

The 233rd ACS National Meeting, Chicago, IL, March 25-29, 2007

INOR Sunday, 25 March 2007

7:00 PM-10:00 PM Hyatt Regency Chicago -- Riverside Center, Poster

Energy and Environmental Inorganic Chemistry

Organizers: Debbie C Crans and Donna J. Nelson

[300](#) Polyelectrolytes-organometallic multilayers for efficient photocurrent generation:

[polypropylviologen/RuL₂(NCS)₂/(PEDOT;PSS)]_n on ITO

Mira Park, Won Joo Lee, Sun Ki Min, Gangri Cai, Sung Hwan Han

[301](#) Catalysts for biofuel synthesis

Hunter M. Cowing, Jan Gryko

[302](#) Photocatalytic water splitting using platinum and metal oxide decorated niobate nanosheets

Owen C. Compton, Jin Y. Kim, Frank E. Osterloh

[303](#) Synthesis of higher alcohol mixtures from syngas over modified copper catalysts

Yong-ge Bai, Shaohui Ge, Lan Ma, **Dehua He**, Boqing Xu

[304](#) Cooperative reactivity of phosphines and boranes: The reversible metal free activation of dihydrogen

Gregory C. Welch, Douglas W. Stephan

[305](#) Designing mixed-metal supramolecular assemblies as photochemical molecular devices: Applications in solar hydrogen production

Shamindri M. Arachchige, Mark Elvington, Jared Brown, Karen J. Brewer

[306](#) Porphyrin-based hydrogen storage materials

Eun Young Choi, Richard W. Novotny, Wonyoung Choe

[307](#) SiC nanoporous membrane derived from polycarbosilane for hydrogen separation at high temperature

Younghee Kim, Soo Ryong Kim, Woo Teck Kwon, Vikram Dabhade

[308](#) Thiol group sidewall functionalization of single walled carbon nanotubes

Heather L. Rhoads, Christopher N. Brammer, Donna J. Nelson, Ruibo Li

[309](#) Effect of dye-semiconductor electronic coupling on solar energy conversion efficiency in dye sensitized solar cells

Ana O. Ramirez, Chunxing She, Kyoung-Tae Youm, Tianquan Lian, Joseph T. Hupp

[310](#) Fragile-free ZnO micro-cone flower-like architecture based 2.21% efficient dye-sensitized solar cells

Ju Hyun Ahn, Sung Hwan Han, Jin-Ho Chang, Hwang-yong Ko

INOR Tuesday, 27 March 2007

2:00 PM-5:40 PM McCormick Place Lakeside -- Room E256, Level 2, Oral

Energy Research in Inorganic Chemistry

Organizer: Debbie C Crans Organizer, Presiding: Donna J. Nelson

2:00 PM [714](#) A novel composite of lead oxide/active carbon for electrochemical supercapacitor

Yan-Zhen Zheng, **Mi-Lin Zhang**

2:20 PM [715](#) Tuning the electronic energies of novel μ -benzenedithiol-bis(triimineplatinum(II)) complexes

Bradley W. Smucker, Rami J. Batrice, Wei-Hsuan Chen, Jessica L. Menke, Mohammad Omary

2:40 PM [716](#) Solubilization of single-walled carbon nanotubes for nanostructure solar cells

Tingying Zeng, Jianxin Geng

3:00 PM [717](#) TiO₂ nanoparticle/nanowire composites for dye-sensitized solar cells. Yiyang Wu, **Bing Tan**

3:20 PM [718](#) Tailoring the interface to improve V_{OC} in dye-sensitized solar cells. **Nathan R. Neale**
3:40 PM [719](#) Preparation of new photosensitive compounds that link aniline oligomers to tetraphenylporphyrin. **Peter Spellane**, Tony E. Nicolas, Mary Chan
4:00 PM [720](#) Silicon nanoparticles: A new hydrogen storage material.
Doinita Neiner, Susan M Kauzlarich
4:20 PM [721](#) High-P/low-T neutron scattering of hydrogen inclusion compounds
Junhua Luo, Yusheng Zhao, Hongwu Xu, Luke L. Daemen, Wendy L. Mao, Robert P. Carrier
4:40 PM [722](#) High pressure gas sorption studies on covalent organic frameworks
Hani M. El-Kaderi, Omar M. Yaghi
5:00 PM [723](#) Comparative evaluation of Ni-, Cu-, and Fe-based oxygen carriers for chemical looping combustion. **Tengfei Liu**, Thomas Simonyi, Tom Sanders, Ranjani Siriwardane, Goetz Vesper
5:20 PM [724](#) Improving the sulfur and coke tolerance of Ni cermet materials
John Kuhn, Nandita Lakshminarayanan, Umit S. Ozkan

