

Draft Final Program

INOR

DIVISION OF INORGANIC CHEMISTRY

S. Koch and N. Radu, *Program Chairs*

SUNDAY MORNING

Section A

San Diego Convention Center
Room 10

ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry: Symposium in Honor of Arnold L. Rheingold

M. Churchill, *Organizer*
C. Campana, *Organizer, Presiding*

8:30 1. Metal complexes with supramolecular structures designed to support single-crystal to single-crystal transformations. **D. L. Reger**, A. Debreczeni, J. J. Horger, M. D. Smith
9:00 2. Low-coordinate iron and copper complexes with fluorinated oxygen-donor ligands. **L. H. Doerr**, S. A. Cantalupo, J. S. Lum

9:30 3. Solution and refinement of non-routine crystal structures. **C. F. Campana**, I. A. Guzei

10:00 4. Self-assembly of highly charged corannulene: Structural mystery resolved. A. V. Zabala, A. S. Filatov, S. N. Spisak, **M. A. Petrukhina**

10:30 Intermission.

10:40 5. Different shapes of the C₉₆ fullerene cage. **M. M. Olmstead**, A. L. Balch, J. C. Fettinger, H. Yang, Z. Liu

11:10 6. Crystallography of solvent mobility, phase transitions and chemical reactions in transition metal complexes of orotate and citrate. **L. R. Falvello**

11:40 7. Asymmetric aldehyde methylation with titanium Lewis acid catalysts and some observations on chiral ligand-metal wrapping from X-ray crystallographic studies. **J. Tanski**, M. Baker-Salisbury, T. Shalumova

Section B

San Diego Convention Center
Room 7A

Undergraduate Research at the Frontiers of Inorganic Chemistry

B. Reisner, J. Stewart, *Organizers*
S. Smith, *Presiding*

8:30 Introductory Remarks.

8:35 8. Lead binding to metallothionein. **R. N. Austin**, L. Mo, A. Su

8:55 9. Synthetic models of iron-sulfur enzymes: Catalysts for hydrogen evolution. **C. A. Mebi**, D. Karr, R. Gao, A. Williams, C. Felton

9:15 10. Synthesis and SOD-like activity of Mn(III) complexes derived

from tridentate Schiff base ligands. **M. Mackenzie**, W. Grau, S. Mann, P. J. Costanzo, C. E. Immoos

9:35 11. De novo protein models of binuclear non-heme iron enzymes. **A. J. Reig**, S. E. Butch, S. N. Cimerol, M. M. Pires, J. R. Calhoun, H. Jo, D. W. Kulp, W. F. DeGrado

9:55 12. Model complex computational investigations of the copper dioxygenase active site. **C. M. Hamilton**, J. Ivie, C. Rowell, J. K. Metzker

10:15 13. Synthesis, biophysical reactivity and medicinal evaluation of a series of half-sandwich ruthenium complexes with a 1,4,7-trithiacyclononane face-cap. **M. LeBlanc**, F. A. Beckford, A. Gonzalez-Sarrias, N. P. Seeram

10:35 14. Half-sandwich ruthenium complexes with thiosemicarbazones ancillary ligands. **F. A. Beckford**, P. Mbarushimana, A. M. Stott, M. LeBlanc, A. Gonzalez-Sarrias, N. P. Seeram

10:55 Intermission.

11:05 15. Second generation of hybrid P450 enzymes as light-driven biocatalyst for the selective hydroxylation of C-H bond. **N. Tran**, L. Cheruzel

11:25 16. Characterization of Cu-metalloproteins at biological interface of silver nanoparticles. A. Martinolich, G. Park, M. Nakamoto, R. Gate, **K. Wheeler**

11:45 17. Exploring an alternate role for Riboflavin Binding Protein in copper transport and storage. **K. M. Jawad**, A. M. Lopez, S. R. Smith, M. Benore

12:05 18. Heterometallic Fe-Au and Fe-Pd iminophosphorane containing complexes as potential anticancer agents. **N. M. Lease**, M. Carreira, A. Casini, M. Contel

Section C

San Diego Convention Center
Room 11A

Emerging Developments in Nanomaterials for Energy Applications

J. Pietryga, M. Kanatzidis, *Organizers*
S. Brock, *Presiding*

8:30 Introductory Remarks.

8:40 19. Nanostructures for electrochemical energy storage (NEES). **S. Lee**, G. Rubloff

9:20 20. Photoelectrochemical and photovoltaic applications of 3D hierarchical photoelectrodes made of earth-abundant semiconductor nanowires. **S. Jin**

10:00 Intermission.

10:20 21. Semiconductor nanowires for solar energy conversion. **P. Yang**

11:00 22. Modeling of light trapping effects in nanowire photovoltaic cells.

M. L. Povinelli, C. Lin, N. Huang

Section D

San Diego Convention Center
Room 8

ACS Award in the Chemistry of Materials: Symposium in Honor of Richard B. Kaner

J. Wiley, *Organizer*
E. Gillan, *Organizer, Presiding*

8:30 Introductory Remarks.

8:35 23. Adventures and opportunities in crystal growth of intermetallics: The search for novel correlated systems. **J. Y. Chan**, W. A. Phelan, M. J. Kangas, G. T. McCandless

9:05 24. Multifunctional materials: Synthesis, structure and properties relationships. **M. Greenblatt**, V. Poltavets, M. Croft, G. Kotliar, J. Hadermann, G. Van Tendeloo, M. Jansen, N. Curro, K. Lokshin, T. Egami, T. Das Gupta, J. Freeland

9:35 25. Inorganic phosphors for solid state white lighting: Understanding and development. **R. Seshadri**

10:05 26. Synthesis and characterization of Mg₂Si/ Si nanocomposites for thermoelectric enhancement. **S. M. Kauzlarich**, T. Yi, S. Bux, N. Mingo, Z. Bian, A. Shakouri, J. Fleurial

10:35 Intermission.

10:50 27. Dimensional reduction: A design tool for new radiation detection materials. **M. G. Kanatzidis**

11:20 28. Mechanically driven condensation reactions for solid-state synthesis. **R. Blair**

11:50 29. Topochemical manipulation of layered perovskites – building layers within layers. M. Montassersadi, K. Ranmohotti, E. Josepha, J. Choi, **J. B. Wiley**

Section E

San Diego Convention Center
Room 7B

Alfred Bader Award in Bioinorganic or Bioorganic Chemistry: Symposium in Honor of Brian M. Hoffman

J. Telsner, *Organizer*
D. Goodin, *Presiding*

8:30 Introductory Remarks.

8:45 30. Mechanism of assembly of the dimanganese-tyrosyl radical cofactor of class Ib ribonucleotide reductases. **J. Stubbe**

9:15 31. Ongoing mechanistic enigma of a two-copper enzyme family: Peptidylglycine alpha-monooxygenase, dopamine beta-monooxygenase, and tyramine beta-monooxygenase. **J. P. Klinman**

9:45 32. EPR Investigations of radical SAM enzyme reaction mechanisms. **R. Britt**, W. Myers, J. Kuchenreuther, T. Stich, E. Kim, S. George, J. Jarrett, S. Stoll

10:15 Intermission.

10:30 33. Electron transfer steps at carboxylate-bridged diiron centers. **S. J. Lippard**

11:00 34. Radical mechanisms of metal cofactor biogenesis: The H-cluster of [FeFe]-hydrogenase. **J. B. Broderick**, E. M. Shepard, B. R. Duffus, S. Ghose, N. Boswell, A. Scott, S. J. George, S. P. Cramer, J. W. Peters

11:30 35. Structural biology of Fe(IV)=O and radicals in heme enzymes

T. L. Poulos

Section F

San Diego Convention Center
Room 9

Chemistry of Materials

C. Lugmair, *Organizer*
J. Goldberger, *Presiding*

8:30 36. Thermoelectric properties of Yb-doped Mg₂Si. **O. Janka**, S. K. Bux, S. M. Kauzlarich

8:50 37. Rapid solid state microwave synthesis of intermetallic thermoelectrics adopting the half heusler crystal structure. **C. S. Birkel**, B. Lettiere, R. Seshadri, G. D. Stucky

9:10 38. ZnSb as a thermoelectric material. **L. Bjerg**, G. K. Madsen, J. C. Grossman, B. B. Iversen

9:30 39. Mn²⁺-doped nanocrystals exhibiting temperature dependent dual emission. **E. J. McLaurin**, V. A. Vlaskin, M. S. Fataftah, D. R. Gamelin

9:50 40. Synthesis and magnetism of kagome lattices: Toward quantum spin liquids. **D. E. Freedman**, D. G. Nocera

10:10 41. Magnetic studies of europium chalcogenide nanostructures. **W. L. Boncher**, S. L. Stoll

10:30 Intermission.

10:40 42. Quantitative predictions and understandings of metal hydroxo clusters: Spectral analyses, synthetic selectivities, and stabilities. **I. Chang**, W. Wang, D. A. Keszler, P. H. Cheong

11:00 43. Highly-ordered organic/TiS₂ molecular junction hybrids. **J. Goldberger**

11:20 44. Investigating the chemistry of nitrogen doped multiwalled carbon nanotubes (N-MWCNTs). **A. Kaur**, M. S. Meier

11:40 45. Influence of oxidative chemistry on the surface and structure of carbon nano-onions. **M. K. Sreeramaju**, S. P. John

12:00 46. Ionic sol-based azobenzene hybrid materials. **C. E. Brown**

12:20 47. Hydrazine processed Ge-substituted CZTS solar cells. **S. Bag, O. Gunawan, T. Gokmen, Y. Zhu, D. B. Mitzi**

Section G

San Diego Convention Center
Room 11B

Main Group Chemistry

N. Radu, *Organizer*

K. Christe, L. Berben, *Presiding*

8:00 48. Synthesis, purification, and characterization of phosphine oxides and their hydrogen peroxide adducts. **C. R. Hilliard, J. Bluemel**

8:20 49. Phosphorus as a carbon copy and as a photocopy for conjugated materials chemistry. **M. P. Washington, V. B. Gudimetla, S. Wu, F. L. Laughlin, J. D. Protasiewicz**

8:40 50. Halogen fluorides and oxofluorides. **K. Thanthiruwatte, M. Vasiliiu, D. A. Dixon, K. O. Christe**

9:00 51. Green energetic materials: Binary group 15 polyazides. **R. Haiges, K. O. Christe, M. Rahm, D. A. Dixon**

9:20 52. On the free pair activation of valence electrons. **M. Rahm, R. Haiges, D. A. Dixon, K. O. Christe**

9:40 53. Synthesis and characterization of azido phosphanes and phosphonitride azides and their reaction chemistry. **W. W. Wilson, A. Clough, R. Haiges, K. O. Christe**

10:00 54. Two-electron redox chemistry of a Te-Pt complex: Formation of a metallated hexavalent tellurium. **T. Lin, F. P. Gabbai**

10:20 55. Novel NHC-stabilized polyphosphorus cations from P4 functionalization. **J. J. Weigand, M. H. Holthausen, M. Donath, S. Schulz, G. Frenking, R. Froehlich**

10:40 56. Development of platinum(II) and -(IV) complexes with bisphosphanylstibine ligand. **I. Ke, F. P. Gabbai**

11:00 57. Mild, metal-free intermol: C-N bond formation in 3-furaldehydes, C-C bond cleavage during BODIPY synthesis, and facile "one pot" route to the novel "half BODIPY" benzazulene-type dye class

. **A. P. Singh, D. P. Murale, K. Lee, K. Kim, T. Jun, D. G. Churchill**

11:20 58. Synthesis and reactivity studies of novel Janus-type biscarbenes comprised of *N*-heterocyclic and carbodicarbenes. **T. W. Hudnall, R. M. Mushinski, B. M. Squires**

11:40 59. Apparently benign ethynylcarbamodithioate [Ar-C≡S-C(S)NR₂] as a masked carbene. **G. Ung, G. Bertrand**

12:00 60. Monohydride functionalized group 14 Zintl Ion and its transition metal derivatives: [HSn₉]³⁻, [Ni@HSn₉]³⁻, [Ni@Sn₉M(CO)₃]⁴⁺ (M= Cr, Mo). **F. Kocak, D. Downing, P. Y. Zavalij, A. Vedernikov, B. W. Eichhorn**

Section H

San Diego Convention Center
Room 5A

Nanoscience

Energy and Catalysis

S. Wong, R. Richards, *Organizers*
E. Corbos, M. zamkov, *Presiding*

8:00 61. Controlled synthesis of Pd and Pt nanocrystals for catalysis with improved activity and selectivity. **Y. Xiong**

8:20 62. Rational design and assembly of titania-based nano-photocatalysts for environmental and energy related applications. **S. Hunyadi Murph, K. Heroux, H. Sessions, R. Lascola**

8:40 63. Synthesis of hierarchical nanocrystal-based mesoporous materials for electrochemical supercapacitors. **I. E. Rauda, J. Benjauthrit, V. Augustyn, R. Buonsanti, X. Chen, G. Rubloff, D. J. Milliron, B. Dunn, S. H. Tolbert**

9:00 64. Mesoporous manganese oxide nanowires for high capacity, high rate, hybrid electrical energy storage. **W. Yan, T. Ayvazian, J. Kim, Y. Liu, K. Donovan, W. Xing, J. Hemminger, R. Penner**

9:20 65. Nanocrystal-based active layers with tailored interfaces and architectures for advanced energy applications. **B. A. Helms, E. L. Rosen, R. Buonsanti, T. E. Pick, A. Llordes, A. M. Sawvel, L. Zhu, D. J. Milliron**

9:40 66. Thiol modified CdSe quantum dots for improved hybrid organic/inorganic solar cells. **M. J. Greaney, R. L. Brutchey**

10:00 Intermission.

10:10 67. Ultrafast dynamics of electron-hole pairs underlying hydrogen production in heteronano-crystal photocatalysts. **M. Zamkov, R. Khnayzer, T. O'Connor, K. Acharya**

10:40 68. Investigation of catalytic and photocatalytic properties of ZnO nanoflowers with novel faceting. **C. Cadigan, F. Lin, L. Chen, C. Chou, N. Linck, R. Richards**

11:00 69. New supported Rh-nanoparticle catalyst materials for selective hydrogenation chemistry. **N. Dahal, I. A. Ibarra, S. Garcia, A. Y. Lee, J. E. Baumeister, S. M. Humphrey**

11:20 70. Size control of Ni₂P nanoparticles: Consequences for hydrodesulfurization activity. **G. L. Savithra, R. Bowyer, M. Smith, M. E. Bussell, S. L. Brock**

11:40 71. Rosette nanotube-supported Palladium nanoparticles: A key step towards efficient and green catalysis. **M. R. Hassan, R. Chhabra, J. Cho, H. Fenniri**

12:00 72. Combined in situ SAXS-EXAFS studies of the synthesis of shaped palladium nanoparticles and their application in industrially-relevant catalytic reactions. **E. Corbos, J. Cookson, P. Ellis, T. Hyde, G. Sankar, V. Briosis, F. Meneau, P. Bishop**

Section I

San Diego Convention Center
Room 5B

Coordination Chemistry

Characterization and Applications

D. Crans, *Organizer*

L. Berreau, *Presiding*

8:30 73. Redox-induced linkage isomerism and geometric isomerism in Ru(II) dichloride complexes of chiral tetradentate aminosulfoxide ligands. **T. J. Brunker, P. O. Atolagbe, K. N. Taylor, S. E. Wood, A. L. Rheingold**

8:50 74. Binding motif of amidoxime to the uranyl ion. **S. Vukovic, L. Watson, R. Custelcean, S. Kang, B. Hay**

9:10 75. Luminescence modulation in a series of phosphinopyridyl bridged gold-copper complexes. **K. Chen, C. E. Strasser, V. J. Catalano**

9:30 76. Evidence for a half σ bond in S...S, Se...Se, and Te...Te complexes. **S. A. Yao, K. M. Lancaster, A. W. Götz, J. F. Berry**

9:50 77. Mixed carbene-oxazoline borate zinc complexes and their hydrosilylation and dehydrosilylation reactions. **S. Xu, A. D. Sadov**

10:10 78. Coordination polymer catalysts based on phosphine coordination compounds as molecular building blocks. **S. M. Humphrey, A. M. Bohnsack, D. N. Casto, M. S. Chang, M. Mosier, A. J. Nunez**

10:30 Intermission.

10:40 79. Iron complexes of the redox-active [ONO] ligand. **J. L. Wong, A. F. Heyduk**

11:00 80. Photoinduced CO-release chemistry of divalent metal flavonolate complexes. **L. M. Berreau**

11:20 81. Structure and optical properties of gold(I) thiocyanate exciplexes. **N. Aoyagi, K. Shimojo, A. Ikeda-Ohno, M. Watanabe, N. R. Brooks, K. Binnemans, T. Kimura**

11:40 82. Diruthenium σ-iminophenylacetylde complexes from on-complex Schiff base condensation. **S. Cummings, P. Fanwick, A. Kharlamova, T. Ren**

12:00 83. Use of phosphorescent materials to monitor the

photooxygenation of organic substrates. **K. R. Schwartz, K. R. Mann**

12:20 84. Exploring the reactivity of high-valent nonheme oxoiron(IV) intermediates with reactive oxygen species. **J. J. Braymer, K. P. O'Neill, M. Lim**

SUNDAY AFTERNOON

Section A

San Diego Convention Center
Room 10

ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry: Symposium in Honor of Arnold L. Rheingold

C. Campana, *Organizer*

M. Churchill, *Organizer, Presiding*

1:30 85. Development of inorganic and organometallic crystallography in the 20th Century: Some personal reflections. **M. R. Churchill**

2:00 86. Applications of tripodal ligands for investigating aspects of the organometallic and bioinorganic chemistry of zinc. **W. Sattler, S. Ruccolo, Y. Rong, G. Parkin**

2:30 87. Anticancer properties of silver carbene complexes. **W. J. Youngs, C. A. Tessier, D. J. Lindner, M. J. Deblock, N. A. Robishaw, B. D. Wright, P. O. Wagers, C. L. Cannon**

3:00 88. Synthesis and structural characterization of electrophilic group 4 metal complexes featuring a diamidoamine ligand. **J. L. Petersen**

3:30 Intermission.

3:40 89. Bond cleavage reactions using nickel, platinum, and rhodium: Elucidating factors that control selectivity. **M. E. Evans, T. Tanabe, T. Li, G. Choi, J. Morris, W. D. Jones**

4:10 90. Crystal-to-crystal phase transitions in metallocinium salts: Good stories for Arnie. **L. C. Lorson, S. R. Posner, B. M. Foxman**

4:40 91. Extraordinary structure/bonding and chemical reactivity consequences upon incorporation of gold, thallium, or platinum into nanosized CO/PR₃-ligated homopalladium clusters. **L. F. Dahl, E. G. Mednikov**

Section B

San Diego Convention Center
Room 7A

Undergraduate Research at the Frontiers of Inorganic Chemistry

B. Reisner, J. Stewart, *Organizers*
A. Bentley, *Presiding*

1:30 Introductory Remarks.

1:35 92. Enhanced energy storage via co-electrodeposition of gold nanoparticles in metal oxide thin films.

A. K. Bentley, K. R. Murphy, S. R. Kubota

1:55 93. Phase and morphological control of SnE and Pb_xSn_{1-x}E [E = S, Se, Te] (E = S, Se, Te) nanomaterials through tin carboxylate precursor selection. **C. P. Jose**, B. Hernandez-Sanchez, P. Clem

2:15 94. Effects of substrates and catalysts on the morphology of GaN nanowires. **A. A. Ayyad**, S. C. Rai, H. Su, W. Zhou

2:35 95. Role of surfactants in the synthesis of CdSe hollow nanoparticles. **J. M. Grider**, S. Gullapalli, M. S. Wong

2:55 96. Study of the utility of ceria nanoparticles for the photodegradation of haloaromatic compounds. **W. E. Lynch**, D. Nivens, R. Groom, R. Cook, M. Tanner

3:15 Intermission.

3:25 97. Electronic structure calculations for quaternary diamond-like semiconductors using density functional theory. **K. R. Daley**, C. D. Brunetta, M. Srnec, B. Karuppannan, J. D. Madura, J. A. Aitken

3:45 98. Pushing the boundaries of transition metal substitution: Synthesis, characterization, and magnetic properties of LnCr_xGa₃ (Ln = Tb-Er). **J. D. McAlpin**, M. J. Kangas, N. Haldolaarachchige, D. P. Young, J. Y. Chan

4:05 99. Optimization of Graezel cell of metal and mixed metal oxides. K. L. Nguyen, **T. Nguyen**

4:25 100. Tracking H₂ in microporous adsorbents. **J. Rowsell**, S. FitzGerald

4:45 101. Copper and iron containing metal templated polymers for catalysis and small molecule binding. **J. W. Gohdes**, D. Nagasako, A. Patton, D. R. Tyler

Section C

San Diego Convention Center
Room 11A

Emerging Developments in Nanomaterials for Energy Applications

J. Pietryga, M. Kanatzidis, *Organizers*
S. Jin, *Presiding*

1:30 102. Engineering semiconductor nanocrystal (Quantum Dot) superlattices for solid state energy conversion. **C. B. Murray**, D. Ko, W. Koh, B. Diroll, D. C. Reifsnyder, A. fafarman, S. Saudari, D. K. Kim, S. J. Oh, Y. Lin, C. R. Kagan

2:10 103. Semiconductor nanocrystals and nanowires for printed photovoltaics and lithium ion battery electrodes. **B. A. Korgel**

2:50 Intermission.

3:10 104. Semiconductor quantum belts for transporting energy and charge. Y. Wang, Y. Liu, V. L. Wayman, F. Wang, R. A. Loomis, **W. E. Buhro**

3:50 105. Multiple exciton generation solar cells. **J. M. Luther**, O. E. Semonin, M. C. Beard, J. Gao, A. J. Nozik

4:30 106. Connecting the (quantum) dots: Toward hybrid photovoltaic devices based on chalcogenide gels. L. Korala, J. N. de Frietas, A. Nogueira, **S. L. Brock**

Section D

San Diego Convention Center
Room 8

ACS Award in the Chemistry of Materials: Symposium in Honor of Richard B. Kaner

E. Gillan, *Organizer*
J. Wiley, *Organizer, Presiding*

1:30 107. Thermochemical approaches to precursor-based syntheses of nitrides and phosphides. **E. G. Gillan**

2:00 108. Synthesis of functional materials through topochemical reactions of layered solids. E. C. Sklute, M. Eguchi, C. N. Henderson, M. Strayer, T. Wang, T. Draskovic, Y. Kobayashi, J. Kwak, H. Hata, **T. E. Mallouk**

2:30 109. Nanowire photonics and single cell endoscopy. **P. Yang**

3:00 Intermission.

3:15 110. Noncovalent functionalization of graphene oxide layers with tetracationic cyclophanes. **J. Stoddart**, A. Coskun, S. Srinivasan, O. Buyukcakir, R. Guliyev, G. Barin, M. Juricek, A. N. Basuray

3:45 111. Using solution phase self-assembly to control the properties of materials – from aligned semiconducting polymers to nanoporous batteries. **S. H. Tolbert**

4:15 112. Aggregation-resistant graphene particles. **J. Huang**

Section E

San Diego Convention Center
Room 7B

Alfred Bader Award in Bioinorganic or Bioorganic Chemistry: Symposium in Honor of Brian M. Hoffman

J. Telser, *Organizer*
D. Tierney, *Presiding*

1:30 113. Cleavage of dinitrogen by a molybdenum pincer complex to give a molybdenum nitride. **R. R. Schrock**, T. Hebden

2:00 114. Recent combined theoretical and experimental studies on nitrogenase and nitrogenase model complexes. **F. Neese**

2:30 115. Inorganic Fe models of a spring-like role for the interstitial light atom of the FeMo-cofactor. **J. C. Peters**

3:00 Intermission.

3:15 116. New types of cluster assembly reactions involving MS₃ templates. B. Zheng, X. Chen, A. Majumdar, **R. H. Holm**

3:45 117. Nitrogenase electron transfer and substrate reduction. **L. C. Seefeldt**, K. Danyal, B. M. Hoffman, D. R. Dean, F. A. Armstrong, K. A. Vincent

4:15 118. Mössbauer, EPR, and DFT studies of an [O=Fe^V=NR]⁺ center formed by one-electron oxidation of an oxoiron(IV) complex. **E. Munck**, E. L. Bominaar, L. Que

4:45 119. Electron flow through metalloproteins. **H. Gray**

Section F

San Diego Convention Center
Room 9

Sustainable Inorganic Chemistry

I. T. Horvath, R. Eagling, *Organizers*
C. Mehnert, *Organizer, Presiding*

1:30 Introductory Remarks.

1:35 120. Catalysis with gold and gold palladium nanoparticles. **G. J. Hutchings**

2:05 121. Nanostructure processing of advanced catalytic materials. **J. Y. Ying**

2:35 122. Development of catalysis in flow. **M. Hii**, K. Hellgardt, N. Zotova, F. Roberts

3:05 123. Ionic liquids for biomass processing. A. Brandt, J. Erickson, J. P. Hallett, M. Schrems, **T. Welton**

3:35 Intermission.

3:45 124. Multifunctional catalysts for the selective conversion of biomass: An organometallic approach. **W. Leitner**

4:15 125. Molecular catalysts for CO₂ reduction and formate oxidation. **A. M. Appel**, J. C. Linehan, B. J. Boro, B. R. Galan, D. L. DuBois, C. Seu, J. Schoffel, C. P. Kubiak

4:45 126. Reductive disassembly of lignocellulose solids and models in super-critical methanol. **P. C. Ford**, T. D. Matson, K. Barta, A. V. Iretskii

Section G

San Diego Convention Center
Room 11B

ACS Award for Affordable Green Chemistry: Symposium in Honor of William J. Kruper

J. Klosin, *Organizer, Presiding*

1:30 Introductory Remarks.

1:35 127. New phosphine ligand promoters for palladium catalyzed telomerization of butadiene with

methanol. **J. R. Briggs**, S. Julka, P. M. Margl, J. T. Patton

2:10 128. Development of new molecular and supported recyclable catalysts for biomass conversion into sugars and HMF. **E. Chen**

2:45 129. Green process for chlorine dioxide production from chlorite using water-soluble manganese catalysts. **J. T. Groves**

3:20 Intermission.

3:35 130. Is it single metal homogeneous, nanocluster heterogeneous, or perhaps subnanometer cluster catalysis? The classic case of benzene hydrogenation catalysis beginning with [Cp*⁺RhCl₂]₂. **R. G. Finke**, E. Bayram, J. C. Linehan, J. L. Fulton, J. A. Roberts, N. K. Szymczak, T. D. Smurthwaite, S. Ozkar, M. Balasubramanian

4:10 131. Renewable products and catalyst studies in reductive etherification of carbonyl compounds with polyols. **M. L. Tulchinsky**, M. M. Olken, J. R. Briggs

4:45 132. Methods and mechanistic aspects of catalytic alkene polymerization. **C. R. Landis**

5:20 133. Synthesis and olefin polymerization of group IV metal complexes containing polydentate ligands. **J. Klosin**

5:55 Concluding Remarks.

Section H

San Diego Convention Center
Room 5A

ACS Award in Pure Chemistry: Symposium in Honor of Oleg V. Ozerov

A. Goldman, F. Gabbai, *Organizers*
X. Hu, *Presiding*

1:30 Introductory Remarks.

1:35 134. Milking the cow of redox non-innocence. **K. G. Caulton**, A. K. Das, A. K. Hui, B. J. Cook, D. J. Mindiola, M. Pink, C. Chen, K. Pal, K. Parimal, A. H. Flood

2:00 135. Exploiting silicon in ligand design: Novel structure and reactivity involving silyl pincer complexes of the platinum group metals. **L. Turculet**

2:25 136. Developing “3rd generation” hydroacylation catalysts that operate at only 0.1 mol%. **A. S. Weller**, M. C. Willis, A. B. Chaplin, J. F. Hooper

2:50 137. Amido-phosphine donor sets: Linker effects. **M. D. Fryzuk**, N. R. Halcovitch, T. C. Wambach

3:15 138. Polyfunctional ligands and late transition metals: From unusual coordination modes to original reactivity patterns

D. Bourissou

3:40 Intermission.

3:55 139. Structural and chemical effects of fluorine as a substituent on metal-carbon bonds. **R. P. Hughes**

4:20 140. From esters to alcohols and back. **D. G. Gusev**, D. Spasyuk

4:45 141. CH activation by early and late transition metal complexes: Unusual pathways. **O. Eisenstein**

5:10 142. Chemistry in a cryptand. N. Lopez, D. J. Graham, G. E. Alliger, D. G. Nocera, **C. C. Cummins**

Section I

San Diego Convention Center
Room 5B

Bioinorganic Chemistry

Enzymes and Coenzymes

S. Koch, *Organizer*
E. Boon, *Presiding*

1:30 143. Role of heme distortion in NO sensing and signaling by the H-NOX family. **E. M. Boon**

1:50 144. Integrated paramagnetic resonance of inhibitor-bound cobalt-substituted zinc hydrolases and related models. **D. L. Tierney**, A. R. Marts, T. M. Woodruff, W. Richert, S. M. Greer, J. C. Kaine

2:10 145. Chemistry of nickel in urease: Novel structural insights from NMR and X-ray crystallography. **S. Ciurli**

2:30 146. Unveiling X: X-ray emission spectroscopy of nitrogenase cofactors. **K. M. Lancaster**, M. Roemelt, P. Ettenhuber, Y. Hu, M. W. Ribbe, F. Neese, U. Bergmann, S. DeBeer

2:50 147. Tyrosine-assisted electron transfer in blue copper azurin. **J. J. Warren**, J. R. Winkler, H. B. Gray

3:10 148. Metal-templated design of protein macrocycles. **A. Medina-Morales**, A. Tezcan

3:30 Intermission.

3:40 149. Synthesis of a new non-heme iron model complex for cysteine dioxygenase: Reactivity with dioxygen. **A. C. McQuilken**, Y. Jiang, D. P. Goldberg

4:00 150. Synthesis, characterization and reactivity of high-valent metal corrolazines. **P. Leeladee**, D. P. Goldberg

4:20 151. Modulation of proton-coupled electron-transfer efficiencies in proteins: pKa analysis of tyrosine and nitrotyrosine in azurin. **B. C. Larson**, H. S. Shafaat, J. E. Kim

4:40 152. Redox-linked conformational rearrangements in heme proteins. **E. V. Pletneva**

5:00 153. Spectroscopic and computational studies of mononuclear molybdenum and tungsten enzymes: Links between electronic structure and enzyme function

B. W. Stein, N. J. Wiebelhaus, R. Mtei, J. H. Enemark, M. L. Kirk

5:20 154. Mechanistic clues for the inhibition of zinc β -lactamases. **A. J. Vila**

Section J

San Diego Convention Center
Room 6F

Organometallic Chemistry

Applications to Materials and Polymers

N. Radu, *Organizer*
C. Goh, T. Strassner, *Presiding*

1:30 155. Ring-opening polymerization (ROP) of dicarba[2]cobaltocenophanes: Routes toward main-chain cobalt-containing homopolymers and block copolymers. **J. B. Gilroy**, S. K. Patra, U. F. Mayer, I. Manners

1:50 156. Efficient and atom economical synthesis of functional polymeric materials from simple olefins and natural building blocks. **Z. Guan**

2:10 157. Improvements in a novel polymerization when converting from a step-growth to chain-growth mechanism. **M. C. Brannock**, C. B. Gorman

2:30 158. Transition metal complexes immobilized on nano-porous silica-polyamine composites. **E. Rosenberg**, J. Ross, G. Abbott, S. Meregude, M. Terwilliger

2:50 159. Functionalized silicon as macroinitiator for surface-initiated group transfer polymerization. **F. M. Deubel**, S. Salzinger, B. Rieger, R. Jordan

3:10 160. New ruthenium catalyst for ethylene polymerization. **M. A. Camacho-Fernandez**, M. Yen, J. W. Ziller, Z. Guan

3:30 161. Ferracarboranes as redox mediators and sensors? **P. A. Jelliss**, S. A. Boyko, R. J. Callahan, S. S. Graham, A. Josipovic, S. D. Minter, V. Svoboda

3:50 Intermission.

