

May 30, 2013 Volume 117, Issue 21 Pages 10877-11448

**Energy Conversion and Storage; Energy and Charge Transport** 

#### Suppressed Activation Energy for Interfacial Charge Transfer of a Prussian Blue Analog Thin Film Electrode with Hydrated Ions (Li<sup>+</sup>, Na<sup>+</sup>, and Mg<sup>2+</sup>)

Yoshifumi Mizuno, Masashi Okubo, Eiji Hosono, Tetsuichi Kudo, Haoshen Zhou, and Katsuyoshi Oh-ishi pp 10877–10882

**Publication Date (Web):** May 20, 2013 (Article)

**DOI:** 10.1021/jp311616s

Section:

Electrochemical, Radiational, and Thermal Energy Technology

### MgH<sub>2</sub> Dehydrogenation Thermodynamics: Nanostructuring and Transition Metal Doping

S. A. Shevlin and Z. X. Guo pp 10883–10891

Publication Date (Web): April 25, 2013 (Article)

**DOI:** 10.1021/jp3117648

Section:

Thermodynamics, Thermochemistry, and Thermal Properties

#### Theoretical Study on the Structure and Energetics of Cd Insertion and Cu Depletion of CuIn<sub>5</sub>Se<sub>8</sub>

Janos Kiss, Thomas Gruhn, Guido Roma, and Claudia Felser pp 10892–10900

**Publication Date (Web):** May 2, 2013 (Article)

**DOI:** 10.1021/jp312467f

Section:

Electric Phenomena

### Charge Separation by Indirect Bandgap Transitions in CdS/ZnSe Type-II Core/Shell Quantum Dots

Sandeep Verma, Sreejith Kaniyankandy, and Hirendra N. Ghosh pp 10901–10908

**Publication Date (Web):** May 6, 2013 (Article)

**DOI:** 10.1021/jp400014j

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

### New Class of Molecular Conductance Switches Based on the [1,3]-Silyl Migration from Silanes to Silenes

Henrik Löfås, Andreas Orthaber, Burkhard O. Jahn, Alvi M. Rouf, Anton Grigoriev, Sascha Ott, Rajeev Ahuja, and Henrik Ottosson

pp 10909-10918

**Publication Date (Web):** April 5, 2013 (Article)

**DOI:** 10.1021/jp400062y

ACS AuthorChoice

Organometallic and Organometalloidal Compounds

# Hole Transport Materials Based Thin Films: Topographic Structures and Phase Transition Thermodynamics of Triphenylamine Derivatives

José C. S. Costa and Luís M. N. B. F. Santos pp 10919–10928

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp4002274

Section:

Thermodynamics, Thermochemistry, and Thermal Properties

### Influence of La<sup>3+</sup> Substitution on Electrical and Photocatalytic Behavior of Complex Bi<sub>2</sub>Sn<sub>2</sub>O<sub>7</sub> Oxides

Farheen N. Sayed, V. Grover, B. P. Mandal, and A. K. Tyagi pp 10929–10938

Publication Date (Web): May 16, 2013 (Article)

**DOI:** 10.1021/jp400248j

Section:

Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes

#### Built-In Charges and Photoluminescence Stability of 3D Surface-Engineered Silicon Nanocrystals by a Nanosecond Laser and a Direct Current Microplasma

V. Švrček, D. Mariotti, S. Mitra, T. Kaneko, L. Li, U. Cvelbar, K. Matsubara, and M. Kondo pp 10939–10948

**Publication Date (Web):** May 9, 2013 (Article)

**DOI:** 10.1021/jp400292h



Optical, Electron, and Mass Spectroscopy and Other Related Properties

#### Efficiency Enhancement of ZnO-Based Dye-Sensitized Solar Cells by Low-Temperature TiCl<sub>4</sub> Treatment and Dye **Optimization**

Nobuya Sakai, Tsutomu Miyasaka, and Takurou N. Murakami pp 10949-10956

Publication Date (Web): April 22, 2013 (Article)

