



ON-SITE MEETING PROGRAM



**237th American Chemical Society
National Meeting & Exposition
Salt Lake City, UT
March 22 – 26, 2009**



- 510.** Synthesis of atomically monodisperse, thiol-functionalized gold nanoclusters. **Z. Wu, H. Gian, R. Jin**
- 511.** Influencing the kinetics of growth by oriented aggregation of iron oxide nanoparticles. **N. D. Burrows, C. Hale, V. M. Yuwono, J. Soltis, R. L. Penn**
- 512.** Gas-phase metallization of surface DNA to make nanowires. **Y. Geng, J. Liu, J. N. Harb, A. T. Woolley**
- 513.** Metal-organic supramolecules based on β -diketone and β -ketoenamine ligands. **A. W. Maverick, C. Pariya, Y. S. Marcos, J. K. Cherutoi, J. D. Sandifer, F. R. Fronczek**
- 514.** Preparation and sintering behavior of SiC nanopowder. **Y. Kim, J. J. Kim, W. T. Kwon, S. R. Kim, J. P. Ahn, J. H. Chae**
- 515.** Uncovering the mechanism of metal chalcogenide gel formation. **I. R. Pala, I. U. Arachchige, S. L. Brock**

Section G

Salt Palace Convention Center
Hall 5

Organometallic Chemistry

B. T. Donovan-Merkert and D. C. Crans,
Organizers

7:00–10:00

- 516.** Synthesis and characterization of *N*-heterocyclic carbene palladium complex and its direct arylation of benzoazoles with aryl bromides application. **H. Arslan, D. G. VanDerveer, S. Demir, I. Özdemir, B. Çetinkaya**
- 517.** Variations on a doubly linked dicyclopentadiene ligand. **R. M. Chin, J. A. Mauldin, J. Criswell, A. N. Simonson**
- 518.** [Re(CO)₃1,2-C₅H₃(CRN)(CRN)] complexes via 1,2-diacetylcyclopentadienes: Proposed route for [Re(CO)₃(n⁵-NC₇H₃-1,3-R₂)]. **C. A. Snyder, J. B. Scott**
- 519.** Synthesis and characterization of bulky disubstituted rhenium n⁵-1,3-diphenylacetyl-cyclopenta[c]pyridazine. **C. A. Snyder, J. M. Strain**
- 520.** Withdrawn.
- 521.** Synthesis of bridged-dicyclopentadienyl diruthenium carbonyl complexes and derivatives. **A. N. Simonson**
- 522.** The pursuit of cyclopentadienyl ferrocenes and their metal complexes. **C. A. Snyder**
- 523.** Thermodynamic studies of the addition reactions between (Me₃SiCH₂)₃W=CSiMe₃ and phosphines. **B. A. Dougan, Z.-L. Xue**
- 524.** Reactivity of group 3 complexes supported by novel tridentate ancillary ligands. **K. R. D. Johnson, P. G. Hayes**
- 525.** Rhenium n⁵-cyclopenta[c]pyridazyl complexes via 1,2-diacetylcyclopentadienes: Proposed route for substituted pyrrolyl complexes. **P. Sriramula, C. A. Snyder**
- 526.** Study of vinylic deprotonation of styrene coordinated in a dicationic platinum complex. **C. Hahn**
- 527.** Mechanistic study on substitution reaction of solventometal carbonyl complex, MeCpMn(CO)₂(THF) with PR₃(R=Me, OEt, C₆H₅) in THF. **Y. K. Park, S. H. Kim, M. Yoo, S. K. Park, D. H. Lee, D. S. Yun, J. H. Kim**
- 528.** New highly water-soluble aminothiazolylphosphines. **G. V. Oshovsky, A. Ouali, N. Xia, M. Taillefer, J.-P. Majoral**
- 529.** New methodology for synthesis of C₂- and C₇-symmetric bis(imino)pyridines and energetic implications for metallation. **M. D. Kennedy, J. E. Steves, K. P. Chiang, W. S. Kassel, W. G. Dougherty Jr., T. J. Dudley, D. L. Zubris**
- 530.** Pincer carbene metal complexes as potential catalysts for the partial oxidation of olefins. **A. Mrutu, R. A. Kemp**
- 531.** Reactions of bisphosphine sulfides and bisphosphine selenides with ferrocene backbones. **C. Nataro, S. S. Kleinbach, A. R. Seibert**