4:00 162. Enhancement of chain growth and chain transfer rates in ethylene polymerization by binding of $B(C_6F_5)_3$ to the sulfonate group of [phosphine-sulfonate]PdMe catalysts. **Z. Cai**, **Z. Shen**, R. F. Jordan

4:20 163. DFT study of isospecific propylene polymerization with C_1 -symmetric titanium complexes bearing tetradentate [ONNO]-type salen ligands. **P. Sumrit**, S. Khaubunsongserm, P. Hornmirun, T. Nanok

4:40 164. Heterometallic ligands as spectroscopic probes for a quantitative understanding of nanocrystal surfaces. **E. L. Rosen**, K. Gilmore, A. T. Hammack, A. M. Sawvel, D. F.

Ogletree, J. J. Urban, D. J. Milliron, D. Prendergast, B. E. Cohen, B. A. Helms

5:00 165. Selective oligomerization of ethylene and terminal alkenes mediated by chromium-PNP complexes. **L. H. Do**, J. E. Bercaw, J. A. Labinger

5:20 166. Luminescent properties of iridium(III) and platinum(II) complexes based on "click" ligands with versatile coordination modes. **S. Liu**, T. M. Swager

5:40 167. Blue phosphorescent emitters based on transition metal NHC-complexes. **T. Strassner**

SUNDAY EVENING

Section A

San Diego Convention Center
Hall D

Bioinorganic Chemistry

DNA and RNA

S. Koch, *Organizer*

6:00 - 8:00

168. Investigating the mechanism of ferritin protection of DNA: Can the bacterial ferritin Dps utilize DNA charge transfer to protect the genome from a distance? **A. R. Arnold**, J. K. Barton

169. Cell-selective activity of rhodium metalloinsertors. **A. C. Komor**, C. J. Schneider, R. J. Ernst, J. K. Barton

170. Dependence of DNA-protein cross-linking via guanine oxidation upon local DNA sequence. **Z. Perez**, E. Stemp

171. Luminescent probes for DNA mismatches. **A. J. McConnell**, J. K. Barton

172. Ruthenium complexes for photodynamic therapy that absorb red light. **E. Wächter**, B. Howerton, D. Heidary, E. Glazer

173. Toward establishing the mechanism of DNA cleavage by the redox-active ruthenium dimer, [(phen)₂Ru(tatpp)Ru(phen)₂]⁴⁺ (P⁴⁺). **C. Griffith**, S. Singh, Z. Breitbach, Y. Zhang, K. Abayan, F. M. MacDonnell

174. Enhanced DNA electrochemistry through improved coupling to the π -stack and electrocatalysis. **C. G. Pheaney**, L. F. Guerra, J. K. Barton

175. Development of an electrochemical sensor for microRNA levels. **E. R. Smith**, N. N. Jarenwattananon, M. C. Buzzeo

Section B

San Diego Convention Center
Hall D

Alfred Bader Award in Bioinorganic or Bioorganic Chemistry: Symposium in Honor of Brian M. Hoffman

J. Telser, *Organizer*

6:00 - 8:00

176. Exploring the structure of photosystem II and multinuclear manganese model complexes. **J. A. Stull**, T. A. Stich, R. J. Service, S. Mukherjee, F. Yu, T. Stamatatos, K. Pringouri, K. Abboud, S. Mandal, R. J. Debus, G. Christou, V. L. Pecoraro, W. H. Armstrong, R. D. Britt

177. Tetramer vs. dimer: The evolutionary significance of the quaternary structure of MnSOD. **Y. Sheng**, M. Schumacher, K. Barnese, E. B. Gralla, D. Cascio, D. E. Cabelli, J. S. Valentine

178. Structure and function of Cu azurin upon interaction with Ag(I) and silver nanoparticles. **R. A. Gate**, A. J. Martinolich, G. Park, **K. E. Wheeler**

179. Studies of divalent metal binding in a pH buffer and its analog: N-(2-acetamido)iminodiacetic acid and nitrilotriacetic acid. **S. K. Burton**, R. P. Planalp

180. Selective oxidation of 8-oxoguanine by Os(phen)₂dppzCl₂ as visualized by DNA-protein crosslinking. **K. R. Miller**, Z. A. Perez, E. D. Stemp

Section C

San Diego Convention Center
Hall D

Undergraduate Research at the Frontiers of Inorganic Chemistry

B. Reisner, J. Stewart, *Organizers*

6:00 - 8:00

181. Solvothermal synthesis and physical characterization of the series [M(tren)]₂Sn₂S₆ (M = Mn²⁺, Fe²⁺, Co²⁺, Ni²⁺, Cu²⁺, Zn²⁺). **R. L. Thoma**, H. Hunter, J. MacNeil, J. A. Aitken

182. Potential photocatalytic properties of some halometallates. **Y. Sivolobova**, J. Robinson, Jr., K. Lewis, J. Kelley, L. Peterson, Jr., M. D. Smith, H. zur Loye

183. Microwave-assisted hydrothermal synthesis of lutetium oxyorthosilicate (LSO). **H. R. Anderson**, A. M. Rice, P. M. Smith

184. Synthesis of sodium-organic polymers using 4,5-imidazoledicarboxylate. **N. P. Schieber**, R. K. Vakiti, C. Webb, B. Yan

185. Postsynthetic modification on bifunctional metal-organic frameworks. **J. A. Boissonault**, M. Kim, C. A. Allen, P. V. Dau, S. M. Cohen

186. Synthesis of polytopic verdazyl ligands. **C. C. Cortez**, **C. Lo**, D. J. Brook, D. Sun

187. Synthesis and structure of new layered oxide solid solutions. **A. M. Carter**, T. Brillatz, L. Gustin, J. B. Wiley

- 188.** Synthesizing $\text{Sr}_3\text{B}_2\text{O}_6\text{Eu}^{2+}$ using $\text{SrB}_4\text{O}_7\text{Eu}^{2+}$ as a precursor. **T. B. Kilburn**, P. Orme, A. L. Diaz
- 189.** Bimetallic carbides as fuel cell catalysts. **G. R. Waetzig**, B. M. Leonard
- 190.** Progress toward incorporating Fe into I-III-VI single source precursors (SSPs). **J. L. Elliott**, C. W. Johnson, A. W. Holland, J. J. Pak
- 191.** Molten flux synthesis and characterization of $\text{Li}_2\text{-II-IV-Se}_4$ diamond-like semiconductors. **K. M. Henline**, K. A. Rosmus, C. D. Brunetta, J. A. Aitken
- 192.** NKU molecular wire research: The combination of molecular wire and fullerene synthesis to create a polymer with both fullerenes and transition metals. **C. Basinger**, K. A. Walters
- 193.** NKU molecular wire research: Spectroscopic study of charge transfer in fullerene-containing polymeric organometallic systems. **K. Sullivan**, M. Powell, K. A. Walters
- 194.** NKU fullerene research: Spectroscopic study of charge transfer in organometallic supramolecular systems containing novel fullerene-transition metal building blocks. **M. Powell**, K. Sullivan, K. A. Walters
- 195.** NKU molecular wire research: Design and implementation of "molecular wire" building blocks for transition metal/ π -conjugated polymer synthesis. **D. Gibbs**, A. Ivers, A. Abner, K. A. Walters
- 196.** Crystal structure, optical band gap, and thermal analysis of thio-lithium super ionic conductors. **D. M. Massi**, K. A. Rosmus, T. A. Gentile, C. D. Brunetta, J. H. MacNeil, J. A. Aitken
- 197.** Towards the ultrafast spectroscopy of heterobimetallic complexes. **M. R. Ryan**, A. D. Hill, C. B. Harris
- 198.** Hybrid frameworks derived from the hydrotris(triazolyl)borate ligand. C. J. Campbell, M. R. Dent, S. A. Steehler, **B. A. Reisner**
- 199.** Structural studies and magnetic properties of the $\text{K}_2\text{RE}_2\text{Bi}_2\text{Se}_9$ series ($\text{RE}=\text{La, Ce, Yb}$) as potential thermoelectric materials. **R. Roesch**, **M. Kita**, **M. Hutnick**, S. Wehrhan, V. Edwards, V. Wu, L. Kennedy, **B. C. Chan**
- 200.** Developing external collaborations at The College of New Jersey using single crystal X-ray diffraction. **M. Kita**, A. O'Connor, **B. C. Chan**
- 201.** #SciFund challenge: Using a crowdfunding model to support science research. **J. J. Bodwin**
- 202.** Novel chromophores for solar energy applications based on a triazine core. **A. B. Altman**, L. J. Allen, A. E. Graham, R. L. Milot, J. Tang, J. B. Benedict, P. Coppens, C. A. Schmuttenmaer, R. H. Crabtree
- 203.** Study of a ferracarborane phosphorescence quenching agent. **R. J. Callahan**, S. S. Graham, P. A. Jelliss
- 204.** Synthesis and characterization of room temperature ionic liquids from tetrahydrothiophene. **K. M. Gentry**, **B. W. Mobley**, S. Williams, Z. Li
- 205.** Size-dependent surface energy loss in nanocrystalline $\text{YBO}_3\text{:Eu}^{3+}$. **A. J. Lawler**, K. Olsen, A. L. Diaz
- 206.** Studies of phase formation of ilmenite $\text{Zn}_{1-x}\text{M}_x\text{TiO}_3$ ($\text{M}=\text{Co}$ and Mg , $0 < x < 1$) from sonochemical method. **J. M. Hodges**, F. Chen
- 207.** Probing the role of annealing temperature and atmosphere in the lithium ion insertion behavior of V_2O_5 . **L. Zha**, **S. M. Malunga**, S. W. von Kugelgen, A. E. Perez, T. M. Drane, M. J. Geselbracht
- 208.** Synthesis of cholesteric liquid crystalline porphyrins. **J. C. Kranick**, **N. J. DeMarte**, L. J. Tucker, J. L. O'Donnell
- 209.** SHARks and laser beams: Searching for mixed metal oxides to split water using sunlight. **E. W. Ogden**, L. Zha, S. M. Malunga, E. Deffebach, M. J. Geselbracht
- 210.** VIPer: Adapt and adopt classroom content from the frontiers of inorganic chemistry. **H. J. Eppley**, **C. Nataro**, M. J. Geselbracht, E. R. Jamieson, A. R. Johnson, B. A. Reisner, S. Smith, J. L. Stewart, L. A. Watson, B. S. Williams
- 211.** Synthesis and characterization of novel, metal-containing ionogels. **A. Hickey**, H. J. Eppley
- 212.** Synthesis of nickel(II) complexes with tri-oxime ligands to be oxygen-activating catalysts. **A. I. Doub**, A. R. Hall, C. M. Davis
- Section D
- San Diego Convention Center Hall D
- ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry: Symposium in Honor of Arnold L. Rheingold**
- C. Campana, M. Churchill, *Organizers*
6:00 - 8:00
- 213.** Metal complexes formed from dipyrromethene ligands. **M. Malachowski**, J. Thomas, M. Grau, A. L. Rheingold
- 214.** Controlled reduction of corannulene: Structural characterization of supramolecular aggregates with alkali metals. S. N. Spisak, A. V. Zabula, A. S. Filatov, **M. A. Petrukhina**
- 215.** Metal chlorides to the rescue: Crystallization of bowl-shaped carbocations with complex inorganic anions. C. Dubceac, A. V. Zabula, A. S. Filatov, F. Rossi, P. Zanello, **M. A. Petrukhina**
- 216.** Development of pyrazoline-based ligands as selective toxic heavy metal sensors and chelators. **C. P. Kulatilleke**, S. A. de Silva, C. F. Campana, R. M. Nyabeta
- Section E
- San Diego Convention Center Hall D
- ACS Award in Inorganic Chemistry: Symposium in Honor of Clifford P. Kubiak**
- J. Figueroa, *Organizer*
6:00 - 8:00
- 217.** Synthesis and properties of a mixed-valent Co(II)-Co(III) complex with a symmetric non-innocent *p*-quinone bridging ligand. **D. Schweinfurth**, N. Deibel, S. Hohloch, J. Fiedler, B. Sarkar
- 218.** Ultrafast electron transfer through gold nanoparticles: Ancillary ligand and solvent effects. **G. Canzi**, C. P. Kubiak
- 219.** 2D DOSY NMR as a viable technique for characterization of metallic nanoparticles. **R. E. Park**, G. Canzi, C. Kubiak
- 220.** PCET in the mechanism of formate oxidation by $[\text{Ni}(\text{P}_2\text{N}_2)_2(\text{CH}_3\text{CN})](\text{BF}_4)_2$ complexes. **C. Seu**, A. M. Appel, D. L. DuBois, C. P. Kubiak
- 221.** Photoinduced charge transfer between porphyrins and axially bound diimide acceptors. **C. J. Hanson**, M. M. Roubelakis, B. A. Anderson, D. G. Nocera
- 222.** Ground-state vibrational dynamics in $\text{Ru}_3(\text{CO})_{12}$. S. M. Blau, A. M. Brockway, J. A. Schneider, A. R. Viennau, **C. H. Londergan**
- 223.** Design of a high throughput 25-well parallel electrolyzer for the accelerated discovery of CO₂ reduction catalysts via a combinatorial approach. **T. Dang**, C. P. Kubiak
- 224.** Photoelectrochemical hydrogen generation by an [FeFe] hydrogenase active site mimic at a *p*-type silicon/molecular electrocatalyst junction. **B. Kumar**, M. Beyley, C. P. Kubiak, S. Ott
- 225.** Effects of proton relays on the electrocatalytic reduction of CO₂. **F. Mariskal**, E. Benson, C. P. Kubiak
- 226.** Electrochemical reduction of CO₂ by Ni-cyclam. **J. D. Froehlich**, C. P. Kubiak
- 227.** Development of proton-donor scaffolds for the electrochemical reduction of carbon dioxide. **K. A. Grice**, C. P. Kubiak
- 228.** Electrocatalytic reduction of carbon dioxide to carbon monoxide by $\text{Mn}(\text{bipy-tBu})(\text{CO})_3\text{Br}$. **J. M. Smieja**, E. E. Benson, B. Kumar, C. P. Kubiak
- 229.** Intermediates and degradation products in the reduction of carbon dioxide using $\text{M}(\text{bpy})(\text{CO})_3\text{Cl}$. **E. Benson**, J. Smieja, C. Kubiak
- 230.** Versatile synthesis of P_2N_2 ligands for molecular electrocatalysts with pendant bases in the second coordination sphere. **M. D. Doud**, C. P. Kubiak
- 231.** Electrochemical formic acid reduction at metal electrodes. **A. Sasayama**
- 232.** Azulenic self-assembled monolayer films on the Au(111) surface: A comparative study involving isocyanide and mercapto junctions. **B. M. Neal**, A. S. Vorushilov, M. V. Barybin, C. L. Berrie
- 233.** Direct measurement of ultrafast electron transfer by terahertz spectroscopy. **J. Henderson**, D. Aschaffenburg, M. Williams, C. Schmuttenmaer, C. Kubiak
- 234.** Developing building blocks for de novo synthesis of the molybdenum cofactor. **D. Vaccarello**, I. Pimkov, P. Basu
- 235.** Investigation of the limits of current doubling in metal oxide photoanodes. **M. J. Llorente**, C. P. Kubiak
- 236.** Dual-emitting semiconductor nanocrystals for ratiometric optical thermometry. **E. J. McLaurin**, V. A. Vlaskin, D. R. Gamelin
- 237.** Synthesis, structural determination and larvicidal effects of several ionic dialkylamine triphenyltin oxalates complexes. **G. Eng**, X. Song, J. Hoerner, C. Anjorin, J. Delao Hernandez, D. P. McLean
- 238.** Synthesis, structure, and reactions of ruthenium-carbyne complexes. **M. J. Johnson**, R. C. Nelson, E. M. Broderick
- 239.** Rhodium(I) diphosphine complexes with pendant amines for proton-coupled electrocatalytic reduction of CO₂. **A. M. Lilio**, C. P. Kubiak
- 240.** Once a nickel chemist, always a nickel chemist? **G. M. Ferrence**, D. M. Burris, T. Gebreslasse
- Section F
- San Diego Convention Center Hall D
- Undergraduate Research at the Frontiers of Inorganic Chemistry**
- B. Reisner, J. Stewart, *Organizers*
6:00 - 8:00
- 241.** Water-soluble fluorescent zinc complexes: Potential sensors for hydrogen sulfide in aqueous solution. E. C. Brown, **N. A. Held**

- 242.** Late 3d metal metathesis of metal-alkoxides with amines. **F. J. Birk**, T. Cundari
- 243.** Development of new fluorescent sensors. **K. Deibler**, P. Basu
- 244.** Synthesis of novel capping moieties for increased q value in Gd-hydroxypyridinone (HOPO) chelators. **A. E. Faris**, P. J. Klemm, S. L. Pailloux, K. N. Raymond
- 245.** Mechanism of the luminescence response to capsaicinoids in new EDTA bis-amide Tb(III) chelates. **C. G. Gulgas**, C. Peck, D. Kelley
- 246.** Synthesis and characterization of bis-ligated zinc complexes with tridentate ketoiminate ligands. **K. A. Gerling**, A. L. Rheingold, J. M. Fritsch
- 247.** Metamorphoses of N-oxide ligands in the presence of copper(II) nitrate. **D. R. Fantozzi**, P. Baran, Z. Trávníček
- 248.** Structural comparisons of DIG₂tren and DIG₃tren complexes with nickel(II). **K. T. D'Aquila**, K. M. Herrick-Reynolds, G. P. Yap, R. C. Scarrow
- 249.** Targeting low-valent group 6 complexes supported by m-terphenyl isocyanides. **D. S. Ripatti**, T. B. Ditri, J. S. Figueroa
- 250.** Electronic and structural influences on SOD-like activity of Mn(III) Schiff base complexes. **W. Grau**, M. MacKenzie, S. Mann, B. Lent, P. J. Costanzo, C. E. Immoos
- 251.** Synthesis of novel metal-organic aggregates in the ionic liquid ethylammonium nitrate. **J. Ni**, H. J. Eppley
- 252.** Anion binding in cobalt complexes with a tripodal, triguanidine ligand. **J. A. Schneider**, S. C. Schwartz, G. P. Yap, R. C. Scarrow
- 253.** Synthesis and characterization of Ni(II) complexes containing bulky dialkyl biaryl phosphine ligands. **D. Kaplan**, K. R. McGarry, A. R. O'Connor, B. C. Chan
- 254.** Bdippza: Synthesis and metal complexes of a new [N₂O] heteroscorpionate ligand. **B. M. Kriegel**, **S. E. Sherman**
- 255.** Synthesis and investigation of heterobimetallic Co/Zr complexes with mixed phosphinoamide donor sets. **A. De Denko**, S. Kuppuswamy, R. McCullough, C. M. Thomas
- 256.** Use of a metal-coordinating diketone bearing a propargyl group in "click" chemistry. **A. A. Holland**, M. B. Summerlin, K. R. Hoke
- 257.** Synthesis, characterization, electronic and acid/base properties of [Ru(phen)₂(bpy(OH)₂)]²⁺ (phen = 1,10-phenanthroline, bpy(OH)₂ = 4,4'-dihydroxy-2,2'-bipyridine). **M. J. Kasher**, J. J. Paul
- 258.** Synthesis of a tripodal Schiff base/pyridine ligand for gadolinium(III) complexation. **M. P. Madsen**, E. J. Werner
- 259.** Coordination chemistry of strong field isocyanide ligands on octahedral Fe₆N₁₂ clusters. **D. A. Reed**, T. Harris, T. A. Betley
- 260.** Substituent effects on the chemistry of dioxovanadium(V) complexes. **N. R. Lessnau**, V. P. McCaffrey
- 261.** Exploration of nickel (II) bis-isocyanide complexes. **A. L. Estrada**, J. S. Figueroa
- 262.** Self assembled grids based on verdazyl radical ligands. **C. C. Cortez**, **C. Lo**, D. Sun, D. J. Brook
- 263.** Synthesis and characterization of new molybdenum (VI) imido complexes with N-salicylidene-2-aminothiophenol. **J. G. Sinnwell**, I. A. Guzei, M. Minelli
- 264.** Efforts towards the template synthesis of novel hydrogen bonding chelates using Tris(3-aminopyrazole)ZnBr₂. **L. Serpas**, I. Nieto, M. Zeller, E. T. Papish
- 265.** Magnetic coupling and crystal structures of substituted bis-phenoxy-bridged dicopper(II) macrocyclic complexes. **C. R. Omerza**, **N. W. Herrman**, D. Guo, J. K. McCusker, V. P. McCaffrey
- 266.** Use of 3-methylcatechol as a model compound for urushiol. **A. Ickes**, C. Homes, P. Baran
- 267.** Methodical study of metal-phenolic complexes in wine. **C. Homes**, P. Baran
- 268.** Utilizing "click chemistry" to incorporate MnSOD mimics into polymer scaffolds. **S. Mann**, W. Grau, M. MacKenzie, M. McMahon, C. E. Immoos, P. J. Costanzo
- 269.** Progress towards synthesizing a water-soluble copper (II) guanine 3-N-oxide complex. **K. G. Hilferding**, P. Baran, Z. Trávníček
- 270.** New metal coordination platforms on small peptides. **K. Du**, R. J. Radford, F. A. Tezcan
- 271.** Structures and properties of copper(I) complexes of tridentate heteroaromatic-imine and heteroaromatic-amine ligands. **Z. D. Remillard**, S. A. Turner, D. T. Gijima, A. Chandrasekaran, D. Royman, R. D. Pike, **C. Goh**
- 272.** Towards small molecule activation using heterobimetallic complexes: Electron donating properties of phosphinoamide ligands. **A. S. Hyre**, C. M. Thomas
- 273.** Synthesis of macromolecular gadolinium hydroxypyridinone (HOPO) complexes as magnetic resonance imaging (MRI) contrast agents. **M. N. Keyser**, P. J. Klemm, S. L. Pailloux, K. N. Raymond
- 274.** Recent development in design, and synthesis of new HOPO in the goal to improve the solubility and the kinetic stability of an already remarkable family of small molecule. **M. Hom**, S. L. Pailloux, P. J. Klemm, K. N. Raymond
- 275.** Transition metal complexes containing tridentate N-heterocyclic phosphonium cations: Synthesis and reactivity. **Z. Xu**, B. Pan, C. M. Thomas

Section G

San Diego Convention Center Hall D

ACS Award in the Chemistry of Materials: Symposium in Honor of Richard B. Kaner

E. Gillan, J. Wiley, *Organizers*

6:00 - 8:00

276. Solid solutions of super-hard metal borides. **A. T. Lech**, R. Mohammadi, C. L. Turner, S. H. Tolbert, R. B. Kaner**277.** Optoelectronic properties of interfacial thin-films of conducting polymer nanofibers and silver nanowires. **J. M. D'Arcy**, R. B. Kaner**278.** Fabrication of nanopeapods - scrolling of niobate nanosheets for magnetic nanoparticle chain encapsulation. **Y. Yao**, G. Chaubey, K. S. Ranmohotti, **J. B. Wiley****279.** Laser printing of flexible graphene-based supercapacitors with ultrahigh power and energy densities. **M. F. El-Kady**, V. Strong, S. Dubin, R. B. Kaner**280.** Superhard solid solutions based on tungsten tetraboride. **C. L. Turner**, R. Mohammadi, A. T. Lech, M. Xie, S. H. Tolbert, R. B. Kaner**281.** Solid-state metathesis routes to metal phosphides and sulfides. **N. Coleman**, E. G. Gillan**282.** Facile botanical templating strategies for the growth of porous metal oxide structures. **A. B. Zimmerman**, E. G. Gillan**283.** Graphene oxide: Interfacial assembly of soft carbon sheets. **D. Krishnan**, **L. J. Cote**, J. Kim, V. C. Tung, H. Jang, J. Luo, J. Huang**284.** Exploring the high pressure behavior of superhard tungsten tetraboride. **M. Xie**

Section H

San Diego Convention Center Hall D

Chemistry of Materials

C. Lugmair, *Organizer*

6:00 - 8:00

285. Pair distribution function and its application to the determination of the local structure of Perovskite crystals. **K. J. Thomas**, G. M. King**286.** Effects of hydrolysis temperature on porous titania prepared from industrial titanyl sulfate solution. **C. Tian****287.** Understanding an order-disorder phase transition in ionothermally synthesized gallium phosphates. **J. H. Olshansky**, A. J. Norquist**288.** Beyond charge density matching: The role of C-H...O interactions in the formation of templated vanadium tellurites. **M. D. Smith**, A. J. Norquist**289.** New polar templated vanadium tellurite enantiomers. **S. M. Blau**, A. J. Norquist**290.** Layer-by-layer porphyrin molecular multilayers on gold (111) electrodes. **A. Krawicz**, P. H. Dinolfo**291.** Synthesis and process of photocurable silicon rubbers. **K. M. Choi****292.** Monomeric to supramolecular 3D-network via tetrahedral water bridges. **S. Mendiratta**, Y. Lin, K. Lu**293.** Carbon coated LiFePO₄ cathode materials for lithium-ion batteries. **M. Shokouhimehr****294.** New topotactic synthetic methodology for synthesis of highly fluorine (F)-doped mesoporous metal oxides. **Z. Qiao**, J. Adocok, S. Brown, S. Dai**295.** Combining orthogonal postsynthetic methods in a single isoreticular metal-organic framework. **C. A. Allen**, S. M. Cohen**296.** New metal-organic frameworks with interesting gas sorption behavior. **P. V. Dau**, M. Kim, S. M. Cohen**297.** Two chemical handles in a Zr(IV)-based metal-organic frameworks. **M. Kim**, J. A. Boissonnault, P. V. Dau, J. F. Cahill, K. A. Prather, S. M. Cohen**298.** Regioisomeric control of metal-organic framework functional groups. **J. A. Boissonnault**, M. Kim, P. V. Dau, S. M. Cohen**299.** Nanomaterials based flexible and transparent film heaters. **A. Carella**, C. Mayousse, C. Celle, J. Simonato, H. Basti**300.** Neutron powder diffraction from your arm-chair: A mail-in service. **S. C. Parks**, **D. A. Neumann****301.** Computational modeling of the breathing behavior of metal-organic frameworks. **J. C. Sung**, J. S. Grosch, **P. B. Howland**, F. Paesani**302.** Nanocomposite materials for improved flywheel rim materials for frequency regulation of the AC grid. **T. J. Boyle**, B. Anderson, M. Celina, N. Bell

- 303.** Highly functionalized bridged mesoporous materials. **K. Ojo, L. Golovko, Y. Gomza, A. Vasiliev**
- 304.** Synthon screening for energetic cocrystal design. **L. R. Simke, O. Bolton, A. J. Matzger**
- 305.** Preparation and characterization of alumina-based aerogels for applications in automotive catalysis. **S. J. Juhl, N. J. Dunn, M. K. Carroll, A. M. Anderson**
- 306.** New hybrid inorganic-organic sol gel polymers as protective coatings for mild steel substrates. **R. K. Suleiman, B. El-Ali**
- 307.** Fabrication of Hierarchical nanostructures Anatase TiO₂ with unusual (201) exposed facets and their application in photo-catalytic activity. **R. Rahal, A. Fihri, U. Patil, V. Polshettiwar**
- 308.** Changes of crystal structure and strength in highly weathered granite after treated with consolidants. **J. Kim, H. Jeong, Y. Jang, E. Woo**
- 309.** Synthesis and characterization of two calcium based metal-organic frameworks. **R. Vakiti, Y. Cao, W. Pan, B. Yan**
- 310.** Encapsulated titanium nitride nanoparticles for photocatalytic activity under visible light. **B. Lim, D. Kang, J. Yoo, K. Lee, N. Hur**
- 311.** Ultrasonic nozzle assisted spray pyrolysis preparation of mixed metal oxide nanocomposites. **A. Iyer, J. Garofano, E. Kissel, C. King'odu, E. Jordan, S. L. Suib**
- 312.** New thermal stable organophilic layered hexaniobates based on N'-alkyl-N-methylimidazolium intercalation: Unexpected chain length dependency. **A. Duarte, V. R. Constantino**
- 313.** Synthesis of alignable fluorophores for light harvesting in liquid crystal and polymeric waveguides. **W. E. Benjamin, M. J. Perkins, D. L. Patrick, J. D. Gilbertson**
- 314.** Investigations of stability of polyacrylamide composites containing antimicrobial silver(I) cyanoximates to high intensity visible and UV light. **M. O. Whited, J. Morton, N. Gerasimchuk**
- 315.** Structural variability of a tungsten dithiolene moiety in the homoleptic insulating salts [(Cp)₂W(dmit)]⁺[X]⁻ (X = BF₄⁻, Br⁻, PF₆⁻ and Au(CN)₂⁻): A combined structural, spectroscopic and magnetic study. **E. W. Reinheimer, I. Olejniczak, A. Lapinski, R. Swietlik, O. Jeannin, M. Fourmigue**
- 316.** Transmission electron microscopy studies of the melting behavior of nanoalloys for solder application. **T. Q. Doan, T. J. Boyle, P. T. Vianco, P. Lu, C. R. Lockhart**
- 317.** Development of thermally stable polydimethylsiloxane fluids: Linear, cyclic and highly branched. **P. C. DeBurgomaster, L. N. Lopez, S. J. Obrey**
- 318.** Wet chemical synthesis toward nanoparticle thermoelectric antimonides FeSb₂ and CoSb₃. **G. Kieslich, C. S. Birkel, I. Veremchuk, E. Morsbach, D. Bessas, C. Tanja, M. Panthöfer, H. Raphael, Y. Grin, W. Tremel**
- 319.** Ionothermal synthesis and characterization of four new nickel thiophosphate anions. **J. A. Cody, G. Alexander, G. Reynders, K. Finch**
- 320.** Competitive separation of toxic heavy metal ions using a new composite cation exchange material polyaniline Sn(IV) silicate: Adsorption kinetics and thermodynamic studies. **Z. A. Alothman, M. Naushad, M. Islam**
- 321.** Reduction of heavy metals from drinking water by adsorption from limestone with a focus on copper, aluminum, and selenium applications. **S. Somasani, S. Tumati, C. Webb**
- 322.** Removal of heavy metals from drinking water by adsorption technique using modified limestone media. **K. Mandadi, S. Tumati, C. Webb**
- 323.** Synthesis and characterization of Zn(acetate)₂(amine)_x compounds and their use as precursors to ZnO. **J. D. Harris, A. R. Snyder, J. R. Walker, A. Thurber, P. Walker, W. B. Knowlton, A. Punnoose, B. J. Frost**
- 324.** Microfluidic synthesis of hollow silica spheres with hierarchical pore networks. **W. Jeong, S. Yang**
- 325.** Crystallization kinetics and energetics of erbium-containing zinc silicate germanate thin films. **T. Potter, D. McCarthy, V. Martelli, K. Downey**
- 326.** Effect of anion size on space group polarity in 1-alkyl, 3,4-dimethylpyridinium salts. **B. J. Reynolds, S. Nalla, M. R. Bond**
- 327.** Synthesis of solid and hollow metal oxide microspheres using ultraviolet light. **C. K. King'odu, N. Opembe, A. Iyer, E. C. Njagi, S. L. Suib**
- 328.** Antimicrobial activity of nanostructured bismuth oxide-based composite photocatalysts. **J. R. Weese, A. R. Smith, J. H. Thurston**