**DOI:** 10.1021/jp401106u

Section:

Electrochemical, Radiational, and Thermal Energy Technology

#### Computational and Photoelectrochemical Study of **Hydrogenated Bismuth Vanadate**

Gongming Wang, Yichuan Ling, Xihong Lu, Fang Qian, Yexiang Tong, Jin Z. Zhang, Vincenzo Lordi, Cedric Rocha Leao, and Yat Li pp 10957-10964

**Publication Date (Web):** April 29, 2013 (Article)

**DOI:** 10.1021/jp401972h

Section:

Electrochemical, Radiational, and Thermal Energy Technology

#### Recombination in SnO<sub>2</sub>-Based Quantum Dots Sensitized **Solar Cells: The Role of Surface States**

Qingli Huang, Fan Li, Yun Gong, Jianheng Luo, Shize Yang, Yanhong Luo, Dongmei Li, Xuedong Bai, and Qingbo Meng

pp 10965-10973

**Publication Date (Web):** May 9, 2013 (Article)

**DOI:** 10.1021/jp402601v

Section:

Electrochemical, Radiational, and Thermal Energy Technology

#### Optical Probe of Charge Separation at Organic/Inorganic **Semiconductor Interfaces**

H. Park, M. Gutierrez, X. Wu, W. Kim, and X.-Y. Zhu pp 10974-10979

Publication Date (Web): May 8, 2013 (Article)

**DOI:** 10.1021/jp4029408

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

#### Determining the Conductivities of the Two Charge Transport Phases in Solid-State Dye-Sensitized Solar Cells by Impedance Spectroscopy

Feng Li, James Robert Jennings, and Qing Wang , Julianto Chua, Nripan Mathews, and Subodh G. Mhaisalkar , Soo-Jin Moon, Shaik M. Zakeeruddin, and Michael Grätzel pp 10980–10989

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp4030188

Section:

Electrochemical, Radiational, and Thermal Energy Technology

Surfaces, Interfaces, Porous Materials, and Catalysis

### Low Temperature Synthesis of NH<sub>3</sub> from Atomic N and H at the Surfaces of FeS<sub>2</sub>{100} Crystals

Tao Liu, Israel Temprano, Stephen J. Jenkins, David A. King, and Stephen M. Driver pp 10990–10998

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp308872y

Section:

Surface Chemistry and Colloids

#### Preparation and Characterization of Dendrimer-Derived Bimetallic Ir–Au/Al<sub>2</sub>O<sub>3</sub> Catalysts for CO Oxidation

You-Jung Song, Yaritza M. López-De Jesús, Paul T. Fanson, and Christopher T. Williams pp 10999–11007

Publication Date (Web): April 18, 2013 (Article)

**DOI:** 10.1021/jp310511q

Section:

Air Pollution and Industrial Hygiene

# Bifunctionality of Rh<sup>3+</sup> Modifier on TiO<sub>2</sub> and Working Mechanism of Rh<sup>3+</sup>/TiO<sub>2</sub> Photocatalyst under Irradiation of Visible Light

Sho Kitano, Naoya Murakami, Teruhisa Ohno, Yasufumi Mitani, Yoshio Nosaka, Hiroyuki Asakura, Kentaro Teramura, Tsunehiro Tanaka, Hiroaki Tada, Keiji Hashimoto, and Hiroshi Kominami

pp 11008-11016

**Publication Date (Web):** May 9, 2013 (Article)

**DOI:** 10.1021/jp311801e

Section:

Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes

### Nanoconfined Electrolyte Solutions in Porous Hydrophilic Silica Membranes

R. Renou, A. Ghoufi, A. Szymczyk, H. Zhu, J.-C. Neyt, and P. Malfreyt pp 11017–11027

**Publication Date (Web):** May 1, 2013 (Article)

**DOI:** 10.1021/jp403450x

Section:

Surface Chemistry and Colloids

#### Molecular Dynamics Simulations of Carbon Dioxide Intercalation in Hydrated Na-Montmorillonite

Evgeniy M. Myshakin, Wissam A. Saidi, Vyacheslav N. Romanov, Randall T. Cygan, and Kenneth D. Jordan pp 11028–11039

**Publication Date (Web):** May 1, 2013 (Article)

**DOI:** 10.1021/jp312589s

Section:

Surface Chemistry and Colloids

### Synthesis of Hierarchical Hollow MnO<sub>2</sub> Microspheres and Potential Application in Abatement of VOCs

Dongyan Li, Xiaofeng Wu, and Yunfa Chen pp 11040–11046

Publication Date (Web): April 12, 2013 (Article)

**DOI:** 10.1021/jp312745n

Section:

**Industrial Inorganic Chemicals** 

#### Reaction Mechanism of Aromatic Ring Amination of Benzene and Substituted Benzenes by Aqueous Ammonia over Platinum-Loaded Titanium Oxide Photocatalyst

Hayato Yuzawa, Jun Kumagai, and Hisao Yoshida pp 11047–11058

Publication Date (Web): March 29, 2013 (Article)

**DOI:** 10.1021/jp3127658

Section:

Physical Organic Chemistry

Pressure and Temperature Effects on the Formation of a Pd/C Surface Carbide: Insights into the Role of Pd/C as a

### Selective Catalytic State for the Partial Hydrogenation of Acetylene

Daniel Torres, Fabrizio Cinquini, and Philippe Sautet pp 11059–11065

**Publication Date (Web):** May 1, 2013 (Article)

**DOI:** 10.1021/jp400059m

Section:

Surface Chemistry and Colloids

#### On the Association of the Base Pairs on the Silica Surface Based on Free Energy Biased Molecular Dynamics Simulation and Quantum Mechanical Calculations

Susanta Haldar, Vojtech Spiwok, and Pavel Hobza pp 11066–11075

**Publication Date (Web):** May 2, 2013 (Article)

**DOI:** 10.1021/jp400198h

Section:

General Biochemistry

### Cooperative Reorganization of Mineral and Template during Directed Nucleation of Calcium Carbonate

Jonathan R. I. Lee, T. Yong-Jin Han, Trevor M. Willey, Michael H. Nielsen, Liana M. Klivansky, Yi Liu, Sungwook Chung, Louis J. Terminello, Tony van Buuren, and James J. De Yoreo

pp 11076-11085

**Publication Date (Web):** April 16, 2013 (Article)

**DOI:** 10.1021/jp400279f

Section:

Surface Chemistry and Colloids

#### Preparation of Ge@Organosilicon Core—Shell Structures and Characterization by Solid State NMR and Other Techniques

Michal Eshed, Keren Keinan-Adamsky, Gil Goobes, and Aharon Gedanken pp 11086–11094

Publication Date (Web): April 23, 2013 (Article)

**DOI:** 10.1021/jp400296y

Section:

Organometallic and Organometalloidal Compounds

#### Phosphate Ions Promoting Association between Peptide and Modeling Cell Membrane Revealed by Sum Frequency Generation Vibrational Spectroscopy

Feng Wei, Shuji Ye, Hongchun Li, and Yi Luo pp 11095–11103

**Publication Date (Web):** April 22, 2013 (Article)

**DOI:** 10.1021/jp400378d

Section:

General Biochemistry

#### Gas Saturation Resulting from Methane Hydrate Dissociation in a Porous Medium: Comparison between Analytical and Pore-Network Results

Ioannis N. Tsimpanogiannis , Peter C. Lichtner pp 11104–11116

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp400449g

Section:

Fossil Fuels, Derivatives, and Related Products

# Theoretical Study of Doubly Resonant Sum-Frequency Vibrational Spectroscopy for 1,1'-Bi-2-naphthol Molecules on Water Surface

Ren-hui Zheng, Wen-mei Wei, Yuan-yuan Jing, Hao Liu, and Qiang Shi pp 11117–11123