‡ Cooperative Cosponsorship

- 532.** Disilylated group 4 metallocene ate complexes. **J. Baumgartner, M. Zimgast, C. Marschner**
- 533.** Displacement kinetics of furan and dihydrofuran from Mn and Cr centers: Evidence for the de-aromatization of the furan ligand. **J. R. Andreatta, D. J. Darenbourg, A. A. Bengali**
- 534.** Formation of a 20-membered ring containing two iron and two rhodium atoms bridged by four 1,2-bis(diphenylphosphino)ethane ligands. **R. L. Keiter, B. Lutes, W. Zhang, E. A. Keiter, A. L. Rheingold**
- 535.** Withdrawn.
- 536.** Activation of carbon-fluorine bond through manganese (I) coordination. **W. M. Hewitt**
- 537.** Bis(indenyl) manganese(II) complexes: Flexible structures and their corresponding reactivities. **R. M. Meier, J. A. Crisp, T. P. Hanusa, W. W. Brennessel**
- 538.** Boron-substituted analogs of the Shvo hydrogenation catalyst: Applications in the hydroboration of aldehydes and imines. **H. N. Londino, J. K. Vellucci, L. Koren-Selfridge, C. P. Casey, T. B. Clark**
- 539.** Design and synthesis of supporting groups for odd-electron Ru complexes. **L. A. Labios, J. S. Figueroa**

Section H

Salt Palace Convention Center
Hall 5

Organometallic Synthesis

B. T. Donovan-Merkert and D. C. Crans,
Organizers

7:00–10:00

- 540.** Complexes of transition metals containing light absorbing antennas. **D. P. Rillema, A. J. F. Cruz, K. Siam, M. Islam**
- 541.** Isolable gold-alkyne complexes. **H. V. R. Dias, J. Wu, J. A. Flores, P. Kroll**
- 542.** Pt-catalyzed asymmetric alkylation of bis(silylphosphines): Linker length effects on selectivity. **T. W. Chapp, A. J. Schoenfeld, D. S. Glueck**
- 543.** Models for the active site of [Fe-Fe] hydrogenase containing redox active groups. **C. A. Mebi, N. Okumura, R. Kottani, U. I. Zakai, A. K. Vannucci, L. T. Lockett, G. A. N. Felton, R. S. Glass, D. H. Evans, D. L. Lichtenberger**
- 544.** Platinum mediated reactions of silanes: Isolation of new silyl and silylene complexes. **A. Hines, S. Schreiner**
- 545.** Sandwich complexes with various substituted tripalladium ditropylum centers. **D. Babbini, S. K. Hurst**
- 546.** Self assembled organometallic diblock copolymers. **B. M. Mosby, D. Glueck, M. Guino-o**
- 547.** Synthesis and characterization of a luminescent Platinum(II) Phenylacetylidyde complex. **V. M. Shingade, L. J. Grove, J. A. Krause, W. B. Connick**
- 548.** Synthesis and characterization of Pd(II) and Ru(II) N-Heterocyclic carbene complexes with N-(2-pyridyl) and N-(2-pyrimidyl) pendant groups. **S. A. Cortes-Llamas, C. van Nieuwkerk, D. Brownand, D. B. Grotjahn**
- 549.** Synthesis and structure of ferrocenyl-methylphosphines and their borane adducts. **M. F. Cain, M. A. Pet, R. P. Hughes, D. S. Glueck, J. A. Golen, A. L. Rheingold**
- 550.** Synthesis of organometallic compounds bearing tridentate podand thioether ligands. **B. P. Nell, J. D. Paretzky, M. Ilmura**
- 551.** Azole ligand scaffolds: Synthesis and metallation of new trianionic pincer ligands. **E. S. Wiedner, M. J. A. Johnson**
- 552.** Bifunctional behavior of imidazol-2-yl complexes of Cp*Ir and CpRu. **V. Miranda-Soto, D. B. Grotjahn, A. G. DiPasquale, A. L. Rheingold**
- 553.** Cationic Cu(I) complexes of primary and secondary phosphines: Potential precursors to phosphido complexes. **M. F. Cain, D. S. Glueck, J. A. Golen, A. L. Rheingold**