Section I
San Diego Convention Center Hall D

ACS Award in Pure Chemistry: Symposium in Honor of Oleg V. Ozerov

A. Goldman, F. Gabbai, *Organizers*

6:00 - 8:00

329. Exploration into heterobimetallic complexes of chromium and cobalt. **A. D. Miller, P. A. Rudd, C. C. Lu**

330. Phosphinite-promoted hydroacylation as an approach to both aldol and homoaldol products. **S. K. Murphy, D. A. Petrone, M. M. Coulter, V. M. Dong**

331. Group 9 phosphite pincer complexes as catalysts for cross-coupling reactions. **S. D. Timpa, C. J. Pell, O. V. Ozerov**

332. Development of an asymmetric rhodium-catalyzed intermolecular ketone hydroacylation reaction. **K. G. Kou, V. M. Dong**

333. Investigation of transition metal-catalyzed hydroarylation through C-H bond activation. **I. Chen, H. J. Su, V. M. Dong**

334. Synthesis and characterization of iridium complexes supported by a dianionic SiNN pincer ligand. **C. Lee, O. Ozerov**

335. Chemistry of three coordinate (PNP)Pd⁺ cations. **R. Huacuja, O. Ozerov, C. Fafard**

336. Asymmetric pincer ligands and their late metal complexes. **J. J. Davidson, O. V. Ozerov**

337. Synthesis and reactivity of multinuclear cobalt complexes relevant to water oxidation based on a hexapyridyl, trialkoxy 1,3,5-triarylbenzene ligand. **D. E. Herbert, T. Agapie**

338. Synthesis and reactivity of phosphino-amino (PCN) complexes of iridium. **J. A. Flores, M. C. Haibach, A. S. Goldman**

339. Kinetic studies of C-N coupling via reductive elimination from a (POCOP) supported rhodium complex. **C. J. Pell, O. V. Ozerov, S. D. Timpa**

Section J

San Diego Convention Center Hall D

Emerging Developments in Nanomaterials for Energy Applications

M. Kanatzidis, J. Pietryga, *Organizers*

6:00 - 8:00

340. Synthesis, characterization and electrochemistry of ruthenium(II) complexes of mixed pyrazolyl - bipyridyl complexes: Potential sensitizers for dye sensitized solar cells. **P. A. Ajibade**

341. Charge carrier dynamics in heterostructured semiconductor nanocrystals. **E. Khon, T. F. O'Connor, D. G. Khon, S. M. Lambright, A. C. Furst, A. P. Kuledge, B. A. Smith, R. J. Lorek, M. A. Zamkov**

342. Hydrothermal synthesis of CdS nanoparticles embedded within porous TiO₂ microspheres for photocatalytic activity. **H. Jang, J. B. Yoo, K. H. Lee, N. Hur**

343. Novel Ir(III)-based supramolecular systems for photoinduced hydrogen production. **B. Elias**

344. Solar autoclave based on steam generation using broadband light-harvesting nanoparticles. **O. Neumann, K. Schell, B. Lu, E. Kim, M. Quinn, S. Thompson, N. Grady, M. Oden, N. J. Halas**

345. Nanobased coatings for the prevention of corrosion and biofouling for marine hydrokinetic energy devices. **B. A. Hernandez-Sanchez, S. Altman, D. Enos, S. Dirk, M. Kirk, R. Rasberry, S. J. Stafslien**

346. Platinum-tipped semiconductor tetrapod nanocrystals for photocatalytic hydrogen production. **S. N. Raja, L. D. Amirav, P. Alivisatos**

347. In situ electron microscopy of nanoscale materials for Li-ion battery and piezoelectric energy harvesting technologies. **R. Shabbazian-Yassar, H. Ghassemi, Y. Yap, M. Au**

348. Highly aligned carbon nanotube forests coated by superconducting NbC. **G. Zou, H. Luo, S. Baily, E. Bauer, T. McClees, A. Burrell, Y. Zhu, J. MacManus-Driscoll, Q. Jia**

349. Magnetic properties of nickel nanoparticles within ceramic fuel cells. **J. R. O'Brien, I. Reimanis, A. Strydom, W. G. Coors**

350. Structural and electronic properties of bare and capped Cd_nSe_n/Cd_nTe_n nanoparticles (n = 6, 9). **A. E. Kuznetsov, D. Balamurugan, S. S. Skourtis, D. N. Beratan**

Section K

San Diego Convention Center Hall D

ACS Awards Poster Session: Symposium in Honor of Mitsuo Kira, Christopher A. Reed and Philip P. Power

G. Bertrand, *Organizer*

6:00 - 8:00

351. [4+2] and [2+2+2] Cycloadditions of a digallene with cyclic polyolefins. **C. A. Caputo, J. D. Guo, S. Nagase, J. C. Fetting, P. Power**

352. Silaaziridine from the reaction of didalkylsilylene with imine

. **L. Zhifang, C. Weifeng, K. Mitsuo**

353. Synthesis and reactivity of group 13 boryl complexes. **N. Dettenrieder, H. Dietrich, C. Schädle, C. Maichle-Mössmer, R. Anwander**

354. Synthesis and characterization of new derivatives of the carborane anion CB₁₁H₁₂(-) and use as weakly coordinating anions. **A. Ramasahayam, C. Douvris**

355. Crystal structures of Pt(tpy)X⁺ salts. **A. E. Norton, J. A. Krause, W. B. Connick**

356. Lewis acid catalyzed carbon dioxide reduction. **R. J. Wehmschulte**, M. Khandelwal

357. Low-coordinate and low-oxidation state early transition metals stabilized by bulky substituted terphenyl derivative ligands. **J. N. Boynton**, P. P. Power

358. Synthesis and characterization of low-melting ionics based on closo- and nido-carborane anions. **A. S. Larsen**, S. Eady, S. Suarez, F. Doctorovich

Section L

San Diego Convention Center
Hall D

Nanoscience

General Posters

S. Wong, R. Richards, *Organizers*

6:00 - 8:00

359. Adaptable synthesis for I-III binuclear complexes and corresponding I-III-VI₂ materials. **J. J. Pak**, A. W. Holland, M. Kihara

360. Simple approach to micropatterning of graphene sheets on flexible substrates by inkjet printing and its wideband dipole-antenna application. **K. Shin**, E. Lee, S. Park, J. Jang

361. Study of luminescent nanoporous crystalline materials. **R. Zhong**, A. K. Burrell, R. E. Del Sesto

362. Flexibility of multidentate ligands in the formation of supramolecular metal complexes. **A. W. Maverick**

363. New approaches to the chemical synthesis of polycyclic electron-donor for nanoelectronic study. H. Lin, **H. Honda**, M. Hsiao

Section M

San Diego Convention Center
Hall D

Nanoscience

Semiconducting Nanostructures

S. Wong, R. Richards, *Organizers*

6:00 - 8:00

364. Controllable preparation and characterization of Fe₃O₄ magnetic nanoparticles. C. Li, C. Ma, F. Wang, Z. Xi, **N. He**

365. Polyamines as both solvents and stabilizing agents to prepare water-soluble Fe₃O₄ nanoparticles with reactive surface functionalities. **H. Qu**, C. J. O'Connor, H. Ma

366. Zinc oxide nanoparticles doped with Co, Ni and Mn as dilute magnetic semiconductors. **W. M. Rankin**, J. M. Hancock, R. G. Harrison

367. Synthesis and gas sensing properties of zinc oxide nanorod and

nanoplate. **S. Lim**, S. Hwang, S. Hong, S. Kim

368. Photochemical vs. thermal synthesis of cobalt(III) oxyhydroxide nanocrystals. **S. R. Alvarado**, Y. Guo, P. T. Ruberu, J. W. Andereg, J. Vela

369. Visible light driven TiO₂ nanorods decorated graphene sheets photocatalysts via a non-hydrolytic sol-gel reaction. **E. Lee**, K. Shin, S. Park, J. Jang

370. Efficient photolysis of water by TiO₂ microspheres with yolk shell structure. **H. Yoo**, J. Yoo, K. Lee, N. Hur

371. Controlled growth of Si nanowires using a simple solution based approach. **H. Geaney**, A. Singh, C. Dickinson, K. M. Ryan

372. Directed and self assembly of semiconductor nanorods over large areas. A. Singh, **D. Kelly**, K. M. Ryan

373. SnSe nanocrystal film processing and characterization. **J. Araujo**, P. D. Antunez, R. L. Brutchey

374. Synthesis of II-VI quantum dots using deep eutectic solvents and chalcogen precursors. **L. L. Lazarus**, R. L. Brutchey

375. One pot synthesis of violet emitting ZnSe and ZnSe/ZnS (core/shell) quantum dots. **P. Burks**, **J. Tillman**, J. Dethlefsen, A. Dossing, P. C. Ford

376. Structurally-correlated exciton relaxation and energy transfer dynamics in Mn-doped CdS/ZnS core/shell nanocrystals. **H. CHEN**, S. Maiti, D. Son

377. Investigating the kinetics of semiconducting nanoparticle ligand exchange via coordination of tetrathiomolybdate. **D. C. Grauer**, A. Alivisatos

378. Click chemistry as a novel synthetic method for surface functionalization of colloidal nanocrystal quantum dots. **E. Tavasoli**, J. Grajeda, P. Kunal, Y. Guo, J. Vela

379. Vinyl-capped colloidal nanocrystal quantum dots: Synthesis and direct surface functionalization via olefin metathesis. **A. M. Gerber**, Y. Guo, P. Kunal, E. Tavasoli, J. Vela

380. Attachment of a fluorescent dye to core-shell quantum dots. **S. Adrian**, **K. Luepke**, B. E. Eichler

Section N

San Diego Convention Center
Hall D

Organometallic Chemistry

Applications to Materials and Polymers

N. Radu, *Organizer*

6:00 - 8:00

381. Synthesis and X-ray structures of titanium complexes chelated by tetradentate diamine-diethanolate ligand and their controlled ring opening polymerization behaviors of lactide and caprolactone. **S. Kim**, J. Lee, Y. Kim

382. Ethylene/4-methyl-1-pentene copolymerization with α -diimine Ni(II) based catalysts. **G. Leone**, S. Losio, D. Piovani, A. Sommazzi, A. Boglia, F. Bertini, M. C. Sacchi, F. Masi, G. Ricci

383. Nanocrystal-polymer composites: Polyolefin encapsulation of vinyl-capped cadmium sulfide quantum dots using ortho-phosphino-sulfonate palladium catalysts. **A. J. Falzone**, N. C. Nelson, Y. Guo, J. Vela

384. Bis-ligated titanium and zirconium complexes of chelating N-heterocyclic carbenes. **A. A. El-Batta**, R. H. Grubbs

385. Ir(III) complexes based on *o*-carborane substituted phenylpyridine ligands: Unusual phosphorescence color tuning. **T. Kim**, K. Lee, W. Sung, M. Lee

386. Catalytic dehydrocoupling of phosphines toward making π -conjugated materials using triamidoamine-supported zirconium complexes. **M. B. Ghebream**, R. Waterman

387. Heteroleptic iridium(III) complexes supported by 4-(dimesitylboryl)benzoate ligand: Turn-on phosphorescence upon fluoride binding. R. S. Vadavi, **W. Sung**, K. Lee, T. Kim, M. Lee

388. Discrete four- and five-coordinate aluminum complexes bearing pyrrolidine imine ligands for ring-opening polymerization of *rac*-lactide. **P. Hormnirun**, T. Nanok

389. Intramolecular electromer formation and its near field infrared emission of organometallic iridium complex. **H. Kim**

Section O

San Diego Convention Center
Hall D

Coordination Chemistry

Characterization and Applications

D. Crans, *Organizer, Presiding*

6:00 - 8:00

390. New insights into spin crossover behaviour: The crucial role of π - π stacking. **D. Schweinfurth**, F. Weisser, D. Dubrin, S. Dechert, S. Demeshko, L. Bogani, B. Sarkar

391. Simple control of crystallization dimensionality of metal complexes using a tetrazolyl ligand. **H. Lee**, K. Lee, M. Go, G. Park, J. Lee, S. Kim, Y. Kim

392. Reactivity of oxaliplatin and derivatives with biologically relevant

ligands. **A. D. Poynter**, V. K. Martin, K. M. Williams

393. Hyperpolarized ⁸⁹Y-texaphyrin as an NMR sensor for lactate. L. L. Lumata, C. Priehs, J. S. Ratnakar, J. L. Sessler, M. E. Merritt, C. R. Malloy, A. Sherry, **Z. Kovacs**

394. Unexpected formation of mercury-containing organometallic intermediate in a palladium catalyzed reaction. **W. R. Goetsch**, P. V. Solntsev, J. R. Sabin, V. N. Nemykin

395. Syntheses and characterization of the axial ferrocenyl substituted subphthalocyanies. **K. L. Spurgin**, P. V. Solntsev, J. R. Spurgin, V. N. Nemykin

396. T₁ modulation of the PARACEST effect in nitroxyl EuDOTA-tetraamide derivatives. **J. S. Ratnakar**, S. Viswanathan, M. E. Merritt, C. Lin, L. Lumata, A. Sherry, Z. Kovacs

397. Cyclometalated platinum(II) complexes with mono- and di-nitrogen-heterocyclic carbenes (NHC) ligands: Synthesis and application in sensing acidic vapors. **K. Li**, Y. Chen, W. Lu, N. Zhu, C. Che

398. Synthesis, characterization, and theoretical description of novel gadolinium and iron HOPO-based MRI contrast agents. **A. D. Hill**, S. L. Pailloux, P. J. Klemm, C. B. Harris, K. N. Raymond

399. Reductive elimination of halogens from Au(III) as a path to Au(I)-based coordination polymers. **J. S. Ovens**, G. Cetnarowski, G. W. Leach, D. B. Leznoff

400. Oxidation of lignin model compounds by ionic liquid-tagged metalloporphyrins in corresponding ionic liquid solvents. **J. H. Baker**, A. Sharits, S. A. Morton, L. A. Morton

401. Catalytic hydroxylation of N,N-dimethylformamide by an Fe(II) complex. **K. A. Kluge**, M. B. Jones, K. S. Hagen, C. E. MacBeth

402. Investigation of the thermal decomposition of *cis*-dicarbonylbis(diorganodithiocarbamate) iron(II) complexes using Fourier transform infrared spectroscopy coupled to thermogravimetric analysis. **J. E. Coffield**, R. Jara, J. Wang, N. V. Duffy

403. Dioxygen activation in bio-inspired Ni(II) phenolate complexes. **T. Deb**, G. T. Rohde, V. G. Young, Jr., M. Jensen

404. Reactivity of an oxoiron(IV) complex toward nitrogen monoxide. **T. M. Owen**, J. Rohde

405. Chlorophyll- and bacteriochlorophyll-based derivatives as protease-sensitive smart contrast agents for optoacoustic imaging (OAI). **S. Viswanathan**, A. H. Green, J. R. Norris, P. J. La Riviere, H. Zhang

406. Ferrocene containing metal-organic hybrids - new approach towards synthesis of multi-redox systems. **D. R. Anderson**, P. V. Solntsev, V. N. Nemykin, N. N. Gerasimchuk

407. Anion binding studies of an expanded azamacrocyle: A selective receptor for sulfate in water. **T. Horne**, F. Fronczek, A. Hossain

408. Complexes with tripodal tris-thiolate and tris-selenolate amine ligands. **Z. Su'aad**, S. A. Koch

Section O

San Diego Convention Center
Hall D

Lanthanide and Actinide Chemistry

A. De Bettencourt Dias, *Organizer*

6:00 - 8:00

409. Chiral oxazolonylborato yttrium complexes as catalysts for enantioselective C-N bond formation. **K. Manna**, A. D. Sadow

410. Synthesis and reactivity of trivalent uranium complex (containing a reduced monoanionic bipyridine) with carbonylated small molecules and O-transfer agent. **A. Mohammad**, D. P. Cladis, P. E. Fanwick, S. C. Bart

411. Synthesis, spectroscopy, and reactivity of transition metal and actinide complexes with monoanionic Schiff base ligands. **J. R. Walensky**, M. S. Bharara, A. N. Dame, A. M. Tamasi, A. C. Lane

412. Synthesis and characterization of rare-earth metal imido complexes. **D. Schädle**, C. Maichle-Mössmer, K. W. Törnroos, R. Anwander

413. Adsorption behavior of actinides on carbon materials. **M. Watanabe**, M. Arisaka, T. Kimura

414. Solid-state synthesis, optical properties, and electronic structure of thorium chalcogenide compounds. **L. A. Koscielski**, D. E. Ellis, J. A. Ibers

415. DFT study of $Cp_2An(Ph)_2$ as catalysts for thiophene hydrodesulfurization (HDS): A novel dimerization. **A. W. Pierpont**, R. L. Martin, E. R. Batista, J. L. Kiplinger, N. E. Travia

416. New melamine-based ligands and their lanthanide ion complexes. **S. Bauer**, A. de Bettencourt-Dias

417. Triplet state energy modulation of pyridine-bis(oxazoline) sensitizers for lanthanide ion sensitization. **J. S. Rossini**, A. de Bettencourt-Dias, S. Viswanathan

418. Cerium BINOLate heterobimetallics: Impact of secondary complex structure on electrochemical and chemical redox properties. **J. R. Robinson**, P. C. Carroll, P. J. Walsh, E. J. Schelter

419. Gold nanoparticles as a surface to immobilize gadolinium-hydroxypyridinone (HOPO) complexes for use a magnetic resonance imaging (MRI) contrast agents. **P. J. Klemm**, M. N. Keyser, S. L. Pailloux, P. J. Straney, J. E. Millstone, K. N. Raymond

420. Development of $CeBr_3$ materials for gamma detection. **K. V. Vasudevan**, N. A. Smith, J. C. Gordon, B. L. Scott, R. E. Muenchausen

421. Properties and applications of uranyl peroxo cage clusters synthesized from UO_2 . **T. J. Evans**, G. E. Sigmon, P. C. Burns

Section O

San Diego Convention Center
Hall D

Organometallic Chemistry

New Ligand Platforms

N. Radu, *Organizer*

6:00 - 8:00

422. *Trans*-selective ring opening of limonene oxide with primary phosphido nucleophiles: Synthesis of chiral secondary phosphines. **S. C. Reynolds**, D. S. Glueck

423. Isocyanide-terminated linear 2,6'-biazulenyl framework: Synthesis, redox behavior, and interaction with electron-rich metal centers. **J. J. Meyers**, E. Shoji, S. Suzuki, S. Motohashi, M. V. Barybin

424. Development of a 2,2'-diisocyanide-6,6'-biazulenyl framework for charge transport applications. **A. D. Spaeth**, T. R. Maher, D. M. McGinnis, B. M. Neal, C. L. Berrie, M. V. Barybin

425. Comparative supramolecular complexes. **T. A. Cappadona**, A. Goni, O. Menakaya, T. Siddiquee

426. Synthesis and coordination chemistry of mercapto- and dimercaptoazulenes. **K. J. Scheetz**, A. S. Vorushilov, M. V. Barybin

427. Large scale synthesis of air-stable chiral primary phosphines and the chemistry of their phosphetane analogs. **C. Sibbald**, L. J. Higham

Section O

San Diego Convention Center
Hall D

Undergraduate Research at the Frontiers of Inorganic Chemistry

B. Reisner, J. Stewart, *Organizers*

6:00 - 8:00

428. Production and characterization of a designed di-iron carboxylate protein. **S. Butch**, A. J. Reig

429. Development in potential anti-HIV and antimetastatic drug: C_3 -symmetric tris-linked bridged tetraazamacrocycles as potential CXCR4 antagonists

C. D. Garcia, T. Hubin, S. J. Archibald, D. Schols

430. Phosphine chalcogenides: Synthesis, electrochemistry and structural characterization. **M. A. Tiedemann**, C. L. Mandell, C. Nataro, A. R. O'Connor, B. C. Chan

431. Electrochemistry of metal carbonyls with 1,1'-bis(phosphino)metallocene ligands. **A. Lopez**, K. M. Gramigna, J. Berstler, D. Menard, C. Nataro, W. G. Dougherty, W. S. Kassel, M. J. Shaw

432. Di-iron proteins: Formation of a rubrerythrin (Rbr) replica protein from a DFsc model protein. **S. N. Cimerol**, A. J. Reig

433. Synthesis of sulfur-bridged transition metal organometallic compounds by ethylene bridge replacement. **K. Fuchigami**, B. Wieliczka, G. L. Miessler

434. Modeling the unique hapticity of cyclooctatetraene in $Fe_3(COT)_3$. **W. L. Borland**, R. M. Jones

435. Synthesis and characterization of cationic Ni(II) complexes containing hemilabile ligands for applications in catalysis. **C. Garland**, J. Koubek, D. Kaplan, A. R. O'Connor

436. NKU fullerene research: Synthesis of fullerene, coronene, and corannulene precursors for organometallic supramolecular systems. **C. Maschinot**, D. Gibbs, Z. Ewing, K. A. Walters

437. NKU fullerene research: Shortening the bridge with phenanthrolines. **E. Jones**, K. A. Walters

438. NKU fullerene research: "Two paths to the same molecule" - synthesis of fullerene-bipyridine ligands. **Z. Ewing**, C. Maschinot, D. Gibbs, K. A. Walters

439. Catalytic metal replaced myoglobin. **J. Hua**

440. iClick: A novel organometallic reaction. **T. J. Del Castillo**, S. Sarkar, A. Powers, K. A. Abboud, A. S. Veige

441. Hydrogenation of quinaldine using and air stable iridium(III) benzoquinoline catalyst. **K. C. Rippy**, G. Dobreiner, M. Manas

442. Synthesis and characterization of tungsten and molybdenum acetate and acrylate complexes. I. G. McKendry, J. Manjerovic, R. G. Carden, **P. M. Graham**

443. Progress towards a rigorous comparison between N-heterocyclic phosphonium ligands and their NHC analogs utilizing a rigid pincer ligand framework. **S. Pierre**, C. M. Thomas, B. Pan

444. Transfer hydrogenation using a ruthenium catalyst with hydroxyl groups near the metal center. **L.**

Reuther, I. Nieto, J. Depasquale, E. T. Papish

445. Examination of the beta-amyloid peptide and its copper complexes using spectroscopic methods. **M. D. Maiden**, K. A. Mies

446. Tungsten carbonyl complexes bearing multidentate phosphine ligands. **M. Knestrick**, S. Kyran, D. J. Darensbourg

447. Hydrophilic and hydrophobic copper chelators: Pro-oxidants or anti-oxidants? **S. A. Razvi**, D. S. Folk, K. J. Franz

448. Photochemical studies of iron-iron hydrogenase model compounds in various solvents. **H. L. van de Wouw**, C. F. Works, P. L. Damon, P. C. Ford, J. A. Marhenke, A. Pierri

449. Optimization of the light activated hybrid P450 biocatalysts. **N. Tran**, A. Nguyen, S. Dwaraknath, J. Heredia, N. Huynh, L. Cheruzel

450. Investigation of the electronic structure of π -allyl complexes. **G. Waldhart**, B. Schreiber, R. Siedschlag, J. D'Acchioli

451. Oxidation and glycolysis of inosine by a Ru(III) complex. **M. Wolf**, S. Choi

452. Dicarbonyl{[2-(diphenylphosphino)ethyl]cyclopentadienyl} group VI metal hydrides and halides: Precursors for olefin epoxidation catalysis. **L. Avena**, K. C. Hackbarth, M. C. Neary, K. P. Sullivan, P. J. Fischer

453. Synthesis and characterization of a new class of N-heterocyclic carbenes. D. Tapu, **C. Ghattas**, L. Hutchinson

454. Fluorescent catalysts derived from N-heterocyclic carbenes. D. Tapu, **M. H. Chowdhury**, Z. McCarty

455. Triazolylidene's role in the dehydrogenation of ammonia-borane. **M. Slitts**, M. Guino-o

456. Comparison of half-sandwich ruthenium-thiosemicarbazone complexes with [9]aneS₃ or *p*-cymene face-caps. **P. Mbarushimana**, F. A. Beckford, A. Gonzalez-Sarrias, N. P. Seeram

457. Benzene-ruthenium organometallic complexes: Synthesis, characterization, and biophysical reactivity. **A. Stott**, F. A. Beckford, A. Gonzalez-Sarrias, N. P. Seeram

458. Work towards complexes of iridium for C-H activation. **A. C. MacRae**, K. E. Allen, J. Choi, A. S. Goldman, K. I. Goldberg

459. Kinetic studies of C-F activation by a masked two-coordinate cobalt(I) complex. **J. M. Goldberg**, T. R. Dugan, P. L. Holland

460. Structure-activity relationship study on Platinum-Amidine analogs and their DNA binding properties. **H. T.**

West, J. Suryadi, X. Qiao, G. L. Kucera, V. del Solar Fernandez, U. Bierbach

MONDAY MORNING

Section A

San Diego Convention Center
Room 6A

ACS National Awards in Inorganic Chemistry: Plenary Session

N. Radu, S. Koch, *Organizers*
J. Long, *Organizer, Presiding*

8:15 461. Award Address (ACS Award in Inorganic Chemistry sponsored by Aldrich Chemical Co., Inc.). Inorganic electron transfer: Sharpening a fuzzy border in mixed valency and extending mixed valency across supramolecular systems and nanoparticles. **C. P. Kubiak**

8:50 462. Award Address (Alfred Bader Award in Bioinorganic or Bioorganic Chemistry sponsored by the Alfred R. Bader Fund). With a little help from my friends. **B. M. Hoffman**

9:25 463. Award Address (ACS Award in the Chemistry of Materials sponsored by E.I. du Pont de Nemours and Co.). Synthesis, characterization and applications of conducting polymer nanofibers, superhard metals and nanostructured carbon. **R. B. Kaner**

10:00 464. Award Address (Frederic Stanley Kipping Award in Silicon Chemistry sponsored by Dow Corning Corporation). Trisilaallene and related heavy allenes: Synthesis and unusual structure and bonding. **M. Kira**

10:35 465. Award Address (ACS Award for Affordable Green Chemistry, sponsored by Dow Chemical and endowed by Rohm and Haas). Sustainable approaches to chemicals: Glycerin as renewable feedstock for epichlorohydrin production. **J. W. Kruper Jr**

11:10 466. Award Address (ACS Award in Pure Chemistry sponsored by the Alpha Chi Sigma Fraternity and the Alpha Chi Sigma Educational Foundation). Pincer ligands as tools in the study of reactivity at transition metal centers. **O. V. Ozerov**

11:45 467. Award Address (ACS Award in Organometallic Chemistry sponsored by The Dow Chemical Co. Foundation). Reactions of small molecules with main group compounds under ambient conditions. **P. P. Power**

Chemical Biology: When Two Heads are Better Than One

GSSPC Symposium

Sponsored by CHED, Cosponsored by BIOL, INOR, and ORGN

MONDAY AFTERNOON

Section A

San Diego Convention Center
Room 6A

ACS National Awards in Inorganic Chemistry: Plenary Session

S. Koch, N. Radu, *Organizers*
J. Long, *Organizer, Presiding*

1:30 468. Award Address (F. Albert Cotton Award in Synthetic Inorganic Chemistry sponsored by F. Albert Cotton Endowment Fund). Acid comments. **C. A. Reed**

2:05 469. Award Address (ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry sponsored by StremChemicals, Inc). Thirty-two years of collaborative chemical crystallography and a few other things. **A. L. Rheingold**

Section B

San Diego Convention Center
Room 7A

Undergraduate Research at the Frontiers of Inorganic Chemistry

B. Reisner, *Organizer*
J. Stewart, *Organizer, Presiding*

2:45 470. Resurrection of phenanthroline N,N'-dioxide metal complexes. **P. Baran**

3:05 471. Macrocyclic lanthanide complexes for luminescent sensor applications. **E. J. Werner, J. E. Smith, A. de Bettencourt-Dias, T. G. Benjamin**

3:25 472. Coordination complexes of a tripodal ligand with hydrogen-bonding guanidine groups. **R. C. Scarrow, K. M. Herrick-Reynolds, S. C. Schwartz, A. D. Mumma, J. A. Schneider**

3:45 473. Using carbon monoxide (CO) as a probe to study the electronic properties of copper (I) tris(triazolyl)borate. **J. Kraus, N. A. Dixon, E. T. Papish**

4:05 474. Modification of an acacen ligand for use in "click" chemistry. **K. R. Hoke, A. A. Holland, M. B. Summerlin, C. H. Stuart**

4:25 475. Sterically demanding 6-arylpicolinates as ligands for transition metals: Structural, redox, and reactivity studies. **P. W. Smith, J. S. Figueroa**

4:45 476. Syntheses, structures, and reactivities of a series of new vanadium nitride complexes. **C. D. Abernethy, M. Findlater, S. E. Reyman, L. E. Shepard, J. A. Parichy, A. H. Chiu**

Section C

San Diego Convention Center
Room 11A

Emerging Developments in Nanomaterials for Energy Applications

M. Kanatzidis, *Organizer*
J. Pietryga, *Organizer, Presiding*

2:45 477. Role of nanoscale morphology on the nano- and macro-scale performance of polythiophene based polymer solar cells. **P. F. Green, J. Amonoo, E. Glynos, C. Chen, B. Kim, J. Kim**

3:25 478. Hydrogen storage in metal-organic frameworks. **K. Sumida, E. D. Bloch, Z. R. Herm, H. Choi, J. R. Long**

4:05 479. Controlled fabrication of semiconductor-metal-silica nanocomposites and their use in photocatalytic biomass conversion. **J. Vela, P. T. Ruberu, I. I. Slowing, C. Lin, Y. Guo, N. C. Nelson, M. D. Reichert**

Section D

San Diego Convention Center
Room 8

ACS Award in the Chemistry of Materials: Symposium in Honor of Richard B. Kaner

J. Wiley, *Organizer*
E. Gillan, *Organizer, Presiding*

2:45 480. New polymers and molecules for organic electronics. **F. Wudl, J. Fan, M. Wang, A. Mohebbi, J. Yuen**

3:15 481. Integrated design of organic materials for flexible electronics. **Z. Bao**

3:45 482. Zeta potentials of nanopolyanilines. **S. Huang**

4:15 483. Nanostructured organic conductors for chemical sensing: Polyaniline nanofibers and graphene. **B. H. Weiller**

4:45 484. Nanofabrication for organic bionics. **G. G. Wallace**

5:15 Concluding Remarks.

Section E

San Diego Convention Center
Room 7B

Alfred Bader Award in Bioinorganic or Bioorganic Chemistry: Symposium in Honor of Brian M. Hoffman

J. Telsner, *Organizer*
A. Ivancich, *Presiding*

2:45 485. Water binding and water splitting in photosystem II probed by high frequency multinuclear EPR, ENDOR and ELDOR-detected NMR. **N. Cox, L. Rapatskiy, T. Lohmiller, W. Lubitz**

3:15 486. DNA and RNA regulation by metallotranscription factors: From zinc fingers to NikR. **S. L. Michel, J. L. Michalek, A. Besold, A. West, E. Pozharski**

3:45 487. Why are yeast manganese superoxide dismutases different? **J. S. Valentine, Y. Sheng, K. Barnese, E. B. Gralla, D. E. Cabelli**

4:15 Intermission.