**Publication Date (Web):** May 8, 2013 (Article)

**DOI:** 10.1021/jp400818d

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

# Support-Free Bimodal Distribution of Plasmonically Active $Ag/AgO_x$ Nanoparticle Catalysts: Attributes and Plasmon Enhanced Surface Chemistry

Zhouying Zhao and Michael A. Carpenter

pp 11124-11132

**Publication Date (Web):** May 2, 2013 (Article)

**DOI:** 10.1021/jp400837r

Section:

Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes

#### **Amorphization in Nanoparticles**

Lucas Piot, Sylvie Le Floch, Thibaut Cornier, Stéphane Daniele, and Denis Machon

pp 11133–11140

**Publication Date (Web):** April 21, 2013 (Article)

**DOI:** 10.1021/jp401121c

Section:

General Physical Chemistry

# Resolving Precursor Deligation, Surface Species Evolution, and Nanoparticle Nucleation during Palladium Atomic Layer Deposition

Yu Lei, Junling Lu, Haiyan Zhao, Bin Liu, Ke-Bin Low, Tianpin Wu, Joseph A. Libera, Jeffrey P. Greeley, Peter J. Chupas, Jeffrey T. Miller, and Jeffrey W. Elam pp 11141–11148

Publication Date (Web): May 3, 2013 (Article)

**DOI:** 10.1021/jp401196f

Section:

Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms

#### Ethanol Photoreaction on RuO<sub>x</sub>/Ru-Modified TiO<sub>2</sub>(110)

S. Kundu, A. B. Vidal, M. A. Nadeem, S. D. Senanayake, H. Idriss, P. Liu, J. A. Rodriguez, and D. Stacchiola

pp 11149–11158

**Publication Date (Web):** May 1, 2013 (Article)

**DOI:** 10.1021/jp4015367

Section:

Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes

#### Adsorption of Propane and Propylene on CuBTC Metal-Organic Framework: Combined Theoretical and Experimental Investigation

Miroslav Rubeš, Andrew D. Wiersum, Philip L. Llewellyn, Lukáš Grajciar, Ota Bludský, and Petr Nachtigall

pp 11159-11167

Publication Date (Web): April 29, 2013 (Article)

**DOI:** 10.1021/jp401600v

Section:

Surface Chemistry and Colloids

#### Carbonylation of Dimethyl Ether with CO on Solid 12-Tungstophosphoric Acid: In Situ Magic Angle Spinning NMR Monitoring of the Reaction Kinetics

Maxim S. Kazantsev, Mikhail V. Luzgin, and Alexander G. Stepanov

pp 11168-11175

**Publication Date (Web):** April 23, 2013 (Article)

**DOI:** 10.1021/jp401604r

Section:

Physical Organic Chemistry

### Study of the Anchoring Process of Tethered Unsymmetrical Zn-Phthalocyanines on TiO<sub>2</sub> Nanostructured Thin Films

Giovanna Pellegrino, Alessandra Alberti, Guglielmo G. Condorelli, Filippo Giannazzo, Antonino La Magna, Anna Maria Paoletti, Giovanna Pennesi, Gentilina Rossi, and Gloria Zanotti

pp 11176-11185

Publication Date (Web): May 20, 2013 (Article)

**DOI:** 10.1021/jp4018458

Section:

Surface Chemistry and Colloids

#### Rutile Surface Properties Beyond the Single Crystal Approach: New Insights from the Experimental Investigation of Different Polycrystalline Samples and Periodic DFT Calculations

Lorenzo Mino, Giuseppe Spoto, Silvia Bordiga, and Adriano Zecchina pp 11186–11196

Publication Date (Web): April 18, 2013 (Article)

**DOI:** 10.1021/jp401916q

Section:

Surface Chemistry and Colloids

### Adsorption Site Selectivity for Thiophene on Reconstructed Si(5 5 12)–2 × 1 Surface

Jae Ryang Hahn, Satyaveda C. Bharath, Gyu-Hyeong Kim, Ki Wan Kim, Sukmin Jeong, and Thomas P. Pearl pp 11197–11202