- 554.** Group 9 metal complexes containing the cyclic diphosphine, *P,P'*-diphenyl-1,4-diphospha-cyclohexane: Synthesis, X-ray structure analyses and spectroscopic studies. **J. E. Sussman, T. S. Morey, M. L. Helm**
- 555.** Heterobimetallics with (allyl)nickel and (allyl)palladium fragments bridged by (2-(diphenylphosphino)ethyl)cyclopentadienyl group VI metal tricarbonyl metalloligands. **P. J. Fischer, A. P. Heerboth, V. G. Young Jr.**

Section I

Salt Palace Convention Center
Hall 5

Main Group Chemistry

D. C. Crans and B. T. Donovan-Merkert,
Organizers

7:00–10:00

- 556.** Synthesis and application of novel sterically demanding amido ligands in main group chemistry. **S. Aldridge, H. B. Mansaray**
- 557.** Synthesis and characterization of a boron viologen analog. **S. C. Dorman, R. E. Sykora, C. Odum, M. D. Soutullo, A. Wierzbicki, E. A. Salter, J. H. Davis Jr.**
- 558.** Progress toward the synthesis of naphthyl-substituted siloles. **N. Benfaremo, K. M. Fecteau, H. J. Tracy, J. Ford, C. K. Prudenté, J. L. Mullin**
- 559.** Reactions of carbon dioxide, carbon disulfide and carbonyl sulfide with tin(II) silylamides. **C. A. Stewart, D. A. Dickie, M. V. Parkes, R. A. Kemp**
- 560.** Synthesis and luminescence characteristics of tolyl-substituted siloles. **J. L. Mullin, T. Bozeman, D. L. Woodall, A. E. Orlando, C. E. Faller, A. L. Booth, C. K. Prudenté, J. Ford, N. Benfaremo, H. J. Tracy**
- 561.** Thin-film photoluminescence and electro-luminescence investigations of group 14 metalloles. **H. J. Tracy, R. Griffin, C. K. Prudenté, J. Ford, J. L. Mullin, N. Benfaremo**
- 562.** Bidentate phosphorus calix[5]arene complexes of platinum and palladium. **B. Rios, M. Lattman, H. Zhang**
- 563.** Deconvolution of steric, electronic, electrostatic and cooperative hydrogen bonding effects in anion binding by Lewis acidic ferrocenylboranes. **A. E. Broomsgrove, C. Bresner, I. R. Morgan, I. A. Fallis, S. Aldridge**
- 564.** Progress toward the synthesis and spectral characterization of group 14 metallafuorenes. **C. K. Prudenté, H. J. Tracy, E. Gjika, J. Ford, J. L. Mullin, N. Benfaremo**
- 565.** Silicon-thioether dendrimers synthesized with thiol-ene chemistry. **C. J. Rissing, D. Y. Son**
- 566.** Synthesis and coordination chemistry of new 6 π -electron ligands. **W. N. William, R. A. Kemp**
- 567.** The carborane-CB₁₁Me₁₁(-) substituent as a bulky and charged protecting group. **C. Douvris, M. Valášek, J. Michl**
- 568.** Thiol-ene chemistry for the synthesis of tripodal thioether ligands. **C. Rim, L. J. Lahey, V. G. Patel, D. Y. Son**

Geochemical Processes, Reactivity, and Applications of Manganese Oxides
Sponsored by GEOC, Cosponsored by ENVR and INOR

WEDNESDAY MORNING

Section A

Salt Palace Convention Center
254 B

Capturing and Storing Solar: Inorganic Chemistry to the Rescue

J. Van Houten and F. N. Castellano,
*Organizers*A. B. Bocarsly, *Presiding*

- 8:30 569.** Our energy future: Science and technology challenges of the 21st century. **T. J. Meyer**

- 9:10 570.** Recent developments in the design of DSSCs components. **C. A. Bigozzi**
- 9:40 571.** Conjugated materials in solar cells. **K. S. Schanze**
- 10:10** Intermission.
- 10:20 572.** First-row transition metal complexes as sensitizers for DSSCs: Making solar cells from paint chips and rust. **J. K. McCusker**
- 10:50 573.** Molecule/metal oxide semiconductor interfaces. **E. Galoppini**
- 11:20 574.** Sensitized iodide redox chemistry. **J. M. Gardner, S. Ardo, J. Rowley, G. J. Meyer**
- 11:50 575.** Mass transfer of polypyridyl cobalt complexes within mesoporous TiO₂ dye-sensitized solar cell photoanodes. **C. M. Elliott, J. J. Nelson, T. J. Amick, H. K. Seo, F. F. Peelor, D. W. Keller**