4:30 488. Proton control of mixed function oxidase activity. **S. G. Sligar, I. Denisov, M. G. Gregory, A. Luthra**

5:00 489. Modeling two- and multi-step hopping transport in proteins. **D. N. Beratan**

Section F

San Diego Convention Center
Room 9

Sustainable Inorganic Chemistry

C. Mehnert, R. Eagling, *Organizers*
I. T. Horvath, *Organizer, Presiding*

2:45 490. Flexibility and functionality in metal organic frameworks. **M. J. Rosseinsky**

3:15 491. TAML activators: Mechanisms of action and applications. **T. J. Collins**

3:45 492. Electrochemical and photoelectrochemical reduction of carbon dioxide. **C. P. Kubiak**

4:15 493. Molecular understanding of the science and ecotechnologies of surfaces. **G. A. Somorjai**

Section G

San Diego Convention Center
Room 11B

ACS Awards: Symposium in Honor of Mitsuo Kira, Christopher A. Reed and Philip P. Power

G. Bertrand, *Organizer*
C. Reed, *Presiding*

2:45 494. Hexafluorometallates as weakly coordinating anions. **K. Seppelt**

3:15 495. Transition metal-mediated functionalization of carboranes. **Z. Xie**

3:45 496. Halogenated *closo*-dodecaborates [B₁₂X₁₂]²⁻ (X = F, Cl, Br, I). **C. Knapp**

4:15 Intermission.

4:20 497. Photoactive, low coordinate and low oxidation state group 15 molecules: From small molecules to polymeric materials. **P. J. Ragogna**

4:50 498. Carbenes for the stabilization of unusual phosphorus and boron species. **G. Bertrand**

Section H

San Diego Convention Center
Room 5A

ACS Award in Pure Chemistry: Symposium in Honor of Oleg V. Ozerov

A. Goldman, F. Gabbai, *Organizers*
C. Thomas, *Presiding*

2:45 499. Catalysts for the transformation of biomaterials. **R. H. Grubbs**

3:10 500. Ni-catalyzed cross coupling of alkyl halides and direct C-H alkylation. **X. Hu**

3:35 501. Transition metal catalyzed synthesis of organoboronates and organosilanes from allylic alcohols and alkenes. **K. J. Szabo**

4:00 Intermission.

4:10 502. Use of (η^6 -arene)Cr(CO)₃ complexes as substrated in asymmetric catalysis. **P. J. Walsh**

4:35 503. Catalytic strategies for stereoselective C-H functionalization. **V. M. Dong**

5:00 504. Inorganic chemistry of synthetic methods. **J. F. Hartwig**

Section I

San Diego Convention Center
Room 5B

Chemical Interactions of Metal-related Therapeutic Drugs

M. Lim, D. Crans, D. Schatzschneider, *Organizers*
C. Verani, *Organizer, Presiding*

2:45 Introductory Remarks.

2:55 505. Chemical, structural, and biological studies of phenanthriplatin, a monofunctional DNA-damaging agent with anticancer drug potential

G. Park, D. Wang, G. Zhu, M. Kellinger, T. Johnstone, **S. J. Lippard**

3:40 506. Gold- and gallium-based anticancer drug candidates as potential enzyme inhibitors. **H. Beraldo**, E. Souza-Fagundes, R. G. Dos Santos, G. L. Parrilha, J. A. Lessa, M. Soares, A. Recio Despaigne

4:10 507. (Thio)pyr(id)one derivatives in anticancer research: From natural products to metal-based drugs. W. Kandioller, M. Hanif, A. Kurzwernhart, S. Meier, M. Barasits, B. Keppler, **C. G. Hartinger**

4:40 508. Inhibiting epithelial-to-mesenchymal transition family transcription factors by a Co(III)-DNA conjugate. **T. J. Meade**

Chemical Biology: When Two Heads are Better Than One

GSSPC Symposium

Sponsored by CHED, Cosponsored by BIOL, INOR, and ORGN

MONDAY EVENING

Section A

San Diego Convention Center
Hall D

Sci-Mix

N. Radu, S. Koch, *Organizers*

8:00 - 10:00

180, 194, 196, 200, 201, 202, 205, 209, 210, 211, 215, 219, 221, 223, 225, 242,

245, 246, 249, 258, 260, 265, 267, 268, 277, 279, 285, 299, 304, 311, 313, 319, 320, 328, 330, 333, 337, 358, 365, 368, 371, 374, 375, 377, 385, 390, 393, 394, 401, 404, 407, 408, 412, 415, 416, 418, 426, 427, 431, 433, 443, 444, 447, 454, 457, 459. See previous listings.

684, 686, 687, 699, 703, 707, 721, 724, 730, 732, 735, 738, 739, 744, 748, 753, 759, 760, 761, 764, 767, 771, 773, 775, 784, 785, 786, 790, 791, 794, 805, 807, 812, 814, 829, 838, 839, 847, 851, 853, 856, 860, 861, 865, 880, 880, 880, 880, 881, 882, 883, 885, 897, 899, 911, 916, 921, 924, 932. See subsequent listings.

TUESDAY MORNING

Section A

San Diego Convention Center
Room 10

ACS Award in Inorganic Chemistry: Symposium in Honor of Clifford P. Kubiak

J. Figueroa, *Organizer*
A. Barney, *Presiding*

8:30 Introductory Remarks.

8:40 509. From A(-frames) to Z(-schemes): Running the alphabet with hydrogen. **R. Eisenberg**

9:05 510. Studies inspired by Kubiak 1.0: Low-coordinate palladium isocyanides in catalysis and substrate activation. **J. S. Figueroa**, L. A. Labios, J. M. Stauber

9:30 511. H₂ and the late transition metals Fe, Co, and Ni. **J. C. Peters**

9:55 512. Chemical mechanisms of biological hydrogen. **F. Armstrong**

10:20 Intermission.

10:30 513. Catalysis approaches to greener hydrofluorocarbon synthesis. **R. Baker**

10:55 514. Strongly bent nickel imides supported by a chelating bis(*N*-heterocyclic carbene) ligand. N. D. Harrold, **G. L. Hillhouse**

11:20 515. When iron meets nitric oxide: Good chemistry, intriguing biology. **M. Y. Darensbourg**, C. Hsieh, J. L. Hess, S. Brothers, M. B. Hall

11:45 516. Activation of pollutant gases with nickel. L. Gonzalez-Sebastian, **J. J. Garcia**

Section B

San Diego Convention Center
Room 7A

Undergraduate Research at the Frontiers of Inorganic Chemistry

B. Reisner, J. Stewart, *Organizers*
C. Nataro, *Presiding*

8:00 Introductory Remarks.

8:05 517. Formation and reactivity of highly electrophilic boron-containing cations derived from azaferrocene-

boranes. **T. J. Brunker**, B. Bentivegna, C. G. Gumabon, A. L. Rheingold

8:25 518. Dicarbonyl{[2-(diphenylphosphino)ethyl]cyclopentadienyl} group VI metal hydrides, halides, and olefin epoxidation catalysts. **P. J. Fischer**, L. Avena, K. C. Hackbarth, M. C. Neary, K. P. Sullivan

8:45 519. Polymerization of L-Lactide with zinc phenoxide complexes supported by tridentate ketoiminates bearing trifluoromethyl substituents. **N. M. Rezaee**, J. M. Fritsch

9:05 520. Thermal chemistry of Cp^W(NO)(CH₂CMe₃)R complexes [Cp^W = (η^5 -C₅Me₄H), R = CH₂CMe₃, CH₂SiMe₃, CH₂CH₃, CH₃]. **K. M. Lalonde**, R. A. Baillie, P. Legzdins

9:25 521. Cyclometallated Gold (III) complexes with trithiacyclononane ligands. S. R. Doherty, D. A. Benefield, G. J. Grant, **D. E. Janzen**

9:45 522. Heavy metal complexes with thiacyclobutanes and related macrocyclic ligands. **G. J. Grant**

10:05 Intermission.

10:15 523. Studies surrounding the reaction and mechanism for the formation of a bis-nitromethylene Pd(II) complex. **J. P. Lee**, A. A. Werlein, G. J. Grant, D. E. Janzen, D. G. VanDerveer

10:35 524. Coordination chemistry of new bis(thione), pyridine/thione and related ligands. **D. Rabinovich**

10:55 525. Copper complexes of tridentate pyridine-imine and pyridine-amine ligands as catalysts for atom transfer radical polymerizations. Z. D. Remillard, S. A. Turner, E. Gao, D. T. Gijima, A. Chandrasekaran, R. D. Pike, **C. Goh**

11:15 526. Electrochemistry and structural parameters of phosphine chalcogenides. **C. L. Mandell**, M. A. Tiedemann, C. Nataro, B. C. Chan, A. R. O'Connor

11:35 527. Multidentate cyclic phosphines: Platforms for homogeneous transition-metal catalysis. **M. L. Helm**, A. W. Goodwin, M. L. Lindstrom, C. E. Thogerson

11:55 528. Electrochemistry and structural parameter of 1,1'-bis(phosphino)cobaltocenium ligands. **C. Nataro**, K. D. Reichl, C. L. Mandell, O. J. Henn, W. G. Dougherty, W. S. Kassel

Section C

San Diego Convention Center
Room 11A

National Fresenius Award: Symposium in Honor of Raymond E. Schaak

B. Leonard, J. Chan, *Organizers*, *Presiding*

8:30 Introductory Remarks.

8:35 529. Award Address (National Fresenius Award sponsored by Phi Lambda Upsilon, The National Chemistry Honor Society). Synthetic design tools for complex inorganic solids and nanostructures. **R. E. Schaak**

9:05 530. Controlling electron and proton transfer in water-splitting dye sensitized solar cells. Y. Zhao, E. A. Hernandez-Pagan, N. M. Vargas-Barbosa, S. Lee, W. Youngblood, E. S. Smotkin, **T. E. Mallouk**, J. Megiatto, A. L. Moore, T. A. Moore, D. Gust

9:35 531. Heterogeneous catalysts need not be so heterogeneous: Tailoring the composition, size and shape of monodisperse transition metal nanocrystal catalysts. Y. Kang, V. Doan-Nguyen, M. Cargnello, T. Gordon, P. Fornasiero, **C. B. Murray**

10:05 532. Colloidal synthesis and characterization of silicon and doped silicon nanoparticles. **S. M. Kaulzarich**, T. M. Atkins, M. Singh, A. Holmes, B. M. Nolan

10:35 Intermission.

10:45 533. Continuous flow synthesis of metal nanoparticles using ionic liquids as the solvent, stabilizer, and reducing agent. **R. L. Brutchey**

11:15 534. Synthesis and applications of conducting polymer nanofibers. **R. B. Kaner**, V. Strong, J. D-Arcy, T. Farrell, K. Wang, J. Wang, H. Tran, C. Baker, B. H. Weiller

11:45 535. Harnessing the self-assembly of block copolymers for the synthesis of inorganic nanoscale patterns. **J. M. Buriak**

Section D

San Diego Convention Center
Room 8

Geometric and Electronic Structure Contributions to Reactivity

Small Molecules

P. Chen, P. Kennepohl, *Organizers*
D. Gamelin, *Organizer, Presiding*
R. Sarangi, *Presiding*

8:30 Introductory Remarks.

8:35 536. Rapid carbon dioxide fixation reactions modulated by mononuclear nickel(II) and related reactions by approximations of the binuclear nickel(II)-iron(II) center of carbon monoxide dehydrogenase. D. Huang, X. Zhang, **R. H. Holm**

9:05 537. Molybdenum(0) dinitrogen complexes with polydentate phosphine ligands for synthetic nitrogen fixation: Electronic structure contributions to reactivity. **F. Tucek**

9:35 538. Small molecule activation by α -keto acid iron(II) and copper(II) complexes. **K. Fujisawa**, H. Takisawa

10:05 539. New platforms for primary copper-dioxygen adduct formation and reactivity. **K. D. Karlin**

10:35 Intermission.

10:55 540. Structural and spectroscopic characterization and reactivities of metal-oxygen intermediates. **W. Nam**

11:25 541. Transition metal adducts of $^1\text{O}_2$: Defining factors that control their formation and reactivity. **P. Kennepohl**

11:55 542. 2,2',6',2"-Terpyridine: A redox-active ligand in coordination chemistry. **C. C. Scarborough, K. Wieghardt**

Section E

San Diego Convention Center
Room 7B

Organometallic Chemistry

New Ligand Platforms

N. Radu, *Organizer*

D. Jenkins, M. Barybin, *Presiding*

8:00 543. Transition metal complexes of chiral N-heterocyclic carbene ligands derived from amino acids: Applications as catalysts and anti-tumour agents. **J. Ramasamy, J. Eppinger, P. E. Walter, A. Khodiyer, J. Merzaban**

8:20 544. Unusual unsymmetrical tridentate dianionic carbenes: Synthesis and coordination chemistry. **E. Despagnet-Ayoub, J. E. Bercaw**

8:40 545. *Tert*-butyl-diphosphabutarene: Synthesis and reactivity of a strained phosphacycle. **S. C. Reynolds, J. A. Golen, A. L. Rheingold, R. P. Hughes, D. S. Glueck**

9:00 546. Incorporation of appended Lewis acidic and basic groups into a metal's secondary coordination sphere: Toward cooperative reactivity. **N. K. Szymczak, O. Tutusaus, C. B. Ni**

9:20 547. First row metals supported by non-innocent "Nindigo" ligands: New bimetallic platforms for multi-electron reactivity. **S. Fortier, O. Gonzalez del Moral, K. Pal, C. Chen, M. Pink, D. J. Mindiola, K. G. Caulton**

9:40 548. New class of trianionic constrained geometry ligands: Synthesis, characterization, and representative complexes. **R. T. Rondo, C. Yeisley, K. Kirschbaum, M. R. Mason**

10:00 Intermission.

10:05 549. Organometallic architectures featuring isocyanide-terminated linear 2,2', 6,6', and 2,6'-biazulenyl frameworks. **M. V. Barybin**

10:25 550. Synthesis and reactivity studies of (SiNN) Ir pincer complexes. **C. Lee, O. Ozerov**

10:45 551. Metal-arene interactions enforced by a pincer ligand: Models for arene activation. **S. Lin, C. Cheng, E. Y. Tsui, M. W. Day, T. Agapie**

11:05 552. Bioinspired ligand platforms utilizing pyridinediimine ligands with hydrogen bond donors/acceptors in the secondary coordination sphere. **Z. Thammavangsy, B. D. Crockett, J. D. Gilbertson**

11:25 553. Conformationally flexible diphosphine ligands and their role in catalysis. **C. C. Lu, K. Ding, S. J. Tereniak, E. E. Marlier**

11:45 554. Low oxidation state transition metals supported by terphenyl-diphosphine ligands. **G. A. Edouard, P. Kelley, T. Agapie, M. Day**

12:05 555. Developing small-ringed macrocyclic tetra-carbene ligands for catalytic systems. **S. A. Cramer, Z. Lu, H. M. Bass, D. M. Jenkins**

Section F

San Diego Convention Center
Room 9

Sustainable Inorganic Chemistry

C. Mehnert, I. T. Horvath, *Organizers*
R. Eagling, *Organizer, Presiding*

8:30 556. Nanoparticles as a model material for water purification. **M. S. Wong**

9:00 557. Heterostructure chemistry and low-cost thermoelectrics. **G. D. Stucky**

9:30 558. Observations of catalysis at the single nanocrystal level using plasmon sensing. **A. Alivisatos**

10:00 Intermission.

10:10 559. Fundamental limits and new concepts for nano-enabled solar cells. **C. M. Lieber**

10:40 560. More of less is more. **D. R. Rolison**

11:10 561. Photoreduction of aqueous protons with colloidal dye-TiO₂ loaded with a synthetic cobalt catalyst. **E. Reisner**

Section G

San Diego Convention Center
Room 11B

ACS Awards: Symposium in Honor of Mitsuo Kira, Christopher A. Reed and Philip P. Power

G. Bertrand, *Organizer*
P. P. Power, *Presiding*

8:30 562. Frustrated Lewis pairs in metal-free hydrogenations. **D. W. Stephan**

9:00 563. Muonium spin resonance spectra and chemical bonding in silylenes, germynes and silenes. **R. West, P. W. Percival**

9:30 564. Redox reactions of aluminum(III): From C-H to CO₂ activation. **T. W. Myers, C. Cates, O. Summerscales, L. A. Berben**

10:00 Intermission.

10:10 565. Nitrogen based ligands in gold carbonyl, alkene and alkyne chemistry. **R. Dias**

10:40 566. Main group cations, carboranes, and C-F activation. **O. Ozerov, W. Gu, R. Ramirez-Contreras, B. J. McCulloch, L. Press**

11:10 567. Activation of carbon dioxide and carbon monoxide with organoscandium-hydridoborate ion pairs. **W. Piers, A. Berkefeld, F. Leblanc, M. Parvez, O. Eisenstein, L. Castro, L. Maron**

Section H

San Diego Convention Center
Room 5A

Lanthanide and Actinide Chemistry

A. De Bettencourt Dias, *Organizer*
E. Schelter, S. Bart, *Presiding*

8:30 568. New avenues in lanthanide nano-magnets: From coordination to organometallic chemistry. **M. Murugesu**

8:50 569. Synthesis of new bimetallic rare earth reduced dinitrogen complexes for the optimization of single molecule magnets (SMM). **J. F. Corbey, J. W. Ziller, W. J. Evans**

9:10 570. Rare earth compounds of tetraazaannulene ligands. **U. J. Williams, B. D. Mahoney, P. T. DeGregorio, J. M. Kikkawa, P. J. Carroll, E. J. Schelter**

9:30 571. Isolation of an actinide benzyne complex. **L. A. Seaman, G. Wu, T. W. Hayton**

9:50 572. Multi-electron processes involving uranium complexes supported by redox-active ligands. **S. C. Bart, D. P. Cladis, B. A. Schaefer, S. J. Kraft, P. Fanwick**

10:10 Intermission.

10:20 573. High valent axial uranium complexes with mono-anionic ligands. **E. J. Schelter, A. J. Lewis, P. J. Carroll, U. J. Williams**

10:40 574. Electronic structure of uranium and lanthanide *N,N*-dimethylaminoborates. **B. Vlaisavljevich, D. Koballa, P. Miró, T. Todorova, G. S. Girolami, C. J. Cramer, L. Gagliardi**

11:00 575. Dinitrogen reductive chemistry of the (C₅Me₅H) ligand in tris(cyclopentadienyl) rare earth complexes. **M. E. Fieser, J. W. Ziller, W. J. Evans**

11:20 576. Synthesis and structure of the first molecular complexes of Ho²⁺, Er²⁺, and Tb²⁺ and their reactivity with dinitrogen. **M. R. MacDonald, J. W. Ziller, W. J. Evans**

11:40 577. Exploring the reaction chemistry of the Y[N(SiMe₃)₂]₃/K reduction system. **J. H. Farnaby, M. Fang, J. W. Ziller, W. J. Evans**

12:00 578. Mechanistic studies on initiation and propagation of rare earth metal-mediated group transfer polymerization of vinylphosphonates. **S. Salzinger, B. Rieger**

Section I

San Diego Convention Center
Room 5B

Chemical Interactions of Metal-related Therapeutic Drugs

D. Crans, D. Schatzschneider, C. Verani, *Organizers*
M. Lim, *Organizer, Presiding*

8:00 579. Use of texaphyrin-platinum conjugates to overcome drug resistance in cancer. **J. F. Arambula, Z. H. Siddik, J. L. Sessler**

8:45 580. Hydrolytic DNA cleavage and cytotoxic activity promoted by dinuclear bioinspired model complexes: Catalytic promiscuity. **A. Neves**

9:15 581. Evaluation of reactive oxygen species production upon subacute MnCl₂ exposure. **T. A. Mathews, M. Khalid**

9:45 582. Organometal compounds and their bioconjugates: Applications in anticancer chemotherapy and bioanalytics. **D. Schatzschneider**

10:15 Intermission.

10:25 583. Novel ROS-caged agents modify DNA and are activated by superoxide dismutase. **E. J. Merino**

10:55 584. Greater binding affinity of Sb(III) to a CCH zinc finger domain compared to a CCH domain of kinetoplast proteins. **C. Demicheli, F. Frezard, H. Silva, A. Pimenta, N. P. Farrell**

11:25 585. Engineering highly cytotoxic platinum-acridine agents into targeted therapies for chemoresistant cancers. **U. Bierbach**

11:55 586. Journey from probing how antidiabetes drugs act to formulation of anticancer agents. **D. C. Crans, K. A. Woll, M. A. Sedgwick, D. R. Worley, A. G. Sostarec, M. D. Johnson, N. E. Levinger**

TUESDAY AFTERNOON

Section A

San Diego Convention Center
Room 8

ACS Award in Inorganic Chemistry: Symposium in Honor of Clifford P. Kubiak

J. Figueroa, *Organizer*
R. Eagling, *Presiding*

1:30 587. Focusing on protons in catalytic and interfacial redox reactions. **J. M. Mayer, S. Barnett, J. Blacqueiere, M. Braten, C. Carver, R. Hayoun, B. Matson, J. Schrauben, T. Tronic, C. Valdez**

1:55 588. Tuning the proton tunneling distance in proton-coupled electron transfer and its relevance for catalysis. **L. Hammarström**, M. Zhang, T. Markle

2:20 589. Electronic structure of high- and low-valent tris(bipyridine) complexes of the transition metal ions (Ti, Zr, V, Nb, Ta, Cr, Fe). **K. E. Wieghardt**

2:45 590. Oxidizing water. **T. J. Meyer**, R. A. Binstead, Z. Chen, J. J. Concepcion, D. P. Harrison, A. K. Vannucci

3:10 Intermission.

3:20 591. Photophysical properties of quadruply bonded (MM = Mo₂, MoW or W₂) supported by carboxylate ligands: Lifetimes and charge distribution in S1 and T1 states. **M. H. Chisholm**

3:45 592. Dynamic Raman band coalescence as a tool for understanding molecular dynamics. **B. J. Lear**, A. Giordano

4:10 593. Excited-state vibrational relaxation dynamics in transition metal-based charge-transfer complexes. C. E. McCusker, A. M. Brown, **J. K. McCusker**

4:35 594. Catalysts for proton reduction to dihydrogen. **H. Gray**

Section B

San Diego Convention Center Room 7A

Organometallic Chemistry

Applications to Organic Transformations

N. Radu, *Organizer*
L. Higham, M. Stradiotto, *Presiding*

2:00 595. Application of Mor-DalPhos in chemoselective Buchwald-Hartwig aminations. **M. Stradiotto**

2:20 596. Water: A unique solvent for palladium-catalyzed cross-coupling reactions. **J. Eppinger**, P. E. Walter, J. Ramasamy, D. Jantke

2:40 597. Chromium catalysts for radical C-C and C-P bond-forming reactions. K. MacLeod, **K. M. Smith**

3:00 598. C-H borylation using borenium cation equivalents. **A. Prokofjevs**, E. Vedejs

3:20 599. Substrate-directed *ortho*-C-H borylation of benzylic amines. **A. J. Roering**, L. V. Hale, P. A. Squier, M. A. Ringgold, E. R. Butler, T. B. Clark

3:40 Intermission.

3:50 600. Orthometallation as an alternative route to the functionalization of organic entities. **E. P. Urriolabeitia**, L. Cuesta, E. Laga, S. Nieto, C. Cativiela

4:10 601. Intermolecular C-H activations of hydrocarbons initiated by

the Cp*W(NO)(CH₂CMe₃)(η³-CH₂CHCHPh) complex. **R. A. Baillie**, K. M. Lalonde, P. Legzdins

4:30 602. Iterative asymmetric hydroformylation-Wittig olefination. **G. W. Wong**, C. R. Landis

4:50 603. Application of highly modular P-OP ligands in asymmetric hydrogenation. P. Etayo, J. Núñez-Rico, H. Fernández-Pérez, **A. Vidal-Ferran**

Section C

San Diego Convention Center Room 11A

Emerging Developments in Nanomaterials for Energy Applications

J. Pietryga, *Organizer*
M. Kanatzidis, *Organizer, Presiding*

1:30 604. Nanostructured interfaces for electrical energy generation and storage: Fuel cells, batteries and supercaps. **H. D. Abruña**

2:10 605. Nanostructured thermoelectrics: Role of hierarchical length-scale architecture. J. He, M. G. Kanatzidis, **V. P. Dravid**

2:50 606. Ion-induced nanostructures for energy applications. **R. S. Goldman**

3:30 Intermission.

3:50 607. Towards omnidirectional plasmonic substrates for light trapping. **T. W. Odom**

4:30 608. Plasmon-based media for solar energy harvesting. **N. J. Halas**

Section D

San Diego Convention Center Room 8

Geometric and Electronic Structure Contributions to Reactivity

Proteins

P. Chen, D. Gamelin, P. Kennepohl, *Organizers*
J. Lipscomb, K. Hodgson, *Presiding*

1:30 609. X-ray absorption spectroscopy approaches and applications in biology. **B. Hedman**, K. O. Hodgson

2:00 610. Fluorescent sensors to elucidate the cell biology of zinc. **A. E. Palmer**

2:30 611. Copper binding to human prion protein fragments: Coordination and redox properties. L. Rivillas-Acevedo, T. Arcos-López, R. Grande-Aztatzi, A. Vela, **L. Quintanar**

2:50 612. Iron trafficking in water under air: Dealing with iron's Pourbaix diagram. **D. J. Kosman**

3:20 Intermission.

3:40 613. Expanding catalytic repertoire of the ferritin-like non-heme dimetal

oxidases and oxygenases. **J. M. Bollinger**, C. Krebs

4:10 614. Age of non-innocence for nickel coordination complexes. **R. K. Szilagy**, M. S. Queen, K. A. Murray, B. S. Veldkamp, H. J. Byker

4:40 615. Defining a preference for halogen substituents in the hydroquinone ring-cleaving dioxygenase PcpA. **T. E. Machonkin**

5:00 616. Spectroscopic insights into the molecular mechanism of dioxygen activation by functional heme models. **T. Ohta**, J. Liu, P. Nagaraju, Y. Naruta

5:20 617. Experimental and computational insights into first- and second-sphere tuning of protein active site-properties. **T. C. Brunold**

Section E

San Diego Convention Center Room 7B

Inorganic Catalysts

S. Koch, *Organizer*
X. Zhao, *Presiding*

1:30 618. 2nd Sphere control of catalysis: Selective reduction of O₂ to O₂⁻ or H₂O by a tetraferrocenyl iron porphyrin catalyst. **A. Dey**

1:50 619. Cobalt metaphosphate Co(PO₃)₂ as an electrocatalyst for water oxidation. **H. S. Ahn**, T. D. Tilley

2:10 620. Hydrogen production coupled to hydrocarbon oxygenation from photocatalytic water splitting. **X. Zhao**, W. Singh, D. Pegram, H. Duan, D. Kalita, P. Simone, G. L. Emmert

2:30 621. Electrochemical proton reduction with nickel hangman porphyrins. **D. Dogutan Kiper**, C. Lee, D. G. Nocera

2:50 622. Assemblies for light-driven water oxidation: Moving towards the first row. **M. R. Norris**, J. J. Concepcion, D. P. Harrison, C. R. Glasson, D. L. Ashford, J. L. Templeton, T. J. Meyer

3:10 Intermission.

3:20 623. Kinetics of hydrogen generation by hangman metalloporphyrins. **M. M. Roubelakis**, D. G. Nocera

3:40 624. Synthesis and reactivity of (pyridylpyrrolide)₂Fe(II) complexes. **A. K. Das**, K. Pal, M. Pink, C. Chen, K. G. Caulton

4:00 625. Mechanism of water oxidation catalyzed by a Co₄O₄ cubane. **P. Miró**, N. Planas, S. Berardi, I. Bazzan, A. Sartorel, M. Bonchio, L. Gagliardi, C. J. Cramer

4:20 626. Electrocatalytic properties of P₂N₂ complexes with alkyl phosphine substituents. **M. D. Doud**, C. P. Kubiak

4:40 627. [Co(tpy)(bpy)(OH₂)₃]³⁺: One catalyst, three catalytic functions. **J. J.**

Concepcion, D. P. Harrison, D. L. Ashford, M. R. Norris, R. A. Binstead, H. Luo, J. L. Templeton, T. J. Meyer

Section F

San Diego Convention Center Room 9

Sustainable Inorganic Chemistry

I. T. Horvath, R. Eagling, *Organizers*
C. Mehnert, *Organizer, Presiding*

1:30 628. Design principles for oxygen reduction and evolution on oxide catalysts. **Y. Shao-Horn**

2:00 629. Heh..heh..he said wood: Selective aerobic oxidation of lignin models and extracts. **R. Baker**

2:30 630. Enzymes – benchmark electrocatalysts for energy conversion technologies. **F. Armstrong**

3:00 Intermission.

3:10 631. Si-graphitic composites derived from graphene with in-plane carbon vacancies for high-performance Li-ion battery electrodes. X. Zhao, C. Hayner, M. Kung, **H. Kung**

3:40 632. From biomass to kerosene – tailored fuels via selective catalysis. **J. A. Lercher**

4:10 633. Do we have enough? **I. T. Horvath**

4:40 Concluding Remarks.

Section G

San Diego Convention Center Room 11B

ACS Awards: Symposium in Honor of Mitsuo Kira, Christopher A. Reed and Philip P. Power

G. Bertrand, *Organizer*
M. Kira, *Presiding*

1:30 634. Surprises from isolable silylenes for activation of small molecules. **M. Driess**

2:00 635. Putting the parent Group 14 hydrides, EH₂ and H₂EEH₂ (E = Si, Ge and/or Sn) in a bottle: Exploration of a donor-acceptor stabilization protocol in the main group

. **E. Rivard**, S. Al-Rafia, A. C. Malcolm, S. M. McDonald, S. K. Liew, M. J. Ferguson, R. McDonald

2:30 636. Fast kinetics studies of the silicon, germanium, and Tin homologues of diphenylcarbene. **W. J. Leigh**, I. Duffy, Y. Saied Hayeniaz, S. S. Kostina, M. E. Reid

3:00 Intermission.

3:10 637. Organofunctional silicones. **J. J. Kennan**, E. J. Joffre

3:40 638. Π -conjugated silicon compounds stabilized by bulky fused-ring groups. **T. Matsu**

4:10 639. Synthesis and structure of persilastaffanes and related silicon compounds. **T. Iwamoto**

4:40 640. Novel metallocene reagents and their reactions. **Y. Apeloig**

Section H

San Diego Convention Center
Room 5A

**ACS Award in Pure Chemistry:
Symposium in Honor of Oleg V.
Ozerov**

A. Goldman, F. Gabbai, *Organizers*
L. Berben, *Presiding*

1:30 641. New Mo and W complexes for selective olefin metathesis reactions. **R. R. Schrock**, L. Gerber, D. Peryshkov

1:55 642. Activation and functionalization of sigma bonds by early/late heterobimetallic complexes. **C. M. Thomas**, J. W. Napoline, W. Zhou, B. Crown

2:20 643. Inorganic Click (*iClick*): The reaction between a metal-azide and a metal-acetylide. **A. S. Veige**, T. J. Del Castillo, K. A. Abboud, A. R. Powers

2:45 644. Molecular organometallic catalysts immobilized on oxide supports. J. Guenther, **J. Blumel**

3:10 645. Tantalum complexes that feature a [CCC] X₃-donor array: A new class of pincer ligand for transition metals. A. Sattler, **G. Parkin**

3:35 Intermission.