**Publication Date (Web):** May 16, 2013 (Article)

**DOI:** 10.1021/jp401932r

Section:

Surface Chemistry and Colloids

#### Modes of Interaction of Simazine with the Surface of Model Amorphous Silicas in Water

Serena Esposito, Filomena Sannino, Michele Pansini, Barbara Bonelli, and Edoardo Garrone pp 11203–11210

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp401997s

Section:

Surface Chemistry and Colloids

### Growth of Single- and Bilayer ZnO on Au(111) and Interaction with Copper

Xingyi Deng, Kun Yao, Keju Sun, Wei-Xue Li, Junseok Lee, and Christopher Matranga

pp 11211-11218

**Publication Date (Web):** May 2, 2013 (Article)

**DOI:** 10.1021/jp402008w

Section:

Crystallography and Liquid Crystals

#### Single-Molecule Fluorescence Detection of Effective Adsorption Sites at the Metal Oxide–Solution Interface

Takashi Tachikawa, Tatsuya Ohsaka, Zhenfeng Bian, and Tetsuro Majima pp 11219–11228

**Publication Date (Web):** May 7, 2013 (Article)

**DOI:** 10.1021/jp402144h

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

### **Understanding Pattern Formation in 2D Metal-Organic Coordination Systems on Solid Surfaces**

Damian Nieckarz and Paweł Szabelski

pp 11229–11241

**Publication Date (Web):** May 6, 2013 (Article)

**DOI:** 10.1021/jp4022486

Section:

Surface Chemistry and Colloids

### **Understanding the Growth Mechanism of α-Fe<sub>2</sub>O<sub>3</sub> Nanoparticles through a Controlled Shape Transformation**

Ming Lin, Hui Ru Tan, Joyce Pei Ying Tan, and Shiqiang Bai pp 11242–11250

**Publication Date (Web):** April 16, 2013 (Article)

**DOI:** 10.1021/jp402281a

Section:

Crystallography and Liquid Crystals

#### Reconstruction of Clean and Oxygen-Covered Pt(110) Surfaces

Tianwei Zhu, Shi-Gang Sun, Rutger A. van Santen, and Emiel J. M. Hensen pp 11251–11257

Publication Date (Web): April 24, 2013 (Article)

**DOI:** 10.1021/jp402423v

Section:

Surface Chemistry and Colloids

### First-Principles Investigation of Selective Oxidation of Propane on Clean and Sulfided $V_2O_5$ (010) Surfaces

John M. H. Lo, Zahra A. Premji, Tom Ziegler, and Peter D. Clark pp 11258–11274

Publication Date (Web): April 23, 2013 (Article)

**DOI:** 10.1021/jp4024734

Section:

Fossil Fuels, Derivatives, and Related Products

# Diffusion of Binary CO<sub>2</sub>/CH<sub>4</sub> Mixtures in the MIL-47(V) and MIL-53(Cr) Metal—Organic Framework Type Solids: A Combination of Neutron Scattering Measurements and Molecular Dynamics Simulations

Fabrice Salles, Hervé Jobic, Thomas Devic, Vincent Guillerm, Christian Serre, Michael M. Koza, Gérard Ferey, and Guillaume Maurin pp 11275–11284

**Publication Date (Web):** May 8, 2013 (Article)

**DOI:** 10.1021/jp403225t

Section:

Surface Chemistry and Colloids

#### Plasmonics, Optical Materials, and Hard Matter

#### High-Contrast On/Off Fluorescence Switching via Reversible E–Z Isomerization of Diphenylstilbene Containing the $\alpha$ -Cyanostilbenic Moiety

Jong Won Chung, Seong-Jun Yoon, Byeong-Kwan An, and Soo Young Park pp 11285–11291

Publication Date (Web): April 29, 2013 (Article)

**DOI:** 10.1021/jp401440s

Section:

Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes

#### High-Pressure, High-Temperature Phase Diagram of Calcium Fluoride from Classical Atomistic Simulations

Claudio Cazorla , Daniel Errandonea pp 11292–11301

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp401577j

Section:

General Physical Chemistry

# Bipyridine-Based Nanosized Metal—Organic Framework with Tunable Luminescence by a Postmodification with Eu(III): An Experimental and Theoretical Study

Ying-Ya Liu, Roel Decadt, Thomas Bogaerts, Karen Hemelsoet, Anna M. Kaczmarek, Dirk Poelman, Michel Waroquier, Veronique Van Speybroeck, Rik Van Deun, and Pascal Van Der Voort

pp 11302-11310

Publication Date (Web): April 29, 2013 (Article)

**DOI:** 10.1021/jp402154q

Section:

**Inorganic Chemicals and Reactions** 

#### Low-Cost Infrared Resonant Structures for Surface-Enhanced Infrared Absorption Spectroscopy in the Fingerprint Region from 3 to 13 $\mu m$

Jón Mattis Hoffmann, Xinghui Yin, Jens Richter, Andrea Hartung, Tobias W. W. Maß, and Thomas Taubner pp 11311–11316

Publication Date (Web): April 26, 2013 (Article)

**DOI:** 10.1021/jp402383h

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

#### Physical Processes in Nanomaterials and Nanostructures

#### Chemical and Electrochemical Oxidation of Silicon Surfaces Functionalized with APTES: The Role of Surface Roughness in the AuNPs Anchoring Kinetics

Joaquín Klug, Luis A. Pérez, Eduardo A. Coronado, and Gabriela I. Lacconi pp 11317–11327

**Publication Date (Web):** May 8, 2013 (Article)

**DOI:** 10.1021/jp212613f

Section:

#### Distribution of Photons in Single Quantum Dot Intermittent Photoluminescence with Power-Law Distribution of On/Off Intervals

I. S. Osad'ko pp 11328–11336

**Publication Date (Web):** April 25, 2013 (Article)

**DOI:** 10.1021/jp4005554

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

#### Solid-State Thermal Dewetting of Just-Percolated Gold Films Evaporated on Glass: Development of the Morphology and Optical Properties

Alexander B. Tesler, Ben M. Maoz, Yishay Feldman, Alexander Vaskevich, and Israel Rubinstein

pp 11337-11346

**Publication Date (Web):** May 17, 2013 (Article)

**DOI:** 10.1021/jp400895z

Section:

Surface Chemistry and Colloids

# Superstructures of Diketopyrrolopyrrole Donors and Perylenediimide Acceptors Formed by Hydrogen-Bonding and $\pi \cdots \pi$ Stacking

Stephen Rieth, Zhong Li, Charlotte E. Hinkle, Carmen X. Guzman, Jungeun J. Lee, Samer I. Nehme, and Adam B. Braunschweig

pp 11347-11356

Publication Date (Web): May 1, 2013 (Article)

**DOI:** 10.1021/jp400918z

Section:

Physical Organic Chemistry

### **Molecular Mechanisms for Adsorption in Cu-BTC Metal Organic Framework**

Juan José Gutiérrez-Sevillano, José Manuel Vicent-Luna, David Dubbeldam, and Sofia Calero pp 11357–11366

**Publication Date (Web):** April 29, 2013 (Article)

**DOI:** 10.1021/jp401017u

Section:

Surface Chemistry and Colloids

#### Influence of an Atom in EGaIn/Ga<sub>2</sub>O<sub>3</sub> Tunneling Junctions Comprising Self-Assembled Monolayers

Davide Fracasso, Mutlu Iskender Muglali, Michael Rohwerder, Andreas Terfort, and Ryan C. Chiechi

pp 11367–11376

Publication Date (Web): April 30, 2013 (Article)

**DOI:** 10.1021/jp401703p

Section:

Electric Phenomena

#### On the Coalescence of Nanoparticulate Gold Sinter Ink

Michael B. Cortie, Michael J. Coutts, Cuong Ton-That, Annette Dowd, Vicki J. Keast, and Andrew M. McDonagh

pp 11377-11384

**Publication Date (Web):** May 7, 2013 (Article)

**DOI:** 10.1021/jp401815b

Section:

Surface Chemistry and Colloids

#### **Determination of Local Dye Concentration in Hybrid Porous Silica Thin Films**

Anna Synak, Piotr Bojarski, Beata Grobelna, Leszek Kułak, and Aneta Lewkowicz pp 11385–11392

**Publication Date (Web):** April 2, 2013 (Article)

**DOI:** 10.1021/jp401839j

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

#### Vibrational Spectrum, Caloric Curve, Low-Temperature Heat Capacity, and Debye Temperature of Sodium Clusters: The Na<sub>139</sub><sup>+</sup> Case

Huziel E. Sauceda, J. Jesús Pelayo, Fernando Salazar, Luis A. Pérez, and Ignacio L. Garzón pp 11393–11398

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp401903f

Section:

General Physical Chemistry

#### New Insight into Intermediate Precursors of Brust–Schiffrin Gold Nanoparticles Synthesis

Lili Zhu, Chen Zhang, Chengchen Guo, Xiaoliang Wang, Pingchuan Sun, Dongshan Zhou, Wei

Chen, and Gi Xue pp 11399–11404

**Publication Date (Web):** May 6, 2013 (Article)

**DOI:** 10.1021/jp402116x

Section:

Surface Chemistry and Colloids

#### Magnetic Hyperthermia Properties of Electrosynthesized Cobalt Ferrite Nanoparticles

Eva Mazario, Nieves Menéndez, Pilar Herrasti, Magdalena Cañete, Vincent Connord, and Julian Carrey

pp 11405–11411

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp4023025

Section: Pharmaceuticals

### Ice-like Water Structure in Carbon Nanotube (8,8) Induces Cationic Hydration Enhancement

Zhongjin He, Jian Zhou, Xiaohua Lu, and Ben Corry

pp 11412-11420

**Publication Date (Web):** May 2, 2013 (Article)

**DOI:** 10.1021/jp4025206

Section:

Surface Chemistry and Colloids

### Enhanced Raman Scattering in Gaps Formed by Planar Au and Au/Ag Alloy Nanoparticles

Kwan Kim, Jeong-Yong Choi, and Kuan Soo Shin pp 11421–11427

**Publication Date (Web):** May 16, 2013 (Article)

**DOI:** 10.1021/jp402746v

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

#### Structure, Energetic and Tribological Properties, and Possible Applications in Nanoelectromechanical Systems of Argon-Separated Double-Layer Graphene

Andrey M. Popov, Irina V. Lebedeva, Andrey A. Knizhnik, Yurii E. Lozovik, and Boris V. Potapkin

pp 11428-11435

**Publication Date (Web):** May 2, 2013 (Article)

**DOI:** 10.1021/jp402765p

Section: Electric Phenomena

# High Exchange Bias in $Fe_{3-\delta}O_4$ @CoO Core Shell Nanoparticles Synthesized by a One-Pot Seed-Mediated Growth Method

Walid Baaziz, Benoît P. Pichon, Christophe Lefevre, Corinne Ulhaq-Bouillet, Jean-Marc Greneche, Mohamed Toumi, Tahar Mhiri, and Sylvie Bégin-Colin pp 11436–11443

**Publication Date (Web):** May 3, 2013 (Article)

**DOI:** 10.1021/jp402823h

Section:

Magnetic Phenomena

# Comparison of the Binding of Polyvinylpyrrolidone and Polyethylene Oxide to Ag Surfaces: Elements of a Successful Structure-Directing Agent

Ya Zhou, Wissam A. Saidi, and Kristen A. Fichthorn pp 11444–11448

Publication Date (Web): May 6, 2013 (Article)

**DOI:** 10.1021/jp403318h

Section:

Surface Chemistry and Colloids