

## Spotlights

### Spotlights on Recent *JACS* Publications

pp 1165–1166

**Publication Date (Web):** January 30, 2013 (Spotlights)

**DOI:** 10.1021/ja400709t

## Perspectives

### The Li-Ion Rechargeable Battery: A Perspective

John B. Goodenough and Kyu-Sung Park

pp 1167–1176

**Publication Date (Web):** January 7, 2013 (Perspective)

**DOI:** 10.1021/ja3091438

 Section:

Electrochemical, Radiational, and Thermal Energy Technology

## Communications

### Protein Structure in the Gas Phase: The Influence of Side-Chain Microsolvation

Stephan Warnke, Gert von Helden, and Kevin Pagel

pp 1177–1180

**Publication Date (Web):** January 15, 2013 (Communication)

**DOI:** 10.1021/ja308528d

 Section:

General Biochemistry

### In-Situ Crystallization Route to Nanorod-Aggregated Functional ZSM-5 Microspheres

Bin Li, Bo Sun, Xufang Qian, Wei Li, Zhangxiong Wu, Zhenkun Sun, Minghua Qiao, Mikel Duke, and Dongyuan Zhao

pp 1181–1184

**Publication Date (Web):** January 3, 2013 (Communication)

**DOI:** 10.1021/ja309194z

Section:

Fossil Fuels, Derivatives, and Related Products

## **Steric Pressure between Membrane-Bound Proteins Opposes Lipid Phase Separation**

Christine S. Scheve, Paul A. Gonzales, Noor Momin, and Jeanne C. Stachowiak  
pp 1185–1188

**Publication Date (Web):** January 15, 2013 (Communication)

**DOI:** 10.1021/ja3099867

Section:

General Biochemistry

## **Spatial Organization of Lipid Phases in Micropatterned Polymer-Supported Membranes**

Friedrich Roder, Oliver Birkholz, Oliver Beutel, Dirk Paterok, and Jacob Piehler  
pp 1189–1192

**Publication Date (Web):** January 5, 2013 (Communication)

**DOI:** 10.1021/ja310186g

Section:

Biochemical Methods

## **A Water-Stable Metal–Organic Framework with Highly Acidic Pores for Proton-Conducting Applications**

Jared M. Taylor, Karl W. Dawson, and George K. H. Shimizu  
pp 1193–1196

**Publication Date (Web):** January 10, 2013 (Communication)

**DOI:** 10.1021/ja310435e

Section:

Inorganic Chemicals and Reactions

## **Phosphine Quenching of Cyanine Dyes as a Versatile Tool for Fluorescence Microscopy**

Joshua C. Vaughan, Graham T. Dempsey, Eileen Sun, and Xiaowei Zhuang  
pp 1197–1200

**Publication Date (Web):** January 11, 2013 (Communication)

**DOI:** 10.1021/ja3105279

Section:

Biochemical Methods

## **Can Boron and Nitrogen Co-doping Improve Oxygen Reduction Reaction Activity of Carbon Nanotubes?**

Yu Zhao, Lijun Yang, Sheng Chen, Xizhang Wang, Yanwen Ma, Qiang Wu, Yufei Jiang, Weijin Qian, and Zheng Hu  
pp 1201–1204

**Publication Date (Web):** January 14, 2013 (Communication)

**DOI:** 10.1021/ja310566z

 Section:

Electrochemical, Radiational, and Thermal Energy Technology

## **The Energetic Difference between Synthesis of Correct and Incorrect Base Pairs Accounts for Highly Accurate DNA Replication**

Andrew C. Olson, Jennifer N. Patro, Milan Urban, and Robert D. Kuchta  
pp 1205–1208

**Publication Date (Web):** January 14, 2013 (Communication)

**DOI:** 10.1021/ja309866m

 Section:

General Biochemistry

## **Synthesis of (–)-Neothiobinupharidine**

Daniel J. Jansen and Ryan A. Shenvi  
pp 1209–1212

**Publication Date (Web):** January 8, 2013 (Communication)

**DOI:** 10.1021/ja310778t

 Section:

Alkaloids

## **Single-Layer Single-Crystalline SnSe Nanosheets**

Lun Li, Zhong Chen, Ying Hu, Xuewen Wang, Ting Zhang, Wei Chen, and Qiangbin Wang  
pp 1213–1216