3:50 646. New strategies for metal-catalyzed hydrosilylations: Structures, reaction steps, and catalytic cycles. **T. Tilley**, M. C. Lipke, M. Fasulo, J. Yang

4:15 647. Synthesis of poly(indene carbonate) from indene oxide and carbon dioxide: A polycarbonate with a rigid backbone. **D. J. Darensbourg**, S. J. Wilson

4:40 648. Aryl-imine and related derivatives in first row transition metal chemistry. **P. T. Wolczanski**, V. A. Williams, E. R. Bartholomew, W. D. Morris, B. Lindley, T. R. Cundari

5:05 649. Understanding the formation of vanadium complexes having a terminal nitride ligand: A one-atom ligand conduit for electron transfer. B. L. Tran, M. Pink, J. Krystek, A. Ozarowski, J. Telsner, K. Meyer, **D. J. Mindiola**

Section I

San Diego Convention Center
Room 5B

**Chemical Interactions of Metal-
related Therapeutic Drugs**

D. Crans, C. Verani, M. Lim, *Organizers*
D. Schatzschneider, *Organizer*,
Presiding

1:30 650. Zinc finger interactions of platinum metal complexes: New drug targets. **N. P. Farrell**

2:10 651. DNA and protein interactions of poly-nuclear Pt(II) anticancer complexes. **Z. Guo**

2:40 652. Correlation between antitumoral and DNA cleavage activities of some complexes of Cu(II). P. P. Silva, W. Guerra, L. H. dos Santos, N. G. Fernandes, A. M. Ferreira, T. Bortolotto, H. Terenzi, A. Neves, **E. C. Pereira-Maia**

3:10 653. Development of metal complexes for biological applications. **J. J. Kodanko**

3:40 Intermission.

3:55 654. Dinuclear metal-metal bonded compounds as new PDT agents. **K. R. Dunbar**

4:25 655. Small molecules as chemical tools and potential therapeutics for human neurodegenerative diseases. **M. Lim**

4:55 656. Redox-active ruthenium(II) polypyridyl complexes (RPCs) as potential anti-cancer drugs with a hypoxia sensitizing mechanism. **F. M. MacDonnell**, S. Awasthi, A. Yadav, T. K. Janaratne, S. S. Singhal, C. A. Griffith, Y. Chen

Section J

San Diego Convention Center
Room 26A

Main Group Chemistry

N. Radu, *Organizer*
A. Svetlanova-Larsen, T. Hanusa,
Presiding

1:30 657. Effects of alkali metal cation size on molecular and extended structures: Coordination polymers and hybrid material of [(4-Et-C₆H₄OM)-(diox)_n], M = Li, Na, K, Rb, Cs. **J. A. Bertke**, A. G. Oliver, K. W. Henderson

1:50 658. Highly luminescent soluble boron-containing polycyclic aromatic hydrocarbons. **C. Hoffend**, M. Bolte, H. Lerner, M. Wagner

2:10 659. Synthesis of highly luminescent unsymmetrically substituted 9,10-dihydro-9,10-diboraanthracene derivatives. **E. Januszewski**, M. Bolte, H. Lerner, M. Wagner

2:30 660. Rapid and simple estimation of the regioselectivity of trialkylboranes by complexation using boron NMR chemical shifts. **T. E. Cole**, Y. Liu, B. Barfield, J. Thai, K. Adams, A. Kim

2:50 661. In situ generation of catalytic borane: Lewis base adduct for the reduction of nitriles to primary amines. D. Crain, S. Armstrong, J. Brunton, C. Givens, P. Porubsky, T. Robben, **S. Schmidt**

3:10 662. Terphenyl-stabilized group 13/14 elements as ligands for transition metal carbonyls. **C. A. Caputo**, P. P. Power

3:30 Intermission.

3:40 663. High oxygen borates as potential green replacements for ammonium perchlorate-based solid propellants. **G. Belanger-Chabot**, K. O. Christe

4:00 664. Bonding variations induced by donor ligands in alkaline-earth compounds. L. S. Fitts, E. J. Bierschenck, **T. P. Hanusa**

4:20 665. Electrolytic synthesis of [Al₁₃(μ₃-OH)₆(μ-OH)₁₈(H₂O)₂₄]¹⁵⁺ cluster and speciation of aqueous aluminum solutions via femtosecond stimulated Raman spectroscopy. **W. Wang**, W. Liu, I. Chang, P. H. Cheong, C. Fang, S. W. Boettcher, D. A. Keszler

4:40 666. Synthesis, characterization, and reactivity of bulky dipyromethene complexes of aluminum. C. G. Gianopoulos, K. Kirschbaum, **M. R. Mason**

5:00 667. Transition metal-alane coordination complexes. **C. C. Lu**, P. A. Rudd, S. Liu, V. G. Young, L. Gagliardi

5:20 668. Mechanism of the C-H activation of isocyanides by unsaturated germanium complexes. **Z. D. Brown**, J. C. Fettinger, H. M. Tuononen, P. P. Power

**10th Symposium on Nanotechnology
and the Environment**

**Green Technology Honoring Dr.
Barbara Karn and Professor
Stanislaus S. Wong**

Sponsored by I&EC, Cosponsored by
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TUESDAY EVENING

Section A

San Diego Convention Center
Hall D

Bioinorganic Chemistry

Enzymes and Coenzymes

S. Koch, *Organizer*

6:00 - 8:00

669. Identifying optimal chelators for metalloprotein inhibitors. **D. P. Martin**, S. M. Cohen

670. Iron transport and storage in the marine green alga: *Tetraselmis suecica*. **A. D. Hartnett**, C. J. Carrano, B. F. Matzanke, L. Böttger, C. Andresen, E. Welter

671. Examining the origin of the substrate specificity of PcpA using synthetic model complexes. **M. Boshart**, M. Rodriguez, T. E. Machonkin, P. L. Holland

672. Characterization of substrate and inhibitor binding in variants of the hydroquinone dioxygenase PcpA. **M. Q. Paulson**, P. A. DaRosa, K. N. Smith, T. E. Machonkin

673. Synthesis, structure, and spectroscopy of oxomolybdenum complexes with chalcogen (E = O, S, Se) donors. **C. Dong**, R. Mtei, B. Stein, M. L. Kirk

674. Changes in heme ligation during folding of a *Geobacter sulfurreducens* sensor GSU0935. **T. L. Freeman**, K. H. Schiavoni, E. V. Pletneva

675. Photoinduced electron transfer in Met80X mutants of yeast iso-1-cytochrome *c*: Role of the heme axial ligand in redox reactivity. **J. Gu**, D. Bandara, E. V. Pletneva

676. Small molecule activation by pyridinediimine iron complexes. **Z. Thammavongsy**, B. M. Crockett, S. P. Swanson, J. D. Gilbertson

677. Modeling copper nitrite reductase with tris(triazolyl)borate ligands: The triazole nitrogen's influence on the structure, electronic properties, and reactivity. **N. A. Dixon**, M. Kumar, A. C. Merkle, N. Lehnert, M. Zeller, E. T. Papish

678. Spectroscopic characterization of copper binding to zinc finger domains. **K. E. Splan**, R. T. Doku

679. Activation of matrix metalloproteinase proinhibitors by esterase. **C. Perez**, K. B. Daniel, S. M. Cohen

680. Investigating the nucleotide-dependent docking modes of nitrogenase. **M. A. Luca**, F. Tezcan

Section B

San Diego Convention Center
Hall D

Organometallic Chemistry

**Applications to Organic
Transformations**

N. Radu, *Organizer*

6:00 - 8:00

681. Gold-catalyzed enantioselective Cope rearrangement of achiral 1,5-dienes. **R. J. Felix**, D. Weber, M. R. Gagné, O. Gutierrez, D. J. Tantillo

682. Transition metal catalyzed asymmetric hydroesterification of olefin. **B. Kim**, V. M. Dong

683. Highly regioselective Rh catalyzed intermolecular hydroacylation strategy for the convergent synthesis of polyketides. **C. M. Le**, M. von Delius, V. M. Dong

684. Dynamic kinetic resolution of allylic sulfonides by asymmetric hydrogenation. **P. K. Dornan**, K. G. Kou, K. N. Houk, V. M. Dong

Section C

San Diego Convention Center
Hall D

Environmental and Energy Related Inorganic Chemistry

S. Koch, *Organizer*

6:00 - 8:00

685. Photocatalytic solar hydrogen production with new semiconductor catalysts. **J. Baeg**

686. Nickel oxides with hierarchical morphologies: Synthesis and application in catalysis and as a super capacitors. **A. Fihri**, R. Rahal, P. Sarawade, V. Polshettiwar

687. Nanocables composed of anatase nanofibers wrapped in UV-light reduced graphene oxide. **Y. Dai**, Y. Jing, J. Zeng, Q. Qi, W. Jiang, D. Goldfeld, Y. Zheng, Y. Sun

688. Spectroscopic characterization of MarR from a methanogenic archaeon. **A. H. Lloyd**, **S. J. Weaver**, J. S. Magyar

689. Perfluorooctanoic acid (PFOA): Structural study of an emerging global environmental pollutant. **W. W. Grabow**, **A. Vij**, F. Tham, J. M. Mabry

690. Adsorption of heavy metals on functionalized mesoporous organoclay. **M. Addy**, B. Losey, R. Mohseni, E. Zlotnikov, **A. Vasiliev**

691. Ultrasensitive detection of chemical warfare gas using metal oxide-decorated carbon nanofiber. **S. Park**, J. Jang

692. Electrochemical studies of copper-sulfide-based nanoparticles. **E. C. Jones**, K. E. Plass

693. Constructing dye sensitized solar cells using microwave heating to accelerate chemical surface modification of transmissive conducting electrodes. **R. W. Cotta**, **J. P. Allen**, T. Cournoyer, E. Couillard, C. J. Timpson, **C. B. Murphy**

694. Photo-induced oxygen exchange between cyclohexane and solid oxide surface of Ti¹⁸O₂. **J. Choi**, K. Lee, B. Lee, N. Hur

695. Preparation of modified calcium-based sorbents (CBA) from acetic acid precipitation for CO₂ sequestration. **Y. Duan**, **H. Li**, D. Xu, X. Fan, M. Cao, **Y. Min**

696. Modification of calcium based CO₂ sorbents using metal oxides dry powders for CO₂ sequestration. **W. Yang**, **H. Li**, D. Xu, Y. Duan, X. Zhang, **Y. Min**

697. Kinetic studies of calcium oxide carbonation at different CO₂ environments. **L. Zhang**, **H. Li**, D. Xu, Y. Duan, **Y. Min**

698. Synthesis and electrochemical analysis of molecular catalysts for water oxidation and proton reduction bound to

chromophore/redox-mediators: Toward tandem dye-sensitized photoelectrosynthesis cells (DSPECs). **D. L. Ashford**, J. J. Concepcion, C. R. Glasson, D. P. Harrison, M. R. Norris, J. L. Templeton, T. J. Meyer

699. Ionic conductivity studies of lithium salt/silyl solvent electrolytes for Li-ion battery applications. **K. Xiong**, **J. B. Davis**, L. J. Lyons, A. P. Hueso, R. West

700. Metal catalyzed reduction of olefins and ketones in biomass-derived substrates. **C. R. Waidmann**, E. R. Batista, R. L. Martin, A. W. Pierpont, B. L. Scott, J. C. Gordon

701. Exploring the binding of aromatic sulfur-containing heterocycles with Lewis acidic metal complexes. **J. T. York**

702. Progress in developing dye sensitized solar cells based on bisbathocuproinedisulfonato copper(I). **B. Johnson**, R. J. LeSuer

703. Iron uptake and storage in the marine brown alga *Ectocarpus siliculosus*. **E. P. Miller**, B. F. Matzanke, L. Boettger, C. Andresen, C. J. Carrano

704. Synthesis of nanoporous organo metal phosphates using PET bottle as unfailing source of organic reagents. **S. Wang**

Section D

San Diego Convention Center
Hall D

Electrochemistry

B. Lucht, *Organizer*

6:00 - 8:00

705. Nanostructured MoS₂ for electrocatalytic watersplitting. **A. B. Laursen**, S. Kegnaes, I. Chorkendorff, S. Dahl

706. Electrochemical biosensors based on novel porous metal nanostructures. **M. Clay**, Q. Cui, J. Chen, **Z. Gu**

707. Characterization of biomimetic membranes by scanning electrochemical microscopy. **M. D. Sykes**, M. C. Buzzeo

708. Unintentional proton coupled electron transfer as an explanation for the odd cyclic voltammetry behavior of quinones at glassy carbon electrodes in organic solvents. **P. Staley**, D. Smith

709. Spectroelectrochemical studies on the roles of hydrogen bonding and proton-coupled electron transfer in the non-aqueous electrochemistry of p-phenylenediamines. **L. A. Clare**, T. Fanco, S. Pavlovsky, D. Smith

Section E

San Diego Convention Center
Hall D

Nanostructured Electronic Materials

G. Girolami, L. McElwee-White, *Organizers*

6:00 - 8:00

710. Synthesis of polypyrrole coated copper nanowire and its application as hydrogen peroxide sensor. **Y. Liu**, Z. Liu, X. Zhang

711. Use of partially fluorinated sidechains in influencing morphology and performance characteristics in BHJ solar cells. **D. A. Gross**, **C. R. Rogers**, E. L. Wu, **L. Y. Park**

712. Controlling conjugation length and ordering in phenylene vinylene oligomers via endcapping and sidechain functionalization. **G. C. Babula**, P. L. Clement, C. J. Corbett, **M. C. Lee**, **L. Y. Park**

713. Properties of ratio-controlled grown ZnO/ZnS heterojunction nanostructures. **J. Li**

714. Synthesis and characterization of benzyne-functionalized graphene and graphite. I. V. Magedov, **L. V. Frolova**, M. Ovezmyradov, D. Bethke, E. A. Shaner, N. G. Kalugin

715. Charge transfer through non-modified and ligand-modified PNAs. **A. R. de Leon**, E. Wierzbinski, K. L. Davis, S. Bezer, D. H. Waldeck, C. Achim

716. Thermoelectric properties of nanostructured silicon germanium prepared by magnesiothermic reduction of silica germania composite. **M. L. Snedaker**, Y. Zhang, C. S. Birkel, D. X. Ji, Y. Shi, M. Moskovits, G. D. Stucky

717. Effect of V₂O₅ on the thermoelectric properties in Fe₂O₃ ceramics. **K. Park**, K. Hwang, J. Kim, K. Y. Kim, S. M. Lim

718. Fabrication of thin film field-effect transistors through matrix encapsulation of nanocrystal arrays. **A. Nemchinov**, **M. Kirsanova**, E. W. Kinder, E. Bower, D. Roth, M. Zamkov

719. Investigation of multilevel resistance switching in Ta/TaOx/Pt structure. Y. Chen, **Y. Chung**, B. Chen, **J. Chen**

720. High performance of zinc-tin oxide thin-film transistors via low-temperature combustion solution process. **L. Liu**, J. Jeng, W. Chen, J. Chen

721. Tunable energy conversion via nanostructured piezoelectric arrays embedded in an environment-responsive matrix. **K. Kim**, D. J. Sirbully

Section F

San Diego Convention Center
Hall D

Nanoscience

Biology and Biological Applications

S. Wong, R. Richards, *Organizers*

6:00 - 8:00

722. Membrane trafficking effect of protein functionalized mesoporous silica nanoparticles. **I. Fang**, B. Trewyn

723. Biodegradable silica nanoparticles as a therapeutic delivery for doxorubicin. **L. R. De Jesus**, W. Law, P. N. Prasad

724. Light triggered release of gene therapeutics from cationic polylysine Au nanoshells: A non-viral delivery vector. **R. Huschka**, A. Barhoumi, Q. Liu, L. Ji, N. J. Halas

725. Visualization of interaction of gold nanoparticles immobilized mesoporous silica nanoparticles with biological systems. **X. Sun**, B. G. Trewyn, V. S. Lin

726. Decomposition of amino acids catalyzed by plasmonic gold nanoparticles. **J. Liu**, C. Zhou, M. Yu, J. Zheng

727. Biocompatible gold nanomaterials for optoacoustic imaging (OAI). **S. Viswanathan**, P. J. La Riviere, C. Chen, H. Zhang, C. Huang, L. Lo

728. Application of the quantum confined Stark effect in type-II nanocrystals for in vivo bioimaging of neurological processes. **T. F. O'Connor**, G. Diederich, R. Lorek, M. A. Zamkov

729. Zero valent iron nanoparticle (nZVI) preparation by a sustainable method and application in bacterial denitrification. **J. R. Johnson**, **A. Watson**, S. Gorsuch, N. Vanderpool, K. E. Dungey

730. Synthetic considerations for optimal magnetic resonance imaging contrast in Fe₃O₄@mesoporous silica nanoparticles. **K. R. Hurley**, Y. Lin, A. Nicol, C. L. Haynes

731. Synthesis and applications of magnetic nanoparticles. **M. Chehbouni**, A. W. Applebtt, S. F. Abu-Arja, J. Z. Leatherwood, T. M. Trad

732. Magnetically propelled flexible nanowire swimmer. **W. Gao**, J. Wang

Section G

San Diego Convention Center
Hall D

Nanoscience

Metallic Nanostructures

S. Wong, R. Richards, *Organizers*

6:00 - 8:00

733. Thiolated resorcinarene cavitand mediated synthesis of dendritic Pt nanostructures. **S. Han**, V. P. Sheela, R. Balasubramanian

734. Synthesis and assembly of hollow spherical CoPt paramagnetic

nanoparticle superstructures. **C. Song**, N. L. Rosi

735. Bimetallic nanoparticles: Correlation of particle morphology and catalytic properties. **G. Krylova**, L. Domaleski, E. Shevchenko, S. Kwon, S. Chattopadhyay, C. Marshall

736. Synthesis and characterization of transition-metal based nanoparticles at room temperature. **O. K. Menakaya**, T. A. Cappadona, A. Goni, T. A. Siddiquee

737. Shape-dependent surface plasmon resonances of Cu₂-xS nanodisks. **S. Hsu**, K. On, A. Tao

738. Synthesis of small and monodisperse phenylethanethiolate-capped palladium nanoparticles: TEM and MALDI-TOF mass spectrometry analysis. **D. J. Gavia**, Y. Shon

739. Microwave assisted synthesis of Germanium nanoparticles. **E. Muthuswamy**, A. S. Iskandar, S. M. Kauzlarich

740. Preparation and adsorption of gold nanoparticles onto functionalized Fe₃O₄@SiO₂ magnetic nanocomposites. H. Jiang, X. Zeng, C. Li, M. Liu, **N. He**

741. Luminescent gold nanoparticles with pH-dependent membrane adsorption. **M. Yu**, C. Zhou, J. Liu, J. D. Hankins, J. Zheng

742. Welding of gold nanoparticles self-assembled on the graphitic templates and their application for breath odor detection. **M. Ding**, D. C. Sorescu, G. P. Kotchey, A. Star

743. Bamboo-structured gold nanowires through laser zone annealing. **J. Kim**, M. Lin, E. Potma, R. Penner

Section H

San Diego Convention Center Hall D

Coordination Chemistry

Characterization and Applications

D. Crans, *Organizer, Presiding*

6:00 - 8:00

744. Phosphorescent molecular tweezers based on alkylnylplatinum(II) terpyridine system: Host-guest chemistry involving heterologous Pt...M interaction. **Y. Tanaka**, K. M. Wong, V. W. Yam

745. Semiconductor nanoparticles and nanocomposites synthesis via single source precursors derived from cyanodithioimidocarbonate-thiuram disulfide. **P. A. Ajibade**

746. Switching of phosphorescence to fluorescence in the Ir(III) complex with acid-labile ancillary ligand. **D. Whang**, W. Chae, Y. You, S. Park

747. Ratiometric fluorescent zinc(II) ion sensor with built-in phosphorescent

reference signaling unit. **C. Lee**, D. Whang, J. Kwon, S. Park

748. Synthesis, characterization and reactivity of a new non-heme manganese oxo complex using water as oxygen source. **H. Duan**, H. Zhou, Z. Wu, B. Yan, J. C. Bollinger, X. Zhao

749. Resonance light scattering investigation of solution phase copper(II) - curcumin coordination. **W. T. Grubbs**, C. L. Massaro

750. Stability of selected copper(I) complexes for use in oxygen sensing applications. **L. M. Hinkle**, J. A. Kessler, K. R. Mann

751. Dynamic nuclear polarization of ^{107,109}Ag complexes. **L. L. Lumata**, M. E. Merritt, Z. Hashami, J. S. Ratnakar, Z. Kovacs

752. Differential scanning calorimetry of the thermal decomposition of metal dithiocarbamate complexes. **J. E. Coffield**, C. V. Balbier, A. B. Lamyathong, N. V. Duffy, A. F. Hepp

753. Highly sensitive and selective fluorescent sensors for the detection of Cu²⁺. **R. M. Madawala**, **E. Sinn**, G. Ramakrishna

754. Effect of a histidinate ligand on ferriheme electronic structure. **A. Chamberlin**, F. Walker

755. Probing the magnetic and photoluminescent properties of manganese-based Mn^{III}₂Mn^{II}₂ single-molecule magnets. **C. C. Beedle**, J. Liu, T. Tokumoto, H. Quddusi, E. del Barco, S. A. McGill, D. N. Hendrickson, S. Hill

756. Novel light responsive α -hydroxy acid iron chelates. **M. A. Shelton**, J. Grabo, J. A. Krause, M. J. Baldwin

757. Magnetic interactions within triangular Ni(II) clusters of salicylaldehydes. **C. Eribal**, **E. Sinn**

758. Metal complexes of phenanthroline and analogs as versatile frameworks for Nitric Oxide sensing and imaging. **L. I. Lozano-Lewis**, N. M. Tsoukias, K. Kavallieratos

759. Fe₂S₂ hydrogen-producing electrocatalysts containing pnictogen ligands. **E. S. Donovan**, G. S. Nichol, G. A. Felton

760. Layered inorganic-organic networks of pyrazole-4-sulfonate metal complexes and their use in copper anticorrosion protective films. **S. Jianrattanasawat**, I. R. Fernando, N. Daskalakis, K. D. Demadis, G. Mezei

761. Synthesis and properties of novel cesium containing lanthanide-organic framework. **T. Nankawa**, Y. Ogoshi, M. Watanabe

Section I

San Diego Convention Center Hall D

Coordination Chemistry

Synthesis

D. Crans, *Organizer*

4:00 - 6:00

762. Biological interactions of Cu(II) thiazole complexes: A structure function study. **R. A. Steiner**, M. M. Wilk, J. Tanski, L. A. Tyler

763. Effect of aliphatic dicarboxylate tether on topology in luminescent cadmium coordination polymers containing bis(4-pyridylformyl)piperazine. **A. L. Pochodylo**, R. L. LaDuca

764. Synthesis and characterization of precursors for molecularly woven materials. **N. Wadhwa**, G. Mezei

765. Metal oxide nanoparticles: Fabrication and characterization. **Q. A. Drmsh**, T. A. Saleh

766. Analysis of Cu(II) thiazole complexes interactions with DNA. **M. M. Wilk**, R. A. Steiner, L. A. Tyler

767. Actinide and transition metal complexes supported by the tridentate tris(ketimine)amine ligands. **J. J. Scepaniak**, G. Wu, T. W. Hayton

768. Novel metal organic framework containing ruthenium polypyridyl complex. **Y. Li**, B. Yan, C. Carmichael

769. Design, synthesis and metalation of ligand frameworks featuring positioned hydrogen-bonding functionalities. **C. M. Moore**, N. K. Szymczak

770. Syntheses and characterations of new polynuclear iron clusters. **Y. Hou**, M. Nyman, X. Fang, T. Monson, M. A. Rodriguez

771. Reversible transformations of P-N coordination networks upon interactions with solvent. **R. D. Sommer**, K. Jason

772. Synthesis of poly(tetrazolyl)borate ligands and their coordination to the [K(18-crown-6)]⁺ fragment: Formation of a tris(tetrazolyl)borate complex. **C. J. Snyder**, M. J. Heeg, C. H. Winter

773. Structural and electronic properties of actinide metal-metal bonds. **O. P. Lam**, S. G. Minasian, D. K. Shuh, J. Arnold

774. Dicopper centers of di-2-pyridyl ketone oxime. **B. L. Westcott**, G. Crundwell, J. McMaster, E. S. Davies

775. Generalized synthesis of aluminum hexoxide and aluminum phenoxide. **M. Khosravi Mardkhe**

776. Polyfunctional ligated metal alkoxides. **L. M. Steele**, T. J. Boyle, D. Yonemoto, C. Lockhart, J. R. Farrell, T. Huhta

777. Structure, reactivity and spectroscopy of new triangular Cu(II) pyrazolate clusters. **L. Mathivathanan**, Y. Sanakis, R. G. Raptis

778. New metallacrown ligands and complexes: Exploring new α -amino acid and α -hydroxy hydroxamic acids. **N. A. Law**, G. D. Millard, M. L. Roppolo

779. Synthesis, characterization, and reactivity of new heterotrimetallic azide complexes. **Y. Turov**, J. F. Berry

780. Preparation, structural and spectroscopic characterization of mono and dinuclear cobalt and cadmium complexes with new multi-N-donor oxazolidine and amino-alcohol ligands. **M. Hakimi**

781. Investigating the coordination chemistry of the Janus head ligand tris(2-pyridyl)phosphine {P(Py)₃}: Factors affecting the formation of N-bound or P-bound metal complexes. **A. P. Valberg**, W. G. Dougherty, W. S. Kassel

782. Synthesis and structural characterization of a series of ionic triphenyltin complexes with thiolactic acid. **X. Song**, A. Callejas, G. Eng, R. Pike

783. Redox and substitution chemistry of solvent supported dimolybdenum cations. **S. C. Haefner**, L. T. McDonald

784. Complexes with the norborane 1,2-dithiolate ligand, a conformationally fixed alkane dithiolate ligand. **S. Bhattacharya**, S. Fox, S. A. Koch, M. Millar

Section J

San Diego Convention Center Hall D

Coordination Chemistry

Synthesis

D. Crans, *Organizer, Presiding*

6:00 - 8:00

785. Cyclic imide dioximes: Formation and hydrolytic stability. **S. Kang**, S. Vukovic, R. Custelcean, B. P. Hay

786. Synthesis, X-ray structure analysis and photophysical characterization of benzil-based diimine ligands and their palladium (II) complexes. D. Covarrubias, **M. Kubota**, C. Pye, F. R. Fronczek, **R. Isovitsch**

787. Synthesis and characterization of single enantiomer tetradentate aminosulfoxide ligands. **S. E. Wood**, T. J. Brunner, K. N. Taylor

788. Synthesis and photophysical properties of 1,8-naphthalimides. J. T. Redd, H. Samha, **S. Natoli**, **J. Christensen**, J. Brewer

789. Free energy correlations of platinum(II) biphenyl complexes containing 2,2'-bipyridine derivatives. **D. Rillema**, W. Huang, A. J. Cruz, K. Siam, D. Base, A. Jehan

790. Synthesis and characterization of alkoxy-ferrocene derivatives of Group 4

metal alkoxides. **T. J. Boyle**, L. M. Steele, R. Kalinich, C. A. Applett

791. Synthesis of Pt(II) and Pd(II) molecular squares and triangles using thiacycrows and azacycrows as capping ligands. **Z. Perry**, G. J. Grant

792. Ether formation on ligands of copper(II) complexes of tridentate Schiff base ligands. **G. M. Mockler**, R. Kanitz, C. Szczepina

793. Dinitrogen functionalization chemistry at Los Alamos. **N. C. Smythe**, J. C. Gordon, N. J. Henson, F. N. Rein, B. L. Scott, R. J. Trovitch

794. Coordination chemistry of a new bis(pyridyl)silone. **L. Hernandez**, D. Rabinovich

795. Ambient temperature, Highly efficient and Green synthesis of copper (I) (N,N) cyanide coordination polymers employing photodecomposition of free radical diazo initiator (AIBN). **R. o. Kaur**, T. Pintauer

796. First bis-cyanoximes: Synthesis, spectroscopic studies, crystal structures, and alkaline metals complexes. **S. Curtis**, N. Gerasimchuk, O. Ilcun, A. Brown

797. Synthesis, spectroscopic and structural characterization of a series of novel N-substituted acetamide-cyanoximes and their Pd,Pt complexes. **R. Kemp**, N. Gerasimchuk

798. Synthesis, characterization, and reactivity of unsymmetric diphosphinomethane ligands. **K. Arias**, Q. D. Shelby

799. Spectroscopic investigations of new tris(carbene)borate Iron(II) complexes. **S. B. Muñoz**, S. Xu, W. K. Foster, R. P. Bontchev, J. M. Smith

800. Using pyridine-2-carboxaldehyde-2'-pyridyl-hydrazone, papy, in the synthesis of MOFs. **H. N. Ly**, D. J. Brook

801. Convenient synthesis of new 1,10-phenanthroline ligands and the dependence of their conformations on complexation. **I. A. Dotsenko**, V. V. Samoshin

802. Toward the synthesis of divalent transition-metal nitride molecules. **S. C. DeLorenzo**, M. P. Nguyen, R. Wilson, M. V. Bennett

803. Structural comparison of formamidines and their metal complexes. **Y. Tsai**, Q. Zhao

804. Synthesis and crystallographic characterization of novel metal dithiocarbamates: Dimeric oxo-bridged molybdenum and 8-coordinated tungsten monomeric complexes. **J. N. Williams**, S. A. Duraj

Section K

San Diego Convention Center
Hall D

Inorganic Catalysts

S. Koch, *Organizer*

6:00 - 8:00

805. Advances in CO₂ hydrogenation to value added hydrocarbons. **M. T. Olsen**, D. M. Drab, R. Ananth, D. R. Hardy, F. W. Williams, F. DiMascio, H. D. Willauer

806. Catalytic activity of titania nanotubes. **C. Piewnuan**, S. Wongkasemjit, T. Chaisuwan, A. Luengnaruemitchai

807. Amide-based nonheme cobalt(III) olefin epoxidation catalyst: Partition of multiple active oxidants Co^V=O, Co^{IV}=O, and Co^{III}-OO(O)CR species. **J. Noh**, M. Hyun, H. Kim, K. Kim, J. Han, C. Kim

808. Efficient hydrocarbon oxidation reactions by manganese(III) catalysts. **I. Hwang**, Y. Jo, J. Kang, J. Bae, E. Song, C. Kim

809. X-ray determined bis(sulfonylimido)ruthenium(VI)porphyrin complex and the related C-H bond insertion reaction mechanism studies by density functional theory calculations. **Z. Guo**, C. Che

810. Different growth mode of platinum on shape controlled gold nanocrystals. **S. Yang**, N. Park, J. Han, C. Kim, S. Lee, H. Lee

811. Redox-active pincer-type N-heterocyclic carbene ligands for multielectron redox reactions at iron and cobalt. **M. B. Bayless**, J. D. Soper

812. Nonheme iron-catalyzed olefin cis-dihydroxylation: Kinetics and the effects of additives. **J. DeGayner**, Y. Song, P. V.K.K., L. Que

813. Mono- or multi-metallic vanadium complexes as catalysts for aerobic oxidation of lignin model. **G. Zhang**, S. K. Hanson

814. Water oxidation by metal complexes with tris(2-pyridylmethyl)amine and derivatives. **C. Que**, M. Singh, C. E. Webster, X. Zhao

815. Regioselective epoxide ring opening with alcohols catalyzed by Co(III) catalyst with trianionic ligand. **Y. Feng**, C. W. Jones

816. DFT study on monomolecular mechanisms of propane activation on H-ZSM-5. **T. Nanok**, J. Limtrakul

817. Ruthenium polypyridyl photocatalysts for CO₂ reduction. **D. J. Boston**, K. Huang, N. Tacconi, R. O. Lezna, F. M. MacDonnell

818. Organo-cobalt mediated radical polymerization of acrylonitrile: Synthesis and mechanistic studies. **Z. Ye**, B. B. Wayland

819. Dimeric design strategy for transfer hydrogenation catalysts. **D. Tran**, S.

Gee, I. Ilyaich, L. Gazdowicz, T. Kadkhodayan, E. P. Kelson

820. Application of semiconductor-metal heterostructured nanocrystals for the production of hydrogen via photocatalysis. **M. J. Imboden**, M. A. Zamkov, T. F. O'Connor, K. P. Acharya, R. S. Khnayzer, G. Diederich

821. Electrocatalytic hydrogen production with 2-azapropene-1,3-dithiolato-bridged hydrogenase-mimics. **S. C. Borowski**, G. B. Hall, D. H. Evans, R. S. Glass, D. L. Lichtenberger

822. Electrochemical and computational investigations of (μ -pyrazine-2,3-dithiolato)dironhexacarbonyl as a catalyst for proton reduction from weak acids. **E. R. Smith**, T. Sakamoto, D. H. Evans, R. S. Glass, D. L. Lichtenberger

823. Polymer-supported oxime palladacycle: Influence of electron-rich ligands on catalytic activity. **H. Cho**, S. Jung, S. Kong, H. Yoon, S. Lee, Y. Lee

824. Synthesis and acid reactivity of molybdenum and tungsten dinitrogen complexes supported by chelating diphosphine ligands containing proton relays: Towards reduction of dinitrogen to ammonia. **C. J. Weiss**, A. N. Groves, M. T. Mock, D. L. DuBois, R. M. Bullock

825. Novel tripodal tris(2-aminoethyl)amine (tren)-based ligand for copper catalyzed atom transfer radical addition (ATRA). **T. Ribelli**, M. Holtz, T. Pintauer

826. Homogeneous vanadium catalyst and its supported analog for catalytic aerobic oxidation of benzylic alcohols. **B. N. Wigington**, S. K. Hanson, M. L. Drummond, T. R. Cundari, D. L. Thorn, S. L. Scott

827. Enhancing photocatalytic activity of WO₃ by embedding on carbon nanotube: Synthesis and implementation. **T. A. Saleh**

828. Copper oxide supported on mesoporous CeO₂ as a catalyst for N-arylation reaction. **L. Al-Hmoud**, L. Chen, C. W. Jones

829. Liquid-phase cyclohexene epoxidation over mesoporous-assembled TiO₂-CeO₂ mixed oxide catalysts. **P. Chaemchaeng**, S. Jongpatiwut

Section L

San Diego Convention Center
Hall D

Main Group Chemistry

N. Radu, *Organizer*

6:00 - 8:00

830. Synthesis and reactivity studies of Janus-type biscarbenes featuring phosphorus-stabilized carbidocarbenes and N-heterocyclic carbenes. **K. N. Schreiber**, T. W. Hudnall

831. Synthesis and reactivity studies of a novel persistent amino-amido carbene. **R. M. Mushinski**, T. W. Hudnall

832. Mimicking transition metal reactivity with aluminum complexes of redox active ligands. **T. W. Myers**, N. Kazem, L. A. Berben

833. Utilization of hypervalent iodonium alkynyl triflates for the generation of cyanocarbenes. **I. D. Hyatt**, M. P. Croatt

834. Synthesis and characterizations of phosphorus-containing conjugated materials. **F. L. Laughlin**, A. L. Rheingold, J. D. Protasiewicz

835. Copper-catalyzed coupling reactions of cluster halides. **D. S. Jaremko**, A. J. Ramirez, J. A. Dopke

836. Synthesis and characterization of novel azacrown heterocycles. **A. R. Gatlin**, A. J. Ramirez, J. A. Dopke

837. Spectroscopic characterization and aggregation-induced emission of 1,1-diallyl- and 1,1-di(hydroxypropyl)-substituted siloles and germales. **K. A. Edwards**, J. Crumrine, C. E. Faller, M. J. Fontair, M. van den Berg, N. Benfaremo, J. R. Ford, J. L. Mullin, C. K. Prudente, H. J. Tracy

838. Spectroscopic characterization of a series of naphthyl-substituted siloles. **K. E. Edwards**, J. Erickson, K. Fecteau, J. M. Hopkins, B. Eichler, J. R. Ford, **J. L. Mullin**, C. K. Prudente, H. J. Tracy

839. Synthesis of bismuth nitride and phosphide clusters and nanoparticles. **N. Yamamoto**, A. G. Nash, R. N. Gilley, R. J. Wilson, M. V. Bennett

Section M

San Diego Convention Center
Hall D

Early Transition Metal Chemistry

S. Koch, *Organizer*

6:00 - 8:00

840. Synthesis, identification and spectrophotometric studies to distinguish the products structures of Bis(acetylacetonate) Oxovanadium(IV) with D-penicillamine in different mediums. **R. Hakimelahi**

841. Behavior of tungtophosphoric Keggin anion in methanol/water solutions followed by spectroscopic techniques. I. Holclajtner-Antunović, D. Bajuk-Bogdanović, A. Popa, **S. Uskokovic-Markovic**

842. Stabilization of acyclic N4 by d-block metals. **S. Jasper**, **A. Hammond**, **S. Phelps**, Z. Eddins, **D. L. Strout**

843. Rapid aqueous [¹⁸F]-labeling of a bodipy dye for positron emissiontomography/fluorescence dual modality imaging. **T. Lin**, F. P. Gabbai, Z. Li

844. Synthesis and coordination chemistry of an arene-substituted

tris(amido) redox-active ligand. **R. F. Munhá**, A. F. Heyduk

845. Highly soluble heteropolyniobates. **Y. Hou**, M. Nyman, M. A. Rodriguez, T. Alam

846. Examining the role of metal valence level on ligand non-innocence. **S. Hananouchi**, R. A. Zarkesh, A. F. Heyduk

Section N

San Diego Convention Center
Hall D

Late Transition Metal Chemistry

S. Koch, *Organizer*

6:00 - 8:00

847. Synthesis of transition metal complexes with redox-active ligands for catalysis. **K. L. Stone**

848. Synthesis and characterization of four-electron transfer platinum complexes. **H. D. Manamperi**, S. Chatterjee, J. A. Krause, W. B. Connick

Section O

San Diego Convention Center
Hall D

Chemical Interactions of Metal-related Therapeutic Drugs

C. Verani, M. Lim, D. Schatzschneider, *Organizers*
D. Crans, *Organizer, Presiding*

6:00 - 8:00

849. New cobalt(III) complex as a prototype for pro-drugs activated by hypoxia. F. L. Bustamante, F. A. Castro, M. D. Pereira, C. B. Pinheiro, **M. Lanznaster**

850. Exploring the reactivity of flavonoids toward metal-associated amyloid- β species in Alzheimer's disease. **A. S. DeToma**, S. Hyung, J. R. Brender, J. Choi, A. Ramamoorthy, B. T. Ruotolo, M. Lim

851. Effects of tethered ligands and of metal oxidation state on the interactions of metal complexes with the 26S proteasome. **D. Tomco**, S. Schmitt, Q. P. Dou, C. N. Verani

852. Characterization and cytotoxicity of a new series of metal-metal bonded compounds. **S. Lane**, K. Dunbar, H. Chifotides

853. Alpha-helical metallopeptide platforms for cellular targeting. **S. Smith**, A. Tezcan

854. BACE activated prochelator mediates A β -Cu toxicity in an Alzheimer's disease cell model. **D. S. Folk**, J. Torosian, K. J. Franz

855. Selective cytotoxicity of rhodium metalloinsertors in mismatch repair-deficient cells. **R. J. Ernst**, A. C. Komor, J. K. Barton

856. Synthesis and bacteria studies of new heterocyclic thiosemicarbazones. **C. N. Thompson**, V. Holcomb, J. Ventrice, E. C. Lisic

857. Investigation of [cis-Rh₂(μ -L-L)₂(L')₂][BF₄]₂ "partial paddlewheel" compounds as photodynamic therapy agents. **Z. Li**, N. Leed, C. Turro, K. R. Dunbar

858. Polypyridine ruthenium(II) bis-acetonitrile complexes as photocisplatin analogs. **B. Peña**, N. Leed, C. Turro, K. R. Dunbar

859. Mechanism of action of novel light activated cytotoxic ruthenium compounds. **D. Heidary**, B. Howerton, E. Glazer

860. Synthesis and characterization of dirhodium based metallopeptides: Facilitating drug delivery systems for cell translocation. **A. David**, K. R. Dunbar, J. P. Pellois

861. Weak interactions of ligand-receptor binding events: Electron transfer of protein-bound transition metals. **H. Hsu**, D. J. Feld, A. L. Eckermann, T. J. Meade

862. Development of bifunctional small molecules that target and modulate the reactivity of metal-associated amyloid- β species in Alzheimer's disease. **A. S. Pithadia**, M. Lim

863. Insight into the photoinduced ligand exchange reaction pathway of cis-[Rh₂(μ -O₂CCH₃)₂(CH₃CN)₆]²⁺ with a DNA model chelate

H. T. Chifotides, D. Lutterman, C. Turro, K. R. Dunbar

864. Photoactive CO releasing moieties (photoCORMs) based on rhenium diimine carbonyls for use in therapeutic applications. **A. E. Pierri**, P. C. Ford

865. Modifying photoactive ruthenium salen nitrosyls for covalent attachment to QDs and quantum yield studies of NO release. **M. A. Crisalli**, C. F. Works, P. C. Ford

866. Formation of phosphine oxide during gold(I) mediated thiol-disulfide exchange reactions. **A. E. Bruce**, G. Garusinghe, M. Aghamoosa, M. R. Bruce

867. Development of two families of bifunctional small molecules that target and modulate the reactivity of metal-A β species

J. J. Braymer, J. Choi, S. Vivekanandan, S. Park, J. Chae, A. Ramamoorthy, M. Lim

Section O

San Diego Convention Center
Hall D

Inorganic Spectroscopy

S. Ronco, *Organizer*

6:00 - 8:00

868. Paramagnetic iron(II) azamacrocyclic complexes as paraCEST contrast agents for MRI. **S. J. Dorazio**, J. R. Morrow

869. Direct determination of the zero-field splitting parameter in high-spin meso-tetraphenylporphyrin iron(III) chloride by inelastic neutron scattering. **S. C. Hunter**, A. A. Podlesnyak, Z. Xue

870. Detailed hydrogen bonding and deprotonation equilibria between a ruthenium biimidazole-like complex and acetate anion. **H. Mo**, B. Ye

871. Ultrafast photochemistry of copper(II) chlorocomplexes in methanol and acetonitrile solutions. **A. S. Mereshchenko**, S. K. Pal, P. Z. El-Khoury, K. E. Karabaeva, A. N. Tarnovsky

872. Excited electron transfer in Ruthenium(II) complexes: Experiment and theory. **M. Kowalczyk**, S. Jang, H. D. Gafney

873. Chemical tuning of the [ππ]* electronic manifolds of diimine complexes of zinc(II). **A. Gomez**, C. Nagatoshi, J. W. Kenney, III, G. A. Crosby

874. Nanosecond FTIR in probing solvent ligand systems and a metal-mediated Pauson-Khand reaction. **N. S. Teodoro**, J. M. Marx, R. J. Gates, M. C. Asplund

875. "Turn-On" fluorescent sensor for the selective detection of cobalt, nickel and copper ions in aqueous media. **F. Abebe**, E. Sinn

876. pH tuning of the electronic states Schiff-base complexes of zinc(II). **D. Garcia**, **N. B. Loree**, J. W. Kenney, III, G. A. Crosby

877. Novel turn-off nerve gas sensors based on coumarin Schiff base derivatives. **E. Sinn**, **F. Abebe**

878. Water structure making/breaking properties of added "simple" salts drive systematic shifts in the spectroscopic ligand-to-metal and intervalence-transfer (Franck-Condon) absorption band energies of aqueous mononuclear and binuclear ruthenium ammine complexes. **S. Doran**, **A. G. Fabrizio**, M. Sheng, J. C. Curtis, R. A. Yegge

879. Spectroscopic probes of the excited electronic manifolds of tris diimine complexes of rhodium(III)

D. M. Jagow, **S. Kim**, J. W. Kenney, III, G. A. Crosby

880. Mechanistic insight into the water oxidation mechanism of the blue dimer using continuous wave and pulse electron paramagnetic resonance. **J. A. Stull**, J. K. Hurst, R. D. Britt

Section O

San Diego Convention Center
Hall D

Organometallic Chemistry

Catalysis

N. Radu, *Organizer*

6:00 - 8:00

881. Photochemistry of CpM(CO)₂Cl [M = Fe, Ru] complexes: A time-resolved infrared study. **M. Sohail**, S. J. Kyran, D. J. Darenbourg, A. A. Bengali

882. Multifunctional ligands as a means towards dual oxidation state stabilization. **J. Bothwell**, C. Scarborough

883. Triaryl boranes as ligands for transition metals. **A. Thangavel**, C. Scarborough

884. Mechanistic studies on the auxiliary-assisted palladium-catalyzed C-H bond functionalization. **G. Franco**, O. Daugulis

885. Iridium-catalyzed C-H borylation of benzylic amines: Reaction development and substrate scope. **L. V. Hale**, **M. A. Ringgold**, A. J. Roering, P. A. Squier, **J. M. Capaldi**, E. R. Butler, T. B. Clark

886. Tungsten initiators for selective olefin dimerisation. **C. Lujan Barroso**

887. Catalytic hydrophosphination of alkene using primary phosphines by triamidoamine-supported zirconium complexes. **M. B. Ghebream**, R. Waterman

888. Direct regioselective and highly enantioselective intermolecular α -allylic alkylation of aldehydes by combination of transition metal and chiral amine catalysts. **S. Afewerki**, I. Ibrahim, P. Breistein, J. Rydjford, A. Cordova

889. One-pot three-component catalytic asymmetric synthesis of homoallylboronates. I. Ibrahim, **S. Afewerki**, P. Breistein, A. Cordova

890. Electronically similar and electrochemically dissimilar [(μ -2,4-pentanedithiolato)]Fe(CO)₃]₂ and [(μ -1,3-propanedithiolato)]Fe(CO)₃]₂: A structural, electrochemical, and computational study of diiron hydrogenase active site mimics. **L. M. Whelan**, G. B. Hall, G. S. Nichol, D. H. Evans, R. S. Glass, D. L. Lichtenberger

891. Mechanistic studies of Cu catalyzed arylation of 1-*H*-perfluoroalkanes. **I. Popov**, O. Daugulis

892. Role for the oximate/iminoxyl couple in metal-catalyzed aerobic alcohol and amine oxidations. **G. O. Wilson**, S. Warncke, J. A. Krause, M. J. Baldwin

893. Oxygen generation from water catalyzed by Ruthenium complexes with Tpy-based ligands. **S. Kudo**, S. R. Reid, W. M. Singh, C. E. Webster, X. Zhao

894. Investigation of monoanionic and dianionic tetradentate ligands for the stabilization of high-valent transition-

metal species. **H. Ma**, C. C. Scarborough

895. Rhodium catalysts for the asymmetric synthesis of chiral macrocycles. **H. A. Khan**, V. M. Dong

896. Noninnocent quinonedithiolato ligands in [FeFe]-hydrogenase active site mimics: EPR characterization of spin density delocalization in the radical anions. **G. B. Hall**, M. T. Swenson, J. M. Triphahn, S. E. Ossowski, J. Chin, N. Okumura, U. I. Zakai, D. H. Evans, R. S. Glass, D. L. Lichtenberger

897. Understanding the mechanism of C-H amination via Cu(I) β -diketiminato alkylnitrenes. **M. B. Aguila**, Y. M. Badiei, T. H. Warren

898. Intermolecular ketone hydroacylation via Rh catalysis employing novel ligand designs. **L. E. Longobardi**, V. M. Dong

899. Rh(III)-catalyzed oxidative coupling of unactivated alkenes via C-H activation: Reaction development and mechanistic insights. **A. S. Tsai**, **M. Brasse**, J. A. Ellman, R. G. Bergman

900. Investigation of the hydration of cyanohydrins with [Ru(η^6 -arene)Cl₂PR₃] complexes. **S. M. Knapp**, D. R. Tyler

901. Bifunctional bidentate N-heterocyclic carbene pyrazole complexes. **M. M. Uteuliyev**, D. B. Grotjahn, C. Chen, A. L. Rheingold

902. NMR and MS studies of iridium based molecular catalysts during water oxidation with ceric ammonium nitrate. **D. C. Marelus**, D. B. Grotjahn, D. B. Brown, J. K. Martin, M. Abadjian, H. N. Tran, G. Kalyuzhny, K. S. Vecchio, Z. G. Specht, S. A. Cortes-Llama, V. Miranda-Soto, C. van Niekerk, C. E. Moore, A. L. Rheingold

903. N-Heteroaryl-N-heterocyclic carbene complexes. **J. M. Kamdar**, J. A. Golen, A. L. Rheingold, D. B. Grotjahn

904. Synthesis of ruthenium N-heterocyclic carbene (NHC) complexes as catalysts for transfer hydrogenation of carbonyl compounds. **J. DePasquale**, M. Kumar, M. Zeller, E. T. Papish

905. Synthesis, structural, and electrochemical studies of diiron hydrogenase mimics: [(μ -SR)(μ -SR')Fe₂(CO)₆] system. **O. In-noi**, D. L. Lichtenberger, R. S. Glass, D. H. Evans, J. H. Enemark, K. J. Haller

906. Synthesis and characterization of transition metal complexes useful for the catalytic deconstruction of lignin. **S. C. Chmely**, S. Kim, G. T. Beckham

Section O

San Diego Convention Center
Hall D

Organometallic Chemistry Synthesis and Characterization

N. Radu, *Organizer*

6:00 - 8:00

907. Synthesis and characterization of novel strontium complex using symmetrically functionalized tetradentate β -diketimine ligand. **S. M. George**, G. Yon, B. Park, C. Kim, T. Chung

908. Synthesis and characterization of *fac*-Re(CO)₃(ASMA) (ASMA = aspartic-N-monoacetic acid), a rhenium analog of a promising renal imaging tracer with a ^{99m}Tc-tricarbonyl core. **J. Klenc**, M. Lipowska, L. G. Marzilli, A. T. Taylor

909. Synthesis and characterization of *fac*-Re(CO)₃L' complexes with polyaminocarboxylic acid ligands as analogs of *fac*-Re(CO)₃(NTA)²⁻ relevant to the development of ^{99m}Tc imaging agents. **J. Klenc**, M. Lipowska, L. G. Marzilli, A. Taylor

910. Asymmetric syntheses of As-P bidentate ligands. **N. Zhang**, S. Pullarkat, P. Leung

911. How big is a Cp? Cycloheptatrienyl zirconium complexes with bulky cyclopentadienyl and indenyl ligands. **A. Gloeckner**, H. Bauer, T. Bannenberg, C. G. Daniliuc, H. Sitzmann, M. Tamm, M. Walter

912. Synthesis and reactivity of cyclopentadienyl chromium imido complexes. **W. Zhou**, K. M. Smith

913. Synthesis and characterization of some group (VII) pyridazyl complexes. **J. O. Young**, N. C. Tice, C. A. Snyder

914. Arene ruthenium complexes bearing electroneutral phosphanes: Synthesis, characterization, and biological activity. **N. G. Petrochko**, R. Peters, M. M. Choate, R. G. Baughman

915. Molybdenum complexes with perfluoroalkyl phosphane ligands: Synthesis, characterization and electronic properties. **J. N. Ash**, R. G. Baughman, M. M. Choate, N. G. Petrochko, R. Peters

916. Soluble luminescent 2,3,4,5-tetraarylsiloles: Synthesis and characterization for use in OLED devices. **B. J. Jackson**, B. E. Eichler

917. Electrochemistry of 1,1'-disubstituted cobaltocenium compounds. **J. K. Pagano**, K. D. Reichl, C. L. Mandell, O. J. Henn, E. C. Sylvester, C. Nataro, W. G. Dougherty, W. S. Kassel

918. Synthesis, characterization, and reactivity of new palladium complexes for catalytic applications to make polymeric materials. **K. R. McGarry**, A. R. O'Connor, B. C. Chan

919. Synthesis and structure of group 10 phosphinoferrrocene complexes. **M. M. Mooberry**, S. Schreiner

920. Synthesis and structure of iridium hydride and iridium carbonyl complexes. **S. E. Schreiner**, S. Schreiner

921. Zinc rich molecules and their coordination sphere. **M. Molon**, C. Rösler, J. Schaumann, C. Gemel, R. A. Fischer

922. Highly luminescent tridentate N³C²N Platinum (II) complexes featuring in fused five-six-membered metallacycle and diminishing concentration quenching. **D. A. Vezzu**, **D. Ravindranathan**, S. Huo

923. New Fe(III) *bis*-acetylido compounds based on the Fe-cyclam motif

Z. Cao, W. Forrest, Y. Gao, P. Fanwick, Y. Zhang, T. Ren

924. Synthesis of iridium pincer catalysts for water oxidation. **L. Wingard**, P. White, M. Brookhart, J. Templeton

925. Synthesis and characterization of a Ni(II)Au(I) bimetallic complex utilizing the Janus head ligand tris(2-pyridyl)phosphine [P(Py)₃]. **W. G. Dougherty**, W. S. Kassel

926. Diruthenium *syn*-facial naphthalene and anthracene complexes. **M. Chin**, H. Salembier, T. Hammond, R. Wallace, E. Alqassab, M. B. Hall, L. M. Perez, W. Brennessel

927. Synthesis and characterization of molecular gyroscopes and cage-like diphosphines via alkene metathesis. **T. Fiedler**, J. A. Gladysz

928. Novel N-pyridyl imidazolidene carbenes coordinated to iridium. **Z. Specht**, D. Grojahn, C. E. Curtis, A. L. Rheingold

929. Alteration of molecular structure of metal-metal bonded dimers by exposure to C₆₀ fullerene. **F. L. Bowles**, A. L. Balch, M. M. Olmstead

930. Schlenk equilibrium in an organometallic manganese(II) system. **R. M. Meier**, T. P. Hanusa, W. B. Brennessel

931. New ferrocenecarboxylate derivatives: Synthesis and in vitro antitumor activity study on human colon carcinoma cells (HT-29). **J. L. Rullán González**, J. M. Jiménez Santiago, J. L. Vera Serrano, E. Meléndez

932. Stoichiometric and catalytic reactivity of electrophilic manganese (I) complexes. **E. Hulley**

933. High-spin mono- and polymetallic manganese allyl complexes. **L. K. Engerer**, C. N. Carlson, T. P. Hanusa

934. Metal-organic networks with lipid components

L. J. Andujo, J. C. Noveron

935. Study on the gel to crystal transition of acetamido functionalized

gold(I) N-heterocyclic carbene complexes. **I. J. Lin**

936. Amino acid functionalized imidazolium salts and their silver(I) and gold(I) N-heterocyclic carbene complexes. **T. H. Hsu**

WEDNESDAY MORNING

Section A

San Diego Convention Center
Room 10

ACS Award in Inorganic Chemistry: Symposium in Honor of Clifford P. Kubiak

J. Figueroa, *Organizer*
J. McCusker, *Presiding*

9:00 937. Allosterically regulated supramolecular assemblies synthesized via the weak-link approach (WLA). **C. A. Mirkin**

9:25 938. Oxide semiconductor nano-morphologies for energy conversion. **T. Bein**

9:50 939. Cobalt-based electrocatalysts for water oxidation: Studies with heterogeneous and molecular systems. **T. Tilley**, K. Ahn, A. I. Nguyen

10:15 940. Watching radical transport in a functioning enzyme. **D. G. Nocera**

10:40 Intermission.

10:50 941. Applications of coordination chemistry in the synthesis of single-molecule magnets. **J. D. Rinehart**, J. M. Zadrozny, K. R. Meihaus, T. Harris, D. E. Freedman, **J. R. Long**

11:15 942. Exploring azaallyls and derivatives as potential redox-active ligands. **P. T. Wolczanski**, E. R. Bartholomew, V. A. Williams, W. D. Morris, B. Lindley, T. R. Cundari

11:40 943. Activation of carbon dioxide by early/late heterobimetallic complexes. **C. M. Thomas**, J. P. Krogman

12:05 944. Uranium-mediated carbon dioxide activation and functionalization. **K. Meyer**

Section B

Westin Gaslamp
California Ballroom A

Nanostructured Electronic Materials

L. McElwee-White, *Organizer*
G. Girolami, *Organizer, Presiding*

8:30 Introductory Remarks.

8:35 945. Metalcones: Hybrid organic-inorganic films fabricated using atomic and molecular layer deposition techniques. **S. M. George**

9:05 946. Ab initio simulations of ALD mechanisms and the properties of ALD films. **C. B. Musgrave**

9:35 947. Direct characterization of the surface plasmon-mediated photothermal

effect on metallic nanostructures. **W. Wei, J. Qiu, J. Wang**

10:05 948. Novel nanostructured electronic nanomaterials for energy applications. **S. S. Wong**

10:35 Intermission.

10:45 949. Nanometalization of single-wall carbon nanotubes and graphene quantum dots. **W. Ye, P. A. Peña Martin, N. Kumar, D. Estrada, S. R. Daly, A. A. Rockett, J. R. Abelson, E. Pop, G. S. Girolami, J. W. Lyding**

11:15 950. Atomically precise manufacturing: Opportunities, challenges, and impact. **J. N. Randall**

11:45 951. Pressure-directed assembly of new classes of multi-dimensional nanostructures. **H. Fan**

Section C

San Diego Convention Center
Room 11A

Electrochemistry

B. Lucht, Organizer
J. Long, J. Protasiewicz, Presiding

8:30 952. Electrodeposition of silicon in a phosphonium ionic liquid. **S. A. Grimes, A. H. Cowley, A. J. Bard, S. Cho**

8:50 953. Renewable energy from a neglected photovoltaic material: Synthesis and photoelectrochemistry of boron arsenide. **S. F. Swingle, A. H. Cowley, A. J. Bard, S. Wang**

9:10 954. PEO-like plasma-polymerized electrolyte coatings for 3D microbatteries. **L. Dudek, D. Membrano, L. Schelhas, N. Cirigliano, C. J. Kim, B. S. Dunn, S. H. Tolbert**

9:30 955. FRIONs: Flame retardant ions for safer lithium ion batteries. **A. R. Shaffer, N. Deligonul, D. A. Scherson, J. D. Protasiewicz**

9:50 956. Electrochemistry of magnesium electrolytes. **C. B. Bucur, J. Muldoon**

10:10 957. Chromium doped high voltage $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ spinel-cathode materials for lithium ion batteries. **K. Manimaran, P. Manikandan, R. Yogeswaran, M. Raju, M. V. Ananth, P. Periasamy, T. Premkumar**

10:30 Intermission.

10:40 958. Hydrothermal synthesis of spinel structured nanomaterials as lithium-ion insertion electrodes. **B. M. Bartlett, X. Hao, Y. Kuo, B. P. Clifford**

11:00 959. Exploring electrochemical windows of room-temperature ionic liquids by hybrid QM-MM method and thermodynamics calculations. **Y. Tian, E. R. Batista**

11:20 960. Redesigning iron oxides in nanoscale and defective forms for enhanced electrochemical charge storage in rechargeable lithium

batteries. **J. W. Long, B. P. Hahn, L. Dudek, K. A. Pettigrew, D. R. Rolison**

11:40 961. Electrochemical characterization of naturally-occurring diselenide bonds. **F. Dewan, M. C. Buzzeo**

12:00 962. Enhanced Lithium storage of nanostructured SnO_2 electrodes analyzed by galvanostatic titration and annealing. **M. R. Smith, D. Teeters**

Section D

San Diego Convention Center
Room 8

Geometric and Electronic Structure Contributions to Reactivity

Materials

P. Chen, D. Gamelin, Organizers
P. Kennepohl, Organizer, Presiding
S. Didziulis, Presiding

8:30 963. Electronic structures of doped semiconductor nanocrystals. **D. R. Gamelin**

9:00 964. Design and pitfalls in the synthesis of single-molecule magnets: High anisotropy barriers vs. slow magnetization tunneling. **T. Glaser**

9:30 965. Charge transfer in metal-organic frameworks: Implications for sensing. **M. D. Allendorp, P. L. Feng, K. Leong**

10:00 966. Single-molecule catalysis: Beyond enzymes. **P. Chen**

10:30 Intermission.

10:50 967. Oxygen reduction for fuel cells and batteries: Mechanistic studies and the design of new catalysts. **A. A. Gewirth, M. Thorseth, C. Tornow**

11:20 968. Reactive intermediates in methane to methanol conversion over Cu containing zeolites. **P. Vanelderen, P. J. Smeets, R. G. Hadt, J. S. Woertink, R. A. Schoonheydt, E. I. Solomon, B. F. Sels**

11:50 969. Making oxygen. **H. Gray**

Section E

San Diego Convention Center
Room 7B

Nanoscience

Controlled Synthesis

S. Wong, R. Richards, Organizers
A. Dennis, B. Hernandez-Sanchez, Presiding

8:00 970. Facile spin-cast route for cation exchange of multilayer perpendicularly-aligned nanorod assemblies. **D. Kelly, A. Singh, C. A. Barrett, C. O'Sullivan, C. Coughlan, F. R. Laffir, C. O'Dwyer, K. M. Ryan**

8:20 971. Realization to reduced temperature high performance transparent metal oxide semiconductors via a solution processed materials chemistry approach. **K. K. Banger, R.**

L. Peterson, K. Mori, Y. Yamashita, T. Leedham, H. Siringhaus

8:40 972. Control of the crystallinity in TiO_2 microspheres through silica impregnation. **M. Dahl, Y. Yin**

9:00 973. Novel synthesis of MnO nanoparticles and size-dependance of magnetic properties. **D. Sabo, J. Zhang**

9:20 974. Glovebox-free procedure to preparing water-soluble Mn^{2+} -doped (CdSSe)ZnS (core)shell nanocrystals for radiometric temperature sensing. **C. Hsia, A. Wuttig, H. Yang**

9:40 975. Tailoring the magnetic behavior of transition metal ferrite nanoparticles. **B. A. Hernandez-Sanchez, D. A. Garcia, T. Monson, J. L. Leager, S. Hoppe, C. P. Jose, C. DiAntonio, H. Y. Greenslet, A. Graziano**

10:10 Intermission.

10:20 976. Biological route to synthesizing nanostructured chalcogenides. **I. R. McFarlane, J. R. Lazzari-Dean, T. D. Yuzvinsky, M. Y. El-Naggar**

10:40 977. Shape- and size-control in the solution-phase synthesis of SnSe nanocrystals. **J. J. Buckley, R. L. Brutchey**

11:00 978. Single crystalline octahedral clusters of spherical PbSe nanocrystals, implications on the mechanism of "oriented attachment" growth of PbSe nanocrystals. **D. K. Britt, Y. Yoon, P. Alivisatos**

11:20 979. Tuning the surface structure and optical properties of CdSe clusters using coordination chemistry. **B. M. Cossairt, J. S. Owen**

11:40 980. Synthesis and direct surface functionalization on vinyl-capped CdS quantum dots. **Y. Guo, E. Tavasoli, R. Zhu, P. Kunal, A. M. Gerber, J. Vela**

12:00 981. Synthesis of novel non-blinking semiconductor nanocrystal quantum dots emitting in the near-infrared. **A. M. Dennis, Y. Park, B. Mangum, H. Htoon, J. A. Hollingsworth**

Section F

San Diego Convention Center
Room 9

Coordination Chemistry

Synthesis

D. Crans, Organizer
P. Sadler, T. Chivers, Presiding

8:30 982. Effect of ligand field-strength on electron delocalization in the octahedral clusters $[(^L\text{L})_2\text{Fe}_6(\text{L})_m]^n$ ($\text{L} = \text{DMF, MeCN, CN}^-$). **R. Hernández Sánchez, T. Harris, T. A. Betley**

8:50 983. S,C,S-pnictogen and -chalcogen bonding and insertion reactions of methanediides of Sb, Bi

and Te. **R. Thirumoorthi, T. Chivers, I. Vargas-Baca**

9:10 984. Hafnium alkoxide derivatives for production of high dielectric constant nanomaterials. **T. J. Boyle, L. M. Steele, T. Q. Doan, D. T. Yonemoto, A. Jones, C. Hamlin, N. Bell, S. Dirk**

9:30 985. Driving polynuclear reaction chemistry. **A. R. Fout, T. A. Betley**

9:50 986. Dioxygen reactivity of an yttrium-tricopper complex as a model for laccase. **D. Lionetti, M. W. Day, T. Agapie**

10:10 Intermission.

10:20 987. Synthesis and reactivity of triiron clusters. **T. M. Powers, T. A. Betley**

10:40 988. Synthesis of heterometallic trimanganese Mn_3MO_x complexes supported by a hexapyridyl 1,3,5-triarylbenzene ligand. **E. Y. Tsui, J. S. Kanady, M. W. Day, T. Agapie**

11:00 989. Tetramanganese complexes with controlled oxygen atom incorporation: Modeling photoassembly of the oxygen-evolving complex in photosystem II. **J. S. Kanady, E. Y. Tsui, M. W. Day, T. Agapie**

11:20 990. Synthesis and characterization of first row transition metal ketimides with supported metal-metal bonds. **R. A. Lewis, A. Chapovetsky, S. Morochnik, G. Wu, T. W. Hayton**

11:40 991. Preparation and properties of a high-spin Mn(V)-oxo complex. **T. Taguchi, R. Gupta, B. Lassalle, J. Yano, M. P. Hendrich, A. S. Borovik**

12:00 992. Synthetic models of the oxygen evolving complex of photosystem II. **T. Agapie, J. S. Kanady, E. Y. Tsui**

12:20 993. New mesoporous chiral metal-organic frameworks. **S. Kaskel, I. Senkovska, N. Klein**

Section G

San Diego Convention Center
Room 11B

Organometallic Chemistry

Synthesis and Characterization

N. Radu, Organizer
T. Burkey, Presiding

8:30 994. Reaction of 3-ferrocenylpropynal with iron carbonyl and chalcogenised iron carbonyl clusters: Formation of new ligands; $[\text{Fe}(\text{CO})_3-\eta^4-(\text{FcC}_2\text{CHO})_2]$, $[\text{Fe}(\text{CO})_2\{\eta^2-\eta^2-(\text{FcC}_2\text{CHO})_2\text{Fe}(\text{CO})_3-\mu-\text{CO}\}]$ and 1,2,3-triselenole. **D. K. Rai, M. Tauqeer, M. M. Shaikh, P. Mathur**

8:50 995. Synthesis, structures and spectroscopy of platinum(II) complexes with bis(oxazoliny)phenyl ligands. **D. Zhao, J. A. Krause, W. B. Connick**

9:10 996. Synthesis, protonation, and reduction of ruthenium(II) dioxygen complexes with pendent amines. **T. A. Tronic**, M. Rakowski DuBois, J. M. Mayer

9:30 997. Luminescent dipyrinato complexes of paramagnetic metal ions. **A. B. Scharf**, T. A. Betley

9:50 998. Redox and photoactive metallyne σ -acetylide complexes with *cross-conjugated* ligands. **W. P. Forrest**, Z. Cao, P. E. Fanwick, T. Ren

10:10 999. Synthesis and reactivity of azapentadienyl-cobalt complexes. **W. Anutrasakda**, J. R. Bleeke, N. P. Rath

10:30 Intermission.

10:40 1000. Synthetic, structural, photochemical, and thermochemical studies of arene chromium tricarbonyl complexes with tethered pyridine groups. **T. J. Burkey**, C. B. Duke, R. G. Letterman, C. R. Ross, C. E. Webster

11:00 1001. Preparation and photochemistry of cyclopentadienyl manganese tricarbonyl derivatives with pendant hydrazone and pyridine groups. **T. J. Burkey**, E. J. Heilweil, J. O. Johnson, K. L. Mosley, P. P. Lubet, C. E. Webster

11:20 1002. Enhanced stability of high-oxidation molybdenum alkylidene complexes containing bipyridine and their use as catalyst precursors. **A. G. Lichtscheidl**, R. R. Schrock, A. H. Hoveyda

11:40 1003. Tapping into the electron reservoir of the pyridylpyrrolide ligand class. **K. Searles**, C. Chen, M. Pink, K. Pal, D. Mindiola, K. Caulton

12:00 1004. Evidence for a reactive (alkene)(peroxo)iridium(III) complex. **J. Rohde**, M. R. Kelley

12:20 1005. Unprecedented autocatalytic O₂ activation by a trianionic OCO³⁻ pincer chromium(III) oxidation catalyst and the role of μ -oxo dimer (Cr^{IV}-O-Cr^{IV}) intermediate. **M. E. O'Reilly**, T. J. Del Castillo, J. M. Falkowski, V. Ramachandran, M. C. Correia, M. Pati, K. A. Abboud, N. S. Dalal, D. E. Richardson, A. S. Veige

Section H

San Diego Convention Center
Room 5A

**ACS Award in Pure Chemistry:
Symposium in Honor of Oleg V.
Ozerov**

A. Goldman, F. Gabbai, *Organizers*
A. Veige, *Presiding*

8:30 1006. Single-crystal-to-single crystal oxidative addition reactions: Role of the "reaction cavity". A. H. Nguyen, A. L. Fernandez, O. V. Ozerov, **B. M. Foxman**

8:55 1007. Synthesis and reactivity of new PNP and NNN Rh and Ir pincer

complexes. **M. Brookhart**, C. Chang, B. G. Kim, A. Goldman, D. Y. Wang

9:20 1008. Breaking and making fluoride bonds at uranium (and thorium). **J. L. Kiplinger**

9:45 1009. Ruthenium-catalyzed hydrogenation and hydrogenolysis of carbon-oxygen bonds: Potential applications in biomass conversion. **F. T. Ladipo**, A. Gowda, S. Parkin

10:10 1010. C-S bond activation of thiophenes and thioesters using (dippe)Pt(nbe)₂. T. S. Atesin, S. Kundu, K. Skugrud, K. Lai, B. D. Swartz, W. W. Brennessel, **W. D. Jones**

10:35 Intermission.

10:50 1011. Ru(I) metalloradical that catalyzes nitrene coupling to azoarenes from arylazides. A. Takaoka, **J. C. Peters**

11:10 1012. Directing the reactivity of [HFe₄(N)(CO)₁₂]⁻ toward H⁺ or CO₂ reduction by understanding the electrocatalytic mechanism. M. D. Rail, **L. A. Berben**

11:35 1013. Factors affecting the "oxidative" addition of N-H and C-H bonds to iridium complexes. D. Y. Wang, K. Krogh-Jespersen, Y. Choliy, M. Haibach, J. F. Hartwig, **A. S. Goldman**

12:00 1014. Anion binding and redox properties of late transition metal-stibine complexes. I. Ke, T. Lin, C. R. Wade, **F. P. Gabbai**

12:25 Concluding Remarks.

Section I

San Diego Convention Center
Room 5B

**Chemical Interactions of Metal-
related Therapeutic Drugs**

D. Schatzschneider, M. Lim, C. Verani, *Organizers*
D. Crans, *Organizer, Presiding*

8:00 1015. Therapeutic medicinal inorganic chemistry. **C. Orvig**

8:45 1016. Optimizing prochelators to bind metal ions in response to disease-associated stimuli

K. J. Franz

9:15 1017. Recent advances in the preparation of methanobactin analogs. **D. Rabinovich**

9:45 1018. Siderophore-mediated iron uptake: Medicinal targets for intractable pathogens. **J. L. DuBois**, R. E. Frederick

10:15 Intermission.

10:30 1019. Targeted nitric oxide delivery with trackable NO donors. **P. K. Mascharak**

11:00 1020. Ruthenium complexes as promising hits for the design of potential agents against multiple

trypanosomatid parasites. **D. Gambino**, B. Demoro, C. Sarniguet, L. Otero, J. D. Maya, C. Olea-Azar, A. Medeiros, M. Comini, J. Costa Pessoa, I. Tomaz, R. de Almeida, V. Moreno

11:30 1021. Mechanistic medicinal inorganic chemistry: Developing, screening and validating gold-based phosphatase inhibitors. **A. M. Barrios**, N. Bottini, A. C. Cato

12:00 1022. Fragment-based approaches for metalloprotein inhibitor development. **S. M. Cohen**, J. Fullagar, D. Martin, K. Daniel, M. Rouffet, J. Major Jourden

**10th Symposium on Nanotechnology
and the Environment**

**Green Technology Honoring Dr.
Barbara Karn and Professor
Stanislaus S. Wong**

Sponsored by I&EC, Cosponsored by
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WEDNESDAY AFTERNOON

Section A

San Diego Convention Center
Room 10

Chemistry of Materials

C. Lugmair, *Organizer*
A. Norquist, R. Lesuer, *Presiding*

1:30 Introductory Remarks.

1:35 1023. Understanding the formation of organically templated vanadium tellurites. **A. J. Norquist**

1:55 1024. Control of dopant distribution through surface-functionalized atomic layer deposition. **A. Yanguas-Gil**, J. A. Libera, J. W. Elam

2:15 1025. Inorganic phosphor materials: Structure property relations and alternative synthetic pathways. **A. Birkel**, N. C. George, K. A. Denault, R. Seshadri

2:35 1026. New vanadium oxides nanostructures with metal-insulator transition: Discovery, preparation and applications. **Y. Xie**

2:55 1027. Assembly of magnetite nanoparticles into spherical clusters with a 3D mesopore channels. **B. Yu**, S. Kwak

3:15 1028. Polymorphous transitions of nanometric Fe₂O₃. **L. Machala**, J. Tucek, R. Zboril

3:35 Intermission.

3:50 1029. Synthesis of cadmium arsenide quantum dots. **D. Harris**, M. Bawendi

4:10 1030. Determination of the framework structure of a UPRM-5 type titanium silicate with simulations based on faulted ETS-4 polymorphs. **J. N. Primera-Pedrozo**, S. Kumar, M. Tsapatsis, A. J. Hernandez-Maldonado

4:30 1031. Structural considerations in refractory hard metal borides. **A. T. Lech**, R. Mohammadi, C. L. Turner, S. H. Tolbert, R. B. Kaner

4:50 1032. Adsorption of phosphines, phosphine oxides, and phosphonium salts on silica surfaces: New insights by solid-state NMR spectroscopy. C. R. Hilliard, **J. Bluemel**

5:10 1033. Investigation of corrosion processes on CoCrMo-based metal-on-metal (MoM) hip joint bearings using scanning electrochemical microscopy. **R. J. LeSuer**

Section B

Westin Gaslamp
California Ballroom B

Nanostructured Electronic Materials

L. McElwee-White, G. Girolami, *Organizers, Presiding*

1:30 1034. Crystallinity and order: A quantitative assessment of the effect of microstructure on transport in organic semiconductors. **A. Salleo**

2:00 1035. Robust molecular tunnel junctions with high yield and temperature stability. **R. L. McCreery**, A. Bonifas, A. Bergren, B. Szeto, J. Ru

2:30 1036. Towards molecular electronics: Solution-based methods for selective deposition of metallic and semiconducting nano-objects. **A. V. Walker**

3:00 1037. Plasmonic nanocavities: New ways to squeeze light into subwavelength volumes. **T. W. Odom**

3:30 Intermission.

3:40 1038. Crossed-nanowire molecular junctions: A multispectroscopy platform for conduction-structure correlations. **T. S. Mayer**, H. P. Yoon, M. M. Maitani, O. M. Cabarcos, L. Cai, D. L. Allara

4:10 1039. Design, synthesis and properties of programmable nanowire transistors for nanoscale circuits and processors. **C. M. Lieber**

4:40 1040. Finding the missing memristor. **R. S. Williams**

5:10 Concluding Remarks.

Section C

San Diego Convention Center
Room 11A

**Organometallic Chemistry
Synthesis and Characterization**

N. Radu, *Organizer*
A. Veige, *Presiding*

1:30 1041. Homoleptic *m*-terphenyl isocyanide complexes of Cr and Mo. **T. B. Ditri**, J. S. Figueroa

1:50 1042. Iron complexes supported by sterically encumbering *m*-terphenyl isocyanides. **B. Emerich**, J. Figueroa

2:10 1043. Organometallic models of the semiconductor interface of TiO₂ based dye sensitized solar cells. **D. D. Fraser**, K. H. Shaughnessy

2:30 1044. Computational investigations of the isomeric preference of [Co(CO)₄]⁺ and [Co(CNR)₄]⁺. **S. P. George**, J. S. Figueroa

2:50 1045. Synthesis and characterization of group 4 transition metal ferrocenylhydridoborate complexes. **A. Reichert**, M. Bolte, H. Lerner, M. Wagner

3:10 Intermission.

3:20 1046. Preparation and electronic modulation of novel palladium-isocyanide nitrosoarene compounds. **L. A. Labios**, J. S. Figueroa

3:40 1047. Characterization and reactivity studies of group 3 metal arene complexes. **W. Huang**, P. Diaconescu

4:00 1048. Synthesis and reduction chemistry of a fused *N*-heterocyclic carbene. **R. R. Butorac**, A. H. Cowley

4:20 1049. Synthesis and functionalization of organozinc ligated transition metal compounds as molecular alloys. **M. Molon**, T. Bollermann, K. Freitag, A. Puls, C. Gemel, R. A. Fischer

4:40 1050. Open indenyl: Introducing the indenyl effect to the pentadienyl chemistry. **A. Gloeckner**, & Árias, T. Bannenberg, C. D. Daniluc, M. Tamm

Section D

San Diego Convention Center Room 8

Geometric and Electronic Structure Contributions to Reactivity

Small Molecules

D. Gamelin, P. Kennepohl, *Organizers*
P. Chen, *Organizer, Presiding*
D. Wilcox, *Presiding*

1:30 1051. Adventures in modeling high-valent iron. **L. Que, Jr.**

2:00 1052. Mono- and dinuclear non-heme iron-nitrosyl complexes: Models for the active sites of bacterial nitric oxide reductases. **N. Lehnert**, T. Berto, A. Speelman, S. Zheng

2:30 1053. Bio-inspired electrodes. **A. Dey**

2:50 1054. Donor-acceptor ligands in inorganic chemistry: The influence of excited states on ground state properties. **M. L. Kirk**

3:20 Intermission.

3:40 1055. Metal-sulfur valence orbital interaction energies in metal-dithiolene complexes: Determination of charge and overlap interaction energies by comparison of core and valence ionization energy shifts. **J. H. Enemark**, N. J. Wiebelhaus, M. A.

Cranswick, E. L. Klein, L. T. Lockett, D. L. Lichtenberger

4:10 1056. X-ray spectroscopic studies of nitrogenase and related models. **S. DeBeer**

4:40 1057. Delayed fluorescence of a dinuclear copper(I) complex. **J. C. Deaton**, S. C. Switalski, D. Y. Kondakov, R. H. Young, T. D. Pawlik, D. J. Giesen, S. B. Harkins, A. J. Miller, S. F. Mickenberg, J. C. Peters

5:00 1058. Computational insights into metal-catalyzed C-H bond activation in direct coupling reactions. **S. I. Gorelsky**

5:20 1059. First principles view on ligand field theory. **F. Neese**, M. Atanasov, K. Sivalingam

Section E

San Diego Convention Center Room 7B

Late Transition Metal Chemistry

S. Koch, *Organizer*
J. Stambuli, *Presiding*

1:30 1060. Site-selective intramolecular dehydrogenation of unactivated alkanes. **J. P. Stambuli**, S. Whittemore

1:50 1061. Silylene- and germylene-bridged complexes of Rh and Ir: Roles of the adjacent metals in Si-H and Ge-H bond activation and in the subsequent reactivity. **M. Mobarok**, M. J. Ferguson, R. McDonald, M. Cowie

2:10 1062. Dispersion and back-donation gives tetracoordinate Pd(PPh₃)₄. **M. S. Ahlquist**, P. Norrby

2:30 1063. Investigation of electron storage in late transition metal complexes with potentially redox noninnocent pyridylpyrrolide ligands. **R. W. Buell**, K. Pal, M. Pink, C. Chen, K. G. Caulton

2:50 1064. HCo(CNAr^{Mes2})₂: A homoleptic isocyano analog of HCo(CO)₄. **A. E. Carpenter**, J. S. Figueroa

3:10 Intermission.

3:20 1065. Donor-acceptor complexes of group 10 metals. **W. W. Kramer**, A. F. Heyduk

3:40 1066. N=N bond cleavage of azobenzene by low-valent iron. **S. M. Bellows**, P. M. Gurubasavaraj, W. W. Brennessel, T. R. Cundari, P. L. Holland

4:00 1067. In situ formation of tetraruthenium dodecacarbonyl tetrahydride from ruthenium(III) chloride in the catalytic decomposition of formic acid to hydrogen and carbon dioxide. **M. Czaun**, A. Goepfert, R. May, M. Sax, J. Zhang, R. Haiges, G. S. Prakash, G. A. Olah

4:20 1068. Free energy surfaces for developing homogeneous rhodium catalysts for methane oxidation. **R. J.**

Nielsen, P. L. Theofanis, V. J. Suhardi, W. A. Goddard

Section F

San Diego Convention Center Room 7A

Nanoscience

Biology and Biological Applications

R. Richards, S. Wong, *Organizers*
A. Singh, V. Pierre, *Presiding*

1:30 1069. Mechanized mesoporous silica nanoparticles with an iron oxide core for magnetic field-activated drug delivery. **C. R. Thomas**, D. P. Ferris, H. Meng, A. E. Nel, J. I. Zink

1:50 1070. Gold nanoparticle capped with modified β-cyclodextrins as a delivery vehicle for a prodrug of cisplatin. **Y. Shi**, J. C. Dabrowiak

2:10 1071. Targeting advanced pancreatic cancer by means of a transferrin functionalized nanoparticle-cored dendrimer. **M. E. Grow**, M. Daniel

2:30 1072. Direct observation of nanoparticle-cancer cell nucleus interactions. **D. H. Dam**, J. Lee, P. N. Sisco, T. W. Odum

2:50 1073. Human serum albumin nanoparticles loaded with magnetic nanoparticles and organic molecules for use in cancer treatment. **I. J. Schmitt**, K. E. Schexnayder, D. Bwambok, A. Wells, L. Malkinski, M. A. Tarr

3:10 1074. Long-range nano ruler for monitoring photothermal therapy response using gold nanotechnology. **A. K. Singh**, P. C. Ray

3:40 Intermission.

3:50 1075. DNA nanofibers from G-quadruplex "synapsable DNA" subunits. **V. A. Szalai**, **M. A. Mendez**

4:10 1076. Progress toward nanoscale electronic circuits from self-assembled DNA templates. **E. Pound**, A. C. Pearson, J. Liu, J. N. Harb, R. C. Davis, A. T. Woolley

4:30 1077. Optimization on the conditions of magnetic enrichment target sequence PCR and detection sensitivity. **N. He**, X. Mou, H. Liu, S. Li

4:50 1078. Photomodulation of upconverting nanoparticle biomarkers in live organisms using dithienylethene photoswitches

J. Boyer, C. Carling, N. Branda

5:10 1079. Controlled synthesis of sub-10 nm, bright, upconverting nanocrystals for bioimaging. **A. D. Ostrowski**, E. M. Chan, D. J. Gargas, P. J. Schuck, D. J. Milliron, B. E. Cohen

5:30 1080. Responsive multimodal nanoparticles-based imaging agents for cellular imaging. **V. C. Pierre**

Section G

San Diego Convention Center Room 11B

Organometallic Chemistry

Catalysis

N. Radu, *Organizer*
E. Hahn, O. Wendt, *Presiding*

1:30 1081. Access to polymeric monolith-supported Pt-nanoparticles via ring-opening metathesis polymerization: Applications in the hydrosilylation of olefins under continuous conditions. **R. Bandari**, **M. R. Buchmeiser**

1:50 1082. Concerted C-N/C-H bond formation in a highly enantioselective zirconium(IV)-catalyzed hydroamination: Significant isotope effects on rate and stereoselectivity. **K. Manna**, A. D. Sadow

2:10 1083. Iron catalyzed *N*-heterocycle formation via intramolecular amination of C-H bonds. **E. T. Hennessy**, T. A. Betley

2:30 1084. Immobilized Sonogashira catalyst systems: New mechanistic insights and improved recyclability. **J. C. Pope**, J. Bluemel, T. Posset

2:50 1085. Probing the origin of degenerate metathesis selectivity via characterization and dynamics of ruthenacyclobutanes containing variable NHCs. **B. K. Keitz**, R. H. Grubbs

3:10 1086. Z-selective, catalytic, internal-alkyne semihydrogenation under H₂:CO mixtures by a niobium(III) imido complex. **T. L. Gianetti**, N. C. Tomson, J. Arnold, R. G. Bergman

3:30 Intermission.

3:40 1087. Synthesis of NHC complexes by oxidative addition of 2-halogenato-*N*-alkylbenzimidazoles. **F. Hahn**, T. Kösterke

4:00 1088. Trianionic NCN³⁻ pincer complex of chromium and OCO³⁻ pincer complex of tungsten: Catalysts for alkene and alkyne polymerization. **K. P. McGowan**, S. Sarkar, S. Meehan, K. A. Abboud, A. S. Veige

4:20 1089. Potential of group 9 (P^OC^OP)M complexes as catalysts for cross-coupling reactions. **S. D. Timpa**, C. J. Pell, O. V. Ozerov

4:40 1090. Probing the good sigma/bad sigma donor effect of ligands on the efficiency of high-oxidation molybdenum alkylidene olefin-metathesis catalysts. **A. G. Lichtscheidl**, R. R. Schrock

5:00 1091. Reusable iron macrocyclic tetra-NHC catalyst for catalytic aziridination. **S. A. Cramer**, D. M. Jenkins

5:20 1092. Reactivity of NHC Au(I) complexes with carbon dioxide and

other electrophiles. Mechanisms of gold catalysed reactions. **O. F. Wendt**

Section H

San Diego Convention Center
Room 5A

Coordination Chemistry

Characterization and Applications

D. Crans, *Organizer*

C. Turro, *Presiding*

1:30 1093. Broadband direct white-light emission by a new corrugated metal-organic framework. **D. F. Sava**, L. E. Rowher, M. A. Rodriguez, J. E. Martin, T. M. Nenoff

1:50 1094. Nanomagnet functionalized metal-organic frameworks (MOFs) for advanced catalysis and drug delivery applications. **M. R. Lohe**, K. Gedrich, T. Freudenberg, E. Kockrick, T. Dellmann, S. Kaskel

2:10 1095. Photoinduced ligand exchange and covalent DNA binding by two new dirhodium acetamide complexes. **S. J. Burya**, J. C. Gallucci, C. Turro

2:30 1096. Synthesizing gold-based antitumor compounds possessing 2,9-disubstituted phenanthroline ligands: From molecular design to in vivo testing. **J. F. Eichler**, C. Macbeth, G. Chen

2:50 1097. Labile zinc-assisted biological phosphate chemosensing and related molecular logic gating interpretations; interplay of salicylaldehyde, lysine, and M^{2+} ions on α -synuclein aggregation and neurotoxicity: A cancellation of aggregation effects. K. Kim, Y. Ha, H. Liew, H. Park, Y. Suh, **D. G. Churchill**

3:10 1098. Glutathionylation of cobalamin model complexes. **J. Prakash**, J. J. Kodanko

3:30 Intermission.

3:40 1099. Manipulating metal coordination, ligand structure, and extraction energetics in an effort to design selective sensors for Pb(II) and other toxic metals. **K. Kavallieratos**

4:00 1100. Magnetic relaxation in the high-symmetry polynuclear transition metal complex $Cu_{17}Mn_{28}$. **C. C. Beedle**, W. Wang, C. Koo, A. Zhou, M. Nakano, J. R. O'Brien, W. Wernsdorfer, S. Hill, M. Tong, X. Chen, D. N. Hendrickson

4:20 1101. 3d Metal complexes with click-derived tripodal ligands: Spin crossover and catalysis. **D. Schweinfurth**, B. Sarkar

4:40 1102. Investigations of magnetic coupling and anisotropy in $M^{II}Re^{IV}(CN)_2$ ($M = Mn, Fe$) single-chain magnets. **X. Feng**, T. D. Harris, J. Liu, S. Hill, J. R. Long

5:00 1103. Strong magnetic interactions in metal complexes of bis-pyridyl substituted verdazyl radicals. **D. J. Brook**

5:20 1104. Copolymerizable ligands for ratiometric Cu^{2+} sensing in a fluorescent polymer indicator. **J. O. Massing**, R. Ding, S. C. Burdette, W. R. Seitz, R. P. Planalp

Section I

San Diego Convention Center
Room 5B

Chemical Interactions of Metal-related Therapeutic Drugs

D. Crans, D. Schatzschneider, M. Lim, C. Verani, *Organizers*
S. Cohen, *Presiding*

1:30 1105. Design of metal anticancer complexes: Novel interactions with multispecific targets. **P. J. Sadler**

2:15 1106. Photobactericidal porphyrin-cellulose nanocrystals: Synthesis, characterization, and antimicrobial properties. **R. A. Ghiladi**

2:45 1107. Mononuclear cobalt(III) complexes as potential selective chemotherapeutics for cancer. **M. Scarpellini**

3:15 1108. Bispidine analogs of cisplatin, carboplatin, and oxaliplatin: Synthesis, structures, and cytotoxicity. **K. R. Porschke**, H. Cui, R. Goddard, M. Kassack

3:45 Intermission.

3:55 1109. Control of excited states of transition metal complexes for applications in biology. **C. Turro**

4:25 1110. Organometallic gold(I) complexes as inhibitors of thioredoxin reductase and cancer chemotherapeutics. **I. Ott**

4:55 1111. Evaluation of interactions between the proteasome and metal complexes. **C. N. Verani**

5:25 Concluding Remarks.

Section J

San Diego Convention Center
Room 6B

Environmental and Energy Related Inorganic Chemistry

S. Koch, *Organizer*
J. Rosenthal, *Presiding*

1:30 1112. Assembly and characterization of covalently tethered Ru coordination complexes on nanostructured oxides via "click" chemistry. **M. C. Benson**, R. E. Ruther, J. B. Gerken, M. L. Rigsby, L. M. Bishop, Y. Tan, S. S. Stahl, R. J. Hamers

1:50 1113. Upconversion-powered photoelectrochemistry: Insights into efficiency and device application. **R. S. Khnayzer**, F. N. Castellano

2:10 1114. Electron transfer kinetics of all-inorganic metal-to-metal charge transfer chromophores. **B. McClure**, H. Frei

2:30 1115. Some recent results in N2 functionalization chemistry from Los Alamos. **J. C. Gordon**, N. J. Henson, F. N. Rein, B. L. Scott, N. C. Smythe, R. J. Trovitch

2:50 1116. Mechanism of proton reduction catalyzed by mononuclear iron complexes. **S. Ott**, R. Lomoth

3:10 1117. Click-triazole as an efficient connector for Ru(II) bipyridine-based devices. A. Baron, C. Herrero, A. Quaranta, M. Charlot, W. Leibl, A. Aukauloo, **B. Vauzeilles**

3:30 Intermission.

3:40 1118. Novel and powerful phosphorus reagents - new concepts for more efficient, selective and sustainable synthetic procedures. **J. J. Weigand**, K. Feldmann, A. K. Echterhoff, S. Schulz

4:00 1119. New tetrapyrrole platforms with a multielectron photochemistry for solar energy capture and conversion. **J. Rosenthal**

4:20 1120. Ultimate regeneration of ammonia borane from boron nitride. **T. Nakagawa**, A. K. Burrell, T. Ichikawa, L. Zeng, K. Shimoda, H. Miyaoka, A. D. Sutton, B. L. Davis, B. L. Scott, R. Zhong, Y. Kojima

4:40 1121. RuO₂/CNO nanocomposites for supercapacitor electrode materials. **R. Borgohain**, J. P. Selegue, J. Li, Y. Cheng

5:00 1122. Solution-based processing of iron pyrite thin films: Toward heterojunction solar cells. **S. M. Seefeld**, A. Weber, N. Berry, M. Limpinsel, S. Park, M. Law

10th Symposium on Nanotechnology and the Environment

Green Technology Honoring Dr. Barbara Karn and Professor Stanislaus S. Wong

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THURSDAY MORNING

San Diego Convention Center
Room 10

Inorganic Spectroscopy

S. Ronco, *Organizer*
F. Castellano, J. Kenney, *Presiding*

8:30 Introductory Remarks.

8:35 1123. Synthetic control of the photophysical properties in phosphorescent three-coordinate Cu(I)-(N-heterocyclic carbene) complexes. **V. A. Krylova**, P. I. Djurovich, M. E. Thompson

8:55 1124. Copper(I) bis-phenanthroline complexes as first row

sensitizers for upconversion photochemistry. **C. E. McCusker**, F. N. Castellano

9:15 1125. Excited states relaxation and dynamics of ligand substitution in monochloro complexes of copper(II) and halogenated complexes of third-row transition metals. **A. N. Tarnovsky**, I. L. Zheldakov, A. S. Mereshchenko

9:35 1126. The taco and the pancake: An 85° difference in saddling dihedral between analogous copper and gold corroles. **A. Ghosh**, K. E. Thomas, A. B. Alemayehu, C. M. Beavers

9:55 Intermission.

10:10 1127. Tuning and spectroscopic interrogation of weak dioxygen-complex interactions in tris diimine complexes of rhodium(III) at cryogenic temperatures. **J. W. Kenney, III**, G. A. Crosby, D. M. Jagow, S. Kim

10:30 1128. Ligand effects on the lowest excited states in cationic iridium cyclometalates. **P. Miró**, K. R. Schwartz, R. Chitta, J. N. Bohnsack, D. J. Ceckanowicz, K. R. Mann, C. J. Cramer

10:50 1129. Novel Pt(II) polyimine arylacetylides: The design, synthesis, and photophysics of self-assembled tetranuclear metallocycles, perylene-diimides, oligo(m-phenylene ethynylene)s, and boron-dipyrromethenes. **V. Prusakova**, S. Goeb, X. Wang, A. Vézina, M. Sallé, D. Gross, W. Wu, H. Guo, J. Shao, J. Sun, S. Ji, J. Zhao, J. S. Moore, F. N. Castellano

11:10 1130. Spectroscopic and electrochemical properties of Platinum(II) benzimidazolyl complexes. **V. M. Shingade**, L. J. Grove, J. A. Krause, W. B. Connick

Section B

San Diego Convention Center
Room 7A

Bioinorganic Chemistry

S. Koch, *Organizer*
D. Churchill, *Presiding*

8:30 1131. Investigating metal ion/biopolymer interactions using mass spectrometry. **S. Ralph**

8:50 1132. DNA charge transport as a first step in lesion detection by repair proteins: Atomic force microscopy to visualize enzyme distribution. **P. A. Sontz**, T. P. Mui, J. K. Barton

9:10 1133. Design, synthesis and biological activity of light activated ruthenium anticancer agents. **E. C. Glazer**

9:30 1134. Oxygen independent pathway of DNA cleavage upon the photogeneration of a Ru(II) polypyridyl complex: A unique approach to photodynamic therapy. **S. Poteet**, C.

Griffith, S. Singh, Z. Breitbach, D. W. Armstrong, F. M. MacDonnell

9:50 Intermission.

10:00 1135. Platinum(II)-diamine complexes promote the formation of G-quadruplex. **F. Shao**, J. Wang

10:20 1136. ATP-stimulated DNA-mediated charge transport by the repair helicase XPD. **T. P. Mui**, J. K. Barton

10:40 1137. Rhodium metalloinsertors as scaffolds for bioconjugate development. **C. J. Schneider**, A. C. Komor, A. Weidmann, J. K. Barton

11:00 1138. Investigation of silver protein interactions by X-ray crystallography and NMR. **M. J. Panzner**, S. M. Bilinovich, J. A. Parker, S. M. Berry, C. J. Ziegler, W. J. Youngs, T. C. Leeper

11:20 1139. Co-administration of anticancer drugs: Bisphosphonates and taxol. **K. Woll**, E. Gaidmanuskas, T. Duniyan, S. Mintz, N. Levinger, D. Crans

Section C

San Diego Convention Center
Room 11A

Coordination Chemistry

Synthesis

D. Crans, *Organizer*

D. Rabinovich, S. Hightower, *Presiding*

8:30 1140. Ligand scaffolds featuring appended amide groups as secondary coordination sphere mimics. **C. M. Moore**, N. K. Szymczak

8:50 1141. Square-planar iridium(I-V) PNP pincer complexes: Closed and open shell iridium nitrides. **M. G. Scheibel**, M. M. Khusniyarov, F. Heinemann, B. de Bruin, S. Schneider

9:10 1142. New [N₂S] donor ligands for the preparation of synthetic analogs of methanobactin. **J. M. Hanley**, D. Rabinovich

9:30 1143. Access to three disparate redox pathways of iron tris(pyrrolido)ethane complexes: Outer sphere, inner sphere, and reversible electron transfers. **G. T. Sazama**, T. A. Betley

9:50 1144. Isolation of a nickel cis-hyponitrite complex: An intermediate in the reduction of NO to N₂O. **A. M. Wright**, T. W. Hayton

10:10 Intermission.

10:20 1145. Preparation and characterization of tris-chelated Re(I)-terpyridines. **S. E. Hightower**

10:40 1146. Sequential self-assembly in metal-organic frameworks. **W. Choe**, B. J. Burnett

11:00 1147. Copper metal-organic frameworks utilizing 1,2,4-triazoles. **C. R. Murdock**, Z. Lu, D. M. Jenkins

11:20 1148. Synthesis and characterization of chiral Cu(II) and Ni(II) complexes with branched cyclic ligands. **M. A. O'Connor**, A. W. Addison, M. Zeller, A. D. Hunter

11:40 1149. Proximal substituent effects in the coordination equilibria of Cu(II) phenanthroline complexes. **S. Watton**

12:00 1150. 3D helical-pillar-layered zinc(II) metal-organic framework with individual functional OH groups on large 1D hexagonal channel surfaces. **G. Liu**, **H. Li**

Section D

San Diego Convention Center
Room 8

Inorganic Catalysis

S. Koch, *Organizer*
M. Bennett, *Presiding*

8:30 1151. Scope and limitation of a donor-acceptor stabilization protocol for the isolation of heavy element hydrocarbon analogs. **S. Al-Rafia**, E. Rivard, R. McDonald, M. J. Ferguson

8:50 1152. Group 6 dinitrogen complexes supported by diphosphine ligands containing proton relays: Protonation studies toward the reduction of dinitrogen to ammonia. **M. T. Mock**, C. J. Weiss, A. N. Groves, S. Chen, R. Rousseau, D. L. DuBois, R. M. Bullock

9:10 1153. Transition metal complexes of non-innocent ligands for CO₂ reduction. **K. V. Vasudevan**, S. K. Hanson

9:30 1154. Novel platforms for conversion of carbon dioxide to chemical fuels. **J. Rosenthal**

9:50 1155. Identification and characterization of intermediate species in low temperature reactions between dirhodium carboxylates and organic diazo compounds. **K. P. Kornecki**, J. F. Briones, V. Boryarskikh, J. Autschbach, H. M. Davies, J. F. Berry

10:10 1156. Iron-catalyzed olefin epoxidation and *cis*-dihydroxylation by tetraalkylcyclam complexes: the importance of *cis*-labile sites. **Y. Feng**, J. England, L. Que

10:30 Intermission.

10:40 1157. Diruthenium(II,III) tetramidates as a new class of oxygenation catalysts. **L. Villalobos**, Z. Cao, P. E. Fanwick, T. Ren

11:00 1158. Carbon dioxide: New strategies towards a molecular solution of this global problem. **B. Rieger**, **M. W. Lehenmeier**, C. Bruckmeier

11:20 1159. Oxidation of model compounds for cotton bleaching studies. **N. M. Boyle**, J. W. de Boer, R. Hage, W. R. Browne

11:40 1160. New palladium-containing polymers for Suzuki-Miyaura cross-coupling reactions. **K. A. Crawford**, A. H. Cowley

12:00 1161. Coordinatively unsaturated iron complexes and catalysis: The importance of ligand field strengths, spin state, and geometry. **K. A. Kirchner**

Section E

San Diego Convention Center
Room 7B

Lanthanide and Actinide Chemistry

A. De Bettencourt Dias, *Organizer*
S. Humphrey, T. Boyle, *Presiding*

8:30 1162. On the origin of the cation templated self-assembly of uranyl-peroxide nanocapsules. **P. Miró**, S. Pierrefixe, M. Gicquel, A. Gil, C. Bo

8:50 1163. Uranyl-organic hybrid materials: Nanotubules and nanospheres. **P. O. Adelani**, T. E. Albrecht-Schmitt

9:10 1164. Synthesis and isolation of a series of uranium(IV) chalcogenide complexes. **J. L. Brown**, S. Fortier, G. Wu, T. W. Hayton

9:30 1165. Synthesis and reactivity of uranyl thione complexes. **M. F. Schettini**, J. L. Bongiovanni, G. Wu, D. Rabinovich, T. W. Hayton

9:50 1166. Recognition and extraction of the uranyl ion. **A. C. Sather**, O. B. Berryman, J. Rebeck Jr.

10:10 Intermission.

10:25 1167. Hydrothermal chemistry and crystal structures of alkali thorium and hafnium fluorides. **C. C. Underwood**, M. Mann, C. D. McMillen, J. W. Kolis

10:45 1168. Integrated theoretical and experimental study of trends in lanthanide solution chemistry. **D. Penchoff**, G. Schweitzer, R. J. Harrison

11:05 1169. Lanthanide-based organophosphine coordination materials with some interesting solid-state properties. **I. A. Ibarra**, D. M. Casto, M. S. Chang, V. M. Lynch, A. J. Nunez, K. E. Tan, S. M. Humphrey

11:25 1170. Synthesis and characterization of novel alkali metal lanthanide alkoxides for nanoceramics for scintillator application. **T. Q. Doan**, T. J. Boyle, L. M. Steele, C. R. Lockhart

11:45 1171. ¹⁹F-LIS: A new class of responsive MRI contrast agents. **V. C. Pierre**

Section F

San Diego Convention Center
Room 9

Chemistry of Materials

C. Lugmair, *Organizer*
H. Heinz, S. Patwardhan, *Presiding*

8:30 Introductory Remarks.

8:35 1172. Nanomechanics and dispersion of layered silicates in polymer matrices: Moduli, cleavage energy, and free energy of exfoliation. **H. Heinz**, Y. Fu, G. D. Zartman, H. Liu, L. F. Drummy

8:55 1173. Green chemistry for nanomaterials with applications in biocatalysis, environmental remediation, and drug delivery. **S. V. Patwardhan**

9:15 1174. BTHO cancer: Novel inorganic layered nanoplatelets for drug delivery in cancer nanotherapy. **A. Diaz**, V. Saxena, M. L. González, A. Baez, J. L. Colón, M. D. Hussain, A. Clearfield

9:35 1175. Nonfluorinated and nonadhesive smooth coatings toward nonpolar liquids. **C. Urata**, D. F. Cheng, A. Hozumi

9:55 1176. Improving performance of microfabricated nitrogen phosphorus detectors with sol-gel deposited alkali and alkaline earth-doped high-porosity silicate films using novel metal alkoxide precursors. **L. M. Steele**, T. Boyle, R. Hess, C. Lockhart

10:15 1177. Experimental visualization of guest-host interaction in energy storage materials from neutron diffraction. **X. Wang**, B. C. Chakoumakos, H. Cao, A. Pramanick, C. Hoffmann

10:35 Intermission.

10:50 1178. In situ creation and *ex situ* engineering of embedded-structure nanocomposites with enhanced lithium storage capabilities. **Z. Yang**, L. A. Archer

11:10 1179. Direct assembly of hydrophobic nanoparticles to multifunctional structures. **Z. Lu**, Y. Yin

11:30 1180. Resorcinarene nanocapsules: Synthesis, functionalization, and encapsulation. **R. Balasubramanian**, K. Mahadevan, S. Prayakrao, S. Han

11:50 1181. Elucidation of the growth mechanism of platinum nanocrystals inside the polyamidoamine starburst dendrimer. **V. Pushkarev**, Y. Borodko, P. Ercius, C. Thompson, M. Marcus, G. Somorjai

12:10 1182. Synthesis and characterization of metal phosphide films from single-source molecular precursors. **A. C. Colson**, C. Chen, E. Morosan, K. H. Whitmire

Section G

San Diego Convention Center
Room 11B

Nanoscience

Semiconducting Nanostructures

S. Wong, R. Richards, *Organizers*
B. M. Wong, R. Harrison, *Presiding*

8:00 1183. Effect of grain size and channel length on mobility and transfer characteristics of lithographically patterned polycrystalline CdSe nanowires. **T. Ayvazian**, W. Yan, R. M. Penner

8:20 1184. Self-assembly of CuInS₂ and CuIn_{1-x}Ga_xS₂ nanorod into 2D and 3D superstructure. **A. Singh**, C. Coughlan, H. Geaney, D. Kelly, **K. M. Ryan**

8:40 1185. Interface engineering in CdSe/CdS core/shell nanocrystal quantum dots toward controlled photophysical properties. **Y. Ghosh**, B. D. Mangum, R. M. Dickerson, H. Htoon, J. A. Hollingsworth

9:00 1186. Molecular level control of nanoscale composition and morphology: CdS_{1-x}Se_x quantum dots and rods. **T. A. Ruberu**, H. R. Albright, B. Callis, F. Hua-Jun, J. Vela

9:20 1187. Surface modification of lead chalcogenide quantum dots for enhanced optical properties and improved stability against oxidation. **W. Bae**, L. A. Padilha, J. Joo, V. I. Klimov, J. M. Pietryga

9:40 1188. Unusual nanoscale effects of electrons in heterojunction core/shell nanowires. **B. M. Wong**, F. Leonard

10:10 Intermission.

10:20 1189. Ligand effects on electrical transport of individual colloidal semiconductor nanocrystals. **B. Beberwyck**, P. Alivisatos

10:40 1190. Size-dependent metastability and magnetostructural transitions in nanoscale MnAs. **Y. Zhang**, A. Dixit, R. Regmi, G. Lawes, S. L. Brock

11:00 1191. Getting down to Bismuth, the photochemical synthesis of group 15 sulfide nanoparticles from single source precursors of the form M(SbN)₃. **P. Warwick**, C. G. Jeffries, T. E. Bitterwolf

11:20 1192. Tunable localized surface plasmon resonances in transition metal oxide nanocrystals. **K. Manthiram**, P. Alivisatos

11:40 1193. γ -Fe₂O₃ nanoparticle surface as an Fe source in PtFe alloy nanoparticle formation. **L. M. Bronstein**, G. Gumina, A. G. Malyutin, A. M. Budgin, B. D. Stein, D. G. Morgan

12:00 1194. Transition metal doped ZnO nanoparticles and their optical and magnetic properties. J. M. Hacock, W. M. Rankin, T. M. Hammad, J. K. Salem, **R. G. Harrison**

Section H

San Diego Convention Center
Room 5A

Organometallic Chemistry

Applications to Organic Transformations

N. Radu, *Organizer*
D. Vicic, P. Walsh, *Presiding*

8:30 1195. Distinguished role of iron pentacarbonyl toward the reaction of acetylenes and isocyanates under photochemical and thermal reaction conditions. **B. Jha**, P. Mathur, R. K. Joshi, S. M. Mobin

8:50 1196. New advances in metal-mediated perfluoroalkylation chemistry. **D. A. Vicic**, C. Zhang

9:10 1197. Propane functionalization with palladium biscarbene complexes. **D. Munz**, T. Strassner

9:30 1198. Synergic stabilization of sensitive anions by a sodium-zinc reagent: Applications to *N*-Boc pyrrolidine chemistry. **J. A. Garden**, R. E. Mulvey

9:50 1199. Isomerization and esterification of olefins using palladium benzimidazole-2-ylidene catalysts. **G. M. Roberts**, L. Woo

10:10 Intermission.

10:20 1200. Z-selective ruthenium-based olefin metathesis: Catalyst development and application to the synthesis of insect pheromones. **M. B. Herbert**, B. K. Keitz, K. Endo, R. H. Grubbs

10:40 1201. Z-selective olefin metathesis with ruthenium catalysts. **B. K. Keitz**, K. Endo, M. B. Herbert, P. R. Patel, R. H. Grubbs

11:00 1202. Catalytic hydrolysis of phosphonothioate neurotoxin mimics by molybdenum metallocene. **L. Y. Kuo**

11:20 1203. Challenging the paradigm and beyond: Chelation controlled additions to substrates that are not suppose to chelate. **P. J. Walsh**

11:40 1204. Synthesis and reactivity of β -hydroxyalkyl gold(III) complexes in aqueous solution. **C. E. Rezsnyak**, J. D. Atwood

12:00 1205. Electric field control of the selectivity of an organometallic catalyst. **E. S. Beh**, C. F. Gorin, M. W. Kanan

Section I

San Diego Convention Center
Room 5B

Organometallic Chemistry

Catalysis

N. Radu, *Organizer*
D. Grotjahn, M. Johnson, *Presiding*

8:30 1206. Effects of chelating ligands in the metathesis of multiple bonds. **M. J. Johnson**, R. C. Nelson, E. M. Broderick

8:50 1207. Synthesis and alkene oligomerization activity of (dfepe)₂PdH⁺. **J. Spott**, T. Parson, D. M. Roddick

9:10 1208. Ethylene polymerizations with dinickel phenoxyiminato complexes: Dinuclear effects on inhibition by amines. **M. R. Radlauer**, T. Agapie, M. Day

9:30 1209. Iridium catalyzed water oxidation supported by a novel bipyridyl ligand. **I. Nieto**, J. DePasquale, L. Reuther, M. Zeller, E. T. Papish

9:50 1210. Investigation of secondary coordination sphere effects on the rate of nitrile hydration with [Ru(η^6 -arene)Cl₂PR₃] complexes. **S. M. Knapp**, D. R. Tyler

10:10 1211. Investigation of the formation of vinyl amines from (IPr^{*})Ni=N(dmp) and ethylene. **S. M. Baldwin**, G. L. Hillhouse

10:30 Intermission.

10:40 1212. Peptide coupled hydrogen production electrocatalysts. **A. Jain**, D. L. Dubois, M. Helm, W. J. Shaw

11:00 1213. Alkane to alkene at room temperature: paraffin dehydrogenation promoted by a pincer-supported titanium alkylidyne complex. **V. N. Cavaliere**, J. A. Flores, M. G. Crestani, D. Buck, C. Chen, M. Pink, M. Baik, D. J. Mindiola

11:20 1214. Reactivity and catalytic applications of iron bis(phosphinite) pincer complexes. **P. Bhattacharya**, J. A. Krause, H. Guan

11:40 1215. Mechanistic studies of formate oxidation by [Ni(P₂N₂)₂]²⁺ electrocatalysts. **C. S. Seu**, A. M. Appel, C. P. Kubiak

12:00 1216. Investigation of fundamental steps in the formation of acrylates from CO₂ and ethylene. **M. Limbach**, R. Ronald Lindner, M. Lejkowsky, T. Kageyama, G. Bodizs, P. Plessow, P. Cao, S. A. Schunk

12:20 1217. Evolution of iridium-based molecular catalysts during water oxidation with ceric ammonium nitrate. **D. B. Grotjahn**, D. B. Brown, J. K. Martin, D. C. Marelius, M. Abadjian, H. N. Tran, G. Kalyuzhny, K. S. Vecchio, Z. G. Specht, S. A. Cortes-Llamas, V. Miranda-Soto, C. van Niekerk, C. E. Moore, A. L. Rheingold

10th Symposium on Nanotechnology and the Environment

Green Technology Honoring Dr. Barbara Karn and Professor Stanislaus S. Wong

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THURSDAY AFTERNOON

Section A

San Diego Convention Center
Room 10

Organometallic Chemistry

Synthesis and Characterization

N. Radu, *Organizer*
T. Cole, T. B. Clark, *Presiding*

1:30 1218. Synthesis of bispincer osmium complex. **Y. Liu**, P. I. Djurovich, M. E. Thompson

1:50 1219. Metal complexes of a tridentate pincer-type ligand featuring a central N-heterocyclic phosphonium donor. **B. Pan**, C. M. Thomas

2:10 1220. Synthesis, characterization and molecular structures of cobalt (II) complexes with PNP ligand. **M. A. Goni**, O. K. Menakaya, T. A. Cappadona, T. A. Siddiquee

2:30 1221. Mechanistic insight into the formation of an iridium (I) monohydride phosphine complex Li[H.Ir(κ^2 -P, C-(CH₂¹Ad)(i-Pr)(P(CH₂¹Ad)(i-Pr)₂)]⁻. **J. S. Figueroa**, **M. D. Millard**

2:50 1222. Reactivity studies on [Cp*Fe]₂: From iron hydrides to P₄-activation. **M. D. Walter**, J. Grunenberg, P. S. White

3:10 1223. Effects of aryl substituents on the kinetics and thermodynamics of C-H bond activation by a pincer-ligated iridium complex. **D. A. Laviska**, D. Y. Wang, K. Krogh-Jespersen, A. S. Goldman

3:30 1224. Synthesis of new asymmetric pincer ligands and their late metal complexes. **J. J. Davidson**, O. V. Ozerov

3:50 1225. Carbon-oxygen bond activation in nickel-diphosphine-ether complexes. **P. Kelley**, G. Edouard, T. Agapie

4:10 1226. Group 10 bimetallic complexes supported by three bicyclic diphosphine bridges. **D. Tofan**, C. C. Cummins

4:30 1227. Synthesis and characterization of novel zinc complexes and reactivity towards primary phosphines. **B. A. Vaughan**, E. M. Arsenault, S. M. Chan, R. Waterman

Section B

San Diego Convention Center
Room 7A

Nanoscience

Metallic Nanostructures

S. Wong, R. Richards, *Organizers*
P. Jelliss, S. Ivanov, *Presiding*

1:30 1228. Unique optical transitions in monolayer-protected gold clusters

M. Devadas, S. Bairu, H. Qian, R. Jin, **G. Ramakrishna**, E. Sinn

1:50 1229. Gold nanomolecules: Gold nanoparticles of molecular definition. **A. Dass**

2:10 1230. Chirality in gold nanoclusters probed by NMR spectroscopy. **H. Qian**, M. Zhu, C. Gayathri, R. R. Gil, R. Jin

2:30 1231. Shape control of gold nanoparticles by silver underpotential deposition. **M. R. Langille**, M. L. Personick, J. Zhang, C. A. Mirkin

2:50 1232. Preparation of gold nanoparticles directly from Au(I) thiourea complexes. **D. A. Marsh**, A. S. Borovik

3:10 1233. Enantioselective separations on chiral Au nanoparticles. **N. Shukla**, M. Bartel, N. Khosla, N. Ondeck, A. J. Gellman

3:30 1234. Luminescent gold and silver clusters from cationic gold-phosphine clusters and metal complexes. I. Arachchige, J. Martinez, S. Tretiak, S. Ivanov

4:00 Intermission.

4:10 1235. Multidentate ligand stabilized metallic nanoparticles: Synthesis, mechanistic implications and applications. **R. Balasubramanian**, S. Han, V. P. Sheela

4:30 1236. Size controlled synthesis of Germanium nanoparticles. **E. Muthuswamy**, S. M. Kauzlarich

4:50 1237. High density germanium nanowire growth directly from copper foil by self-induced solid seeding. **H. Geaney**, C. Dickinson, K. M. Ryan

5:10 1238. Synthesis for the direct coating of small metal nanoparticles with titanium dioxide. **J. Goebel**, J. Joo, M. Dahl, Y. Yin

5:30 1239. Passivation of aluminum nanoparticles using a composite polymerization approach. **P. A. Jelliss**, S. W. Buckner, C. E. Bunker, S. Chung, E. A. Gulians, A. Patel, B. Thomas

Section C

San Diego Convention Center
Room 11A

Inorganic Catalysis

S. Koch, *Organizer*
L. G. Beauvais, *Presiding*

1:30 1240. Carbon-coated TiO₂ nanofibers for visible light-enhanced photodegradation of organic pollutants. **E. A. Obuya**, J. Benoy, T. O'Brien, F. Omenya, C. Kanyi, T. C. Keane, W. E. Jones Jr.

1:50 1241. Modulating palladium-on-gold catalysis for glycerol oxidation with Pd surface coverage. **Z. Zhao**, J. Arentz, J. Clomburg, R. Gonzalez, L. A. Pretzer, N. Schweitzer, J. T. Miller, M. S. Wong

2:10 1242. Graphene-TiO₂ nanotube composites as advanced photocatalytic

hybrid materials. **S. D. Perera**, K. J. Balkus

2:30 1243. Electric field control of a metal oxide-catalyzed epoxide rearrangement. **C. F. Gorin**, E. S. Beh, M. W. Kanan

2:50 Intermission.

3:00 1244. Effects of the zeolite nanocavity on the adsorption of alkanes studied with the density functional M06-2X. **V. Dungsrikaew**, T. Maihom, S. Wannakao, B. Boekfa, **J. Limtrakul**

3:20 1245. Adsorption and hydrogen exchange reaction of light alkanes in the nanocavity of zeolite: A DFT study. **B. Boekfa**, **J. Limtrakul**

3:40 1246. Nano-sized ZSM-5 synthesized via confined space approach using novel porous carbon template derived from polybenzoxazine and its catalytic activity. **U. Thubsuang**, S. Wongkasemjit, T. Chaisuwan

4:00 1247. Preparation of pore-size-tailored TiO₂ photocatalysts via the interactions of an ionic liquid with inorganic salts in a sol-gel method. **C. Lee**, **S. Chang**

4:20 1248. Epoxidation of olefins mediated by perrhenate and molybdate salts in ionic liquids. **I. I. Markovits**, W. Eger, M. Cokoja, B. Zhang, C. Münchmeyer, M. Zhou, J. Mink, A. Genest, S. Zhang, N. Rösch, W. A. Herrmann, F. E. Kühn

Section D

San Diego Convention Center
Room 8

Inorganic Spectroscopy

S. Ronco, *Organizer*
J. Kim, P. Djurovich, *Presiding*

1:30 Introductory Remarks.

1:35 1249. Origins of IR peak coalescence in iron diene tricarbonyl compounds: 2D-IR study of exchange versus cross-relaxation. **A. D. Hill**, M. C. Zorb, S. C. Nguyen, J. P. Lomont, J. P. Schlegel, M. A. Bowring, C. B. Harris

1:55 1250. Nanosecond infrared spectroscopy of metal carbonyl complexes in a model Pauson-Khand reaction. **M. C. Asplund**, R. J. Gates, N. S. Teodoro, J. M. Marx

2:15 1251. Green-to-blue photon upconversion with ultralow non-coherent excitation. **F. Deng**, J. Blumhoff, F. N. Castellano

2:35 Intermission.

2:50 1252. Multi-edge XAS investigation of molybdenum and tungsten oxide, sulfide, and selenide. **B. D. Towey**, R. K. Szilagy

3:10 1253. What really happens when metalloproteins bind to self-assembled

monolayer coated gold surfaces. **A. M. Mueller**, J. R. Winkler, H. B. Gray

3:30 1254. Light switching photoluminescent complexes for monitoring protein aggregation. **A. A. Martí**, N. Cook

3:50 1255. Role of the protein environment on the reactivity of tryptophan radicals in azurin. **J. R. Pomponio**, H. S. Shafaat, J. E. Kim

Section E

San Diego Convention Center
Room 7B

Chemistry of Materials

C. Lugmair, *Organizer*
V. Stavila, *Presiding*

1:30 Introductory Remarks.

1:35 1256. Ordered mesoporous silicon carbide and carbide derived carbon materials. **S. Kaskel**, L. Borchardt, M. Oschatz

1:55 1257. Zeolitic aerogel: A new hierarchical porous material. **W. Han**, S. A. Ferdousi, S. Cao, G. Xiong, W. Yang, K. Yeung

2:15 1258. Mechanical properties of metal-organic frameworks. **L. Shen**, R. I. Masel, G. S. Girolami

2:35 1259. Highly porous element-organic frameworks (EOFs). **S. Kaskel**, M. Rose

2:55 1260. Thermodynamics of metal-organic frameworks: A look into the energetics of solvent confinement and framework metastability with respect to stable dense states of several carboxylate and imidazole MOFs. **J. T. Hughes**, A. Navrotsky

3:15 Intermission.

3:30 1261. Porphyrinic metal-organic frameworks for nitro-aromatic explosives detection. **B. J. Burnett**, V. Fry, H. Chung, J. A. Johnson, **W. Choe**

3:50 1262. Fabrication of MOF thin films for chemical sensing. **V. Stavila**, J. Volponi, K. Leong, M. I. White, A. L. Robinson, J. Lee, A. Venkatasubramanian, I. Ellern, P. J. Hesketh, M. D. Allendorf

4:10 1263. Heterobimetallic metal-organic frameworks with tunable open-metal sites. **D. P. Butler**, L. Beauvais, N. Smythe, W. McGowan, B. Abeykoon

4:30 1264. High-throughput strategies for rapid discovery and characterization of metal-organic frameworks. **K. Sumida**, M. Manupill, J. R. Long

Section F

San Diego Convention Center
Room 9

Coordination Chemistry

Characterization and Applications

D. Crans, *Organizer*
J. Rohde, J. Kodanko, *Presiding*

1:30 1265. Synthesis and characterization of rare blue pseudorotaxanes and their metal complexes with zinc, cadmium and mercury halides. **G. Mezei**, I. R. Fernando

1:50 1266. Synthesis and properties of linearly bridged, binuclear metallacycles supported by third generation bis(1-pyrazolyl)methane ligands. **A. E. Pascui**, D. L. Reger, M. D. Smith, A. Ozarowski, J. Jezierska

2:10 1267. Effect of ligand functionalization on the stability of DABCO based pillared MOFs under humid conditions. **H. Jasuja**, K. S. Walton

2:30 1268. Synthesis and characterization of dinuclear Schiff-base complexes: Potential water oxidation catalysts. **S. Kal**, S. Thomas, P. H. Dinolfo

2:50 Intermission.

3:00 1269. Synthesis, electrochemistry, and photophysical characterization of luminescent cyclometalated binuclear platinum(II) complexes. **A. Chakraborty**, F. N. Castellano

3:20 1270. Switching the ligand coordination by supramolecular interactions: Implication in hydroformylation catalysis. **R. Bellini**, J. H. Reek

3:40 1271. First row transition metal complexes with 2,6-bis(1-decyl-1H-1,2,3-triazol-4-yl)pyridine. **C. L. Hoch**, M. Zeller, G. P. Meier, K. L. Nash

4:00 1272. Mononuclear Fe(III) single molecule magnet with a 3/2 to 5/2 spin crossover. **S. Mossin**, D. Adhikari, M. Pink, K. Meyer, D. Mindiola

Section G

San Diego Convention Center
Room 11B

Nanoscience

General Papers

S. Wong, R. Richards, *Organizers*
A. Aplett, L. Margerum, *Presiding*

1:30 1273. Photoinduced magnetization in core-shell Prussian blue analog heterostructures. **M. F. Dumont**, C. H. Li, E. S. Knowles, M. K. Peprah, D. M. Pajerowski, M. W. Meisel, D. R. Talham

1:50 1274. Molecular rings for quantum information processing (QIP). **T. B. Faust**, G. A. Timco, F. Tuna, E. J. McInnes, R. E. Winpenny

2:10 1275. Comparing solution structures with solid-state geometries of metal-seamed organic nanocapsules. **H. Kumari**, S. R. Kline, J. L. Atwood

2:30 1276. Synthesis and characterization of rigid charged heteroleptic tetranuclear Ruthenium (II) complexes. **S. G. Riddlen**, J. R. Alston, J. C. Poler

2:50 1277. Effect of dendrimer tethered metal affinity reagents on immobilized indicator displacement assays. **L. D. Margerum**, C. Liu, J. Dancer

3:20 1278. Nanoscale photoconductors with high gain and bandwidth. **W. Xing**, W. E. van der Veer, S. Kung, W. Yan, T. Ayvazian, R. M. Penner

3:40 Intermission.

3:50 1279. Novel insights of the structure and formation of silica nanoparticles via sol-gel reaction in rubber matrix. **E. Miloskovska**, D. Hristova-Bogaerds, M. van Duin, P. Lemstra

4:10 1280. Template synthesis of polymer based highly efficient catalytic tubular microengines. **W. Gao**, J. Wang

4:30 1281. Polyaniline for biomedical, environmental, electronic, green-energy (BEEG). **Y. G. Min**

4:50 1282. Chemical solution approach: Polymer-assisted deposition of thin films. **G. Zou**

5:10 1283. Investigation of calcium carbonate decomposition and sequestration at high CO₂ environment from cement plant

. **H. Li**, D. Xu, Y. Duan, W. Yang, L. Zhang, X. Fan, X. Fan, **Y. Min**

5:30 1284. Nanometric solutions for the threat of peroxide explosives encountered in the laboratory or due to terrorism. **A. Apblett**, N. Materer, K. Barber, D. Bussan, C. Cannon

B. M. Bartlett, J. E. Yourey, J. B. Kurtz

3:10 Intermission.

3:20 1290. Striped gold nanoparticles for selective ion-capturing. **E. Cho**, J. Kim, H. Jiang, H. Nakanishi, M. Yu, S. Glotzer, B. Grzybowski, F. Stellacci

3:40 1291. Efficient large-area inverted organic solar cells with zinc-tin oxide infiltrated ZnO nanoparticles electron transport layer. **M. Tsai**, **J. Chen**, S. L. Hsu

4:00 1292. Mg battery: Electrolyte is the key. **J. Muldoon**, C. B. Bucur

4:20 1293. High efficiency non-coherent photon upconversion with large anti-stokes shifts. **F. Deng**, J. Blumhoff, F. N. Castellano

4:40 1294. Preparation of adsorbents for removal of toxic ions in waste water derived from waste concrete. **A. Yamasaki**, Y. Sakai, T. Hongo, A. Iizuka, T. Sasaki, Y. Tsunashima

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Section H

San Diego Convention Center
Room 5A

Environmental and Energy Related Inorganic Chemistry

S. Koch, *Organizer*
B. Bartlett, *Presiding*

1:30 1285. Surface dendrite-free lithium metal anode via spatially heterogeneous 3D current collectors. **X. Ji**, G. D. Stucky

1:50 1286. Synthesis of photocatalysts containing isolated TiO_x and ZnO species in SBA-15 for CO₂ reduction. **B. Mei**, A. Becerikli, A. Pougin, D. Heeskens, I. Sinev, F. Oropeza, M. Muhler, **J. Strunk**

2:10 1287. Solvothermal synthesis of CdSe hollow nanoparticles. **S. Gullapalli**, H. G. Bagaria, J. M. Grider, K. Lee, G. E. Jabbour, M. S. Wong

2:30 1288. Doping and alloying in the solution-phase synthesis of germanium nanocrystals. **D. A. Ruddy**, N. R. Neale

2:50 1289. Zero-bias water oxidation on a CuWO₄-WO₃ composite photoanode.