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Energy and Environmental Inorganic Chemistry

Organizers: Debbie C Crans and Donna J. Nelson

[858](#) Dependence of rates of interfacial electron transfer on anchoring group and dye MLCT state energy
Reid Gadziala, Debra L. Mohler
[859](#) Distance dependence of photoinduced interfacial electron transfer
Michael Alvey, Kyle A. Moler, Debra L. Mohler
[860](#) Heteroleptic ruthenium(II) terpyridyl complexes for dye-sensitized solar cells
Yali Sun, Felix N. Castellano
[861](#) Ordered uniform macroporous carbons with mesoporous walls as catalyst support in PEM fuel cell
Jong-Sung Yu, Jung Ho Kim, Min Sik Kim, Young A Song, Baizeng Fang, Suk Bon Yoon [862](#) Plasmon amplified absorption in dye-sensitized solar cells
Stacey D. Standridge, George C Schatz, Joseph T. Hupp
[863](#) Binding of tetrahedral anions with native and derivatized α -cyclodextrins
Suhash Harwani, Jason R. Telford
[864](#) Carbon dioxide fixation by a cadmium(II) macrocyclic complex
Maikel E Botros, Gregory J. Grant, Daron E. Janzen
[865](#) Determination contents of hydrogen sulfide in gas medium
Dilorom Kurbanova, Ziyadulla Normurodov
[866](#) Kinetic and mechanistic studies of an iron(0) model complex with halogenated hydrocarbons
Kristen A. Thoreson, Angela D. Follett, Kristopher McNeill
[867](#) Lung edema caused by brief inhalation of high concentration nitrogen dioxide in awake rats
Zengfa Gu, Adolph J Januskiewicz, Thelda I Atkin, Venee I Morthole, Gary D Coleman
[868](#) Metal ion adsorption on functionalized nanocrystalline zeolitic materials
Karna N Barquist, Sarah C. Larsen
[869](#) Photocatalytic degradation of organic pollutants by monovacant phosphotungstate under visible-light irradiation. **Huoming Shu**, Su-xing Luo, Ming-hui Ji, Ji-min Xie
[870](#) The sensor for determination of concentration gas component in the mixture of gases
Nurliboy Hamraev, Ziyadulla Normuradov

INOR Thursday, 29 March 2007

9:00 AM-11:40 AM McCormick Place Lakeside -- Room E271B, Level 2, Oral

Environmental Inorganic Chemistry

Organizers: Debbie C Crans and Donna J. Nelson Presiding: Heather Rhodes and Donna Nelson

9:00 AM [1234](#) Lagrangian water quality dynamics in the San Luis Drain, California

Emily C Volkmar, Randy A Dahlgren, William T. Stringfellow, Solomon S Henson, Sharon E Borglin, C. Kendall

9:20 AM [1235](#) Tracking manganese interaction with carboxylic acid functionalized fused quartz/water interfaces with second harmonic generation

Christopher T. Konek, Michael J. Musorrafiti, Paul A. Bertin, SonBinh T. Nguyen, Franz M. Geiger

9:40 AM [1236](#) Genetics of iron acquisition by an environmental microbe and geochemical model,

Pseudomonas mendocina ymp. **Jennifer L. DuBois**, Jonathan D. Awaysa

10:00 AM [1237](#) Heavy metal remediation using molybdenum oxide and tungsten oxide

Mohamed Chehbouni, Allen W. Apblett

10:20 AM [1238](#) Second harmonic studies of chromium (VI) binding to alpha-aluminum oxide

Michael J. Musorrafiti, Christopher T. Konek, Franz M. Geiger

10:40 AM [1239](#) Size fractionated chemical characteristics of aerosols in fertilizer manufacturing facilities

Yu-Mei Hsu, **Chang-Yu Wu**, Dale A. Lundgren, Brian K. Birky

11:00 AM [1240](#) Understanding the removal of elemental mercury from flue gas using a SiO₂-TiO₂ nanocomposite. Ying Li, Patrick Murphy, **Chang-Yu Wu**

11:20 AM [1241](#) Removing algae with electrocoagulation (EC). **Jia-Qian Jiang**