**Publication Date (Web):** January 12, 2013 (Communication)

**DOI:** 10.1021/ja3108017

 Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties

## **Mechanism of Hydrogenolysis of an Iridium–Methyl Bond: Evidence for a Methane Complex Intermediate**

Jesús Campos, Sabuj Kundu, Dale R. Pahls, Maurice Brookhart, Ernesto Carmona, and Thomas R. Cundari  
pp 1217–1220

**Publication Date (Web):** January 11, 2013 (Communication)

**DOI:** 10.1021/ja310982v

 Section:

Organometallic and Organometalloidal Compounds

## Ni-Catalyzed Direct Carboxylation of Benzyl Halides with CO<sub>2</sub>

Thierry León, Arkaitz Correa, and Ruben Martin

pp 1221–1224

**Publication Date (Web):** January 9, 2013 (Communication)

**DOI:** 10.1021/ja311045f

 Section:

Aliphatic Compounds

## Iridium-Catalyzed Hydrosilylative Reduction of Glucose to Hexane(s)

Matthew P. McLaughlin, Laura L. Adduci, Jennifer J. Becker, and Michel R. Gagné

pp 1225–1227

**Publication Date (Web):** January 11, 2013 (Communication)

**DOI:** 10.1021/ja3110494

 Section:

Industrial Organic Chemicals, Leather, Fats, and Waxes

## A Powerful Aluminum Catalyst for the Synthesis of Highly Functional Organic Carbonates

Christopher J. Whiteoak, Nicola Kielland, Victor Laserna, Eduardo C. Escudero-Adán, Eddy Martin, and Arjan W. Kleij

pp 1228–1231

**Publication Date (Web):** January 10, 2013 (Communication)

**DOI:** 10.1021/ja311053h

 Section:

Heterocyclic Compounds (More than One Hetero Atom)

## C<sub>2</sub>-Symmetric Cyclic Selenium-Catalyzed Enantioselective Bromoaminocyclization

Feng Chen, Chong Kiat Tan, and Ying-Yeung Yeung

pp 1232–1235

**Publication Date (Web):** January 13, 2013 (Communication)

**DOI:** 10.1021/ja311202e

 Section:

Heterocyclic Compounds (More than One Hetero Atom)

## Pd(II)-Catalyzed Enantioselective C–H Activation/C–O Bond Formation: Synthesis of Chiral Benzofuranones

Xiu-Fen Cheng, Yan Li, Yi-Ming Su, Feng Yin, Jian-Yong Wang, Jie Sheng, Harit U. Vora, Xi-Sheng Wang, and Jin-Quan Yu

pp 1236–1239

**Publication Date (Web):** January 10, 2013 (Communication)

**DOI:** 10.1021/ja311259x

 Section:

Heterocyclic Compounds (One Hetero Atom)

## **Application of *N*-Halogeno-*N*-sodiobenzenesulfonamide Reagents to the Selective Detection of 5-Methylcytosine in DNA Sequences**

Tianlu Wang, Tingting Hong, Tun Tang, Qianqian Zhai, Xiwen Xing, Wuxiang Mao, Xiaolong Zheng, Liang Xu, Jinjun Wu, Xiaocheng Weng, Shaoru Wang, Tian Tian, Bifeng Yuan, Bing Huang, Lin Zhuang, and Xiang Zhou

pp 1240–1243

**Publication Date (Web):** January 9, 2013 (Communication)

**DOI:** 10.1021/ja311229n

 Section:

General Biochemistry

## **Highly Selective Catalyst-Dependent Competitive 1,2-C→C, -O→C, and -N→C Migrations from β-Methylene-β-silyloxy-β-amido-α-diazoacetates**

Xichen Xu, Yu Qian, Peter Y. Zavalij, and Michael P. Doyle

pp 1244–1247

**Publication Date (Web):** January 14, 2013 (Communication)

**DOI:** 10.1021/ja311392m

 Section:

Physical Organic Chemistry

## **C(sp<sup>3</sup>)-F Bond Activation of CF<sub>3</sub>-Substituted Anilines with Catalytically Generated Silicon Cations: Spectroscopic Evidence for a Hydride-Bridged Ru–S Dimer in the Catalytic Cycle**

Timo Stahl, Hendrik F. T. Klare, and Martin Oestreich

pp 1248–1251

**Publication Date (Web):** January 11, 2013 (Communication)

**DOI:** 10.1021/ja311398j

 Section:

Organometallic and Organometalloidal Compounds

## **MOFs Under Pressure: The Reversible Compression of a Single Crystal**

Kevin J. Gagnon, Christine M. Beavers, and Abraham Clearfield

pp 1252–1255

**Publication Date (Web):** January 15, 2013 (Communication)

**DOI:** 10.1021/ja311613p

 Section:

Crystallography and Liquid Crystals

## **Growing Crystalline Chalcogenidoarsenates in Surfactants: From Zero-Dimensional Cluster to Three-Dimensional Framework**

Wei-Wei Xiong, Eashwer Umesh Athresh, Yu Ting Ng, Junfeng Ding, Tom Wu, and Qichun Zhang

pp 1256–1259

**Publication Date (Web):** January 11, 2013 (Communication)

**DOI:** 10.1021/ja3116179

 Section:

Crystallography and Liquid Crystals

## **Reconstitution of Biosynthetic Machinery for Indole- Diterpene Paxilline in *Aspergillus oryzae***

Koichi Tagami, Chengwei Liu, Atsushi Minami, Motoyoshi Noike, Tetsuya Isaka, Shuhei Fueki, Yoshihiro Shichijo, Hiroaki Toshima, Katsuya Gomi, Tohru Dairi, and Hideaki Oikawa

pp 1260–1263

**Publication Date (Web):** January 11, 2013 (Communication)

**DOI:** 10.1021/ja3116636

 Section:

Enzymes

## **Mn-Catalyzed Aromatic C–H Alkenylation with Terminal Alkynes**

Bingwei Zhou, Hui Chen, and Congyang Wang

pp 1264–1267

**Publication Date (Web):** January 3, 2013 (Communication)

**DOI:** 10.1021/ja311689k

 Section:

Organometallic and Organometalloidal Compounds


## **Chiral Anion Phase-Transfer Catalysis Applied to the Direct Enantioselective Fluorinative Dearomatization of Phenols**

Robert J. Phipps and F. Dean Toste

pp 1268–1271

**Publication Date (Web):** January 18, 2013 (Communication)

**DOI:** 10.1021/ja311798q

 Section:  
General Organic Chemistry

## **A New Nanobiocatalytic System Based on Allosteric Effect with Dramatically Enhanced Enzymatic Performance**

Liang-Bing Wang, You-Cheng Wang, Rong He, Awei Zhuang, Xiaoping Wang, Jie Zeng, and J. G. Hou

pp 1272–1275

**Publication Date (Web):** January 14, 2013 (Communication)

**DOI:** 10.1021/ja3120136

 Section:  
Enzymes


## **Highly Active Ruthenium Metathesis Catalysts Exhibiting Unprecedented Activity and Z-Selectivity**

Lauren E. Rosebrugh, Myles B. Herbert, Vanessa M. Marx, Benjamin K. Keitz, and Robert H. Grubbs

pp 1276–1279

**Publication Date (Web):** January 14, 2013 (Communication)

**DOI:** 10.1021/ja311916m

 Section:  
General Organic Chemistry


## **Transition between Collective Behaviors of Micromotors in Response to Different Stimuli**

Wentao Duan, Ran Liu, and Ayusman Sen

pp 1280–1283

**Publication Date (Web):** January 9, 2013 (Communication)

**DOI:** 10.1021/ja3120357

 Section:  
Surface Chemistry and Colloids

## **Cation Modules as Building Blocks Forming Supramolecular Assemblies with Planar Receptor–Anion Complexes**

Bin Dong, Tsuneaki Sakurai, Yoshihito Honsho, Shu Seki, and Hiromitsu Maeda

pp 1284–1287

**Publication Date (Web):** January 9, 2013 (Communication)

**DOI:** 10.1021/ja312214a

 Section:  
Organometallic and Organometalloidal Compounds

## Articles

### **Energetic Basis of Uncoupling Folding from Binding for an Intrinsically Disordered Protein**

Igor Drobnak, Natalie De Jonge, Sarah Haesaerts, Gorazd Vesnaver, Remy Loris, and Jurij Lah  
pp 1288–1294

**Publication Date