Section B

Salt Palace Convention Center
255 B

Coordination Chemistry of NO and its Implication for Metabolism, Imaging and Toxicity

W. R. Scheidt, *Organizer*N. Lehnert, *Organizer, Presiding*

- 8:30** Introductory Remarks.
- 8:35 576.** Reactivity and mechanisms of heme coordinated NOx: Reductive nitrosylation and oxygen atom transfer processes. **P. C. Ford, J. L. Heinecke, C. Khin, A. V. Iretskii, T. S. Kurtkyan**
- 9:05 577.** Dye-sensitized ruthenium nitrosyls: Trackable NO donors for light-triggered NO delivery to cellular targets. **P. K. Mascharak**
- 9:35 578.** NO movement in the solid-state structures of iron nitrosyls. **W. R. Scheidt, N. J. Silvermail, A. Barabanshikov, J. T. Sage**
- 10:05 579.** Force spectroscopy of the iron atom in nitrosylated heme proteins. **J. T. Sage, W. Zeng, A. Barabanshikov, N. J. Silvermail, W. R. Scheidt**
- 10:35** Intermission.
- 10:50 580.** NO product formation from Cu nitrite reductase. **M. E. Murphy, E. I. Tocheva, F. I. Rosell, A. G. Mauk**
- 11:20 581.** Electron nuclear double resonance (ENDOR) of the active site structures in the NO-generating copper center of nitrite reductase and the NO-binding heme center of cytochrome c'. **C. P. Scholes, B. Lee, Y. Sun, V. M. Grigoryants, O. M. Usov, J. P. Shapleigh**
- 11:50 582.** New light on NO bonding in Fe(II/III) heme proteins from resonance Raman spectroscopy and DFT modeling. **T. G. Spiro, M. Ibrahim, A. V. Soldatova**
- 12:20** Concluding Remarks.

Section C

Salt Palace Convention Center
255 D

Coordination Chemistry: Synthesis

W. A. Howard, *Organizer*C. N. Verani, *Presiding*

- 9:40 583.** Building a new family of reactive metal centers with big isocyanides. **J. S. Figueroa, B. J. Fox, T. B. D. Diti, M. D. Millard, L. A. Labios**

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American Chemical Society

NOTE: Abstracts public availability on January 26, 2009; rooms and times subject to change.

Synthesis and characterization of *N*-heterocyclic carbene palladium complex and its direct arylation of benzoxazoles with aryl bromides application

INOR 516

Hakan Arslan, harslan@uncfsu.edu¹, Donald G. VanDerveer, dvander@clemsun.edu², Serpil Demir³, Ismail Özdemir, iozdemir44@gmail.com³, and Bekir Çetinkaya, bekir.cetinkaya@ege.edu.tr⁴, (1) Department of Natural Sciences, Fayetteville State University, Fayetteville, NC 28301, (2) Department of Chemistry, Clemson University, Clemson, SC 29634, (3) Department of Chemistry, Faculty of Science and Arts, İnönü University, Malatya, 44280, Turkey, (4) Department of Chemistry, Faculty Science, Ege University, Izmir, 35100, Turkey

A number of simple *N*-heterocyclic carbene palladium-based complexes have recently emerged as effective catalysts for a variety of cross-coupling reactions. Various aryl-substitutedazole compounds having imidazole, oxazole and thiazole skeletons are known to exhibit pharmacological activities and also of importance in the area of π -conjugated functional materials. Among the most useful methods to prepare such arylheterocycles is the palladium catalyzed cross-coupling of either heteroaryl halides with arylmetals or aryl halides with heteroaryl metals. Based on these findings and our continuing interest in developing more efficient and stable catalysts, we now report the straightforward preparation of the title type complex, *trans*-bis(1-(4-tert-butylbenzyl)-3-(2,4,6-trimethylbenzyl)-1*H*-benzo[d]imidazol-2-ylidene) dihalopalladium(II) complex (Halo: Cl/Br, 0.72/0.28), and its structural and spectroscopic characterization. Also, we have investigated catalytic activation on direct arylation reaction of benzoxazoles with aryl bromides.

[Organometallic Chemistry](#)

7:00 PM-10:00 PM, Tuesday, March 24, 2009 Salt Palace Convention Center -- Hall 5, Poster

[Division of Inorganic Chemistry](#)

[The 237th ACS National Meeting, Salt Lake City, UT, March 22-26, 2009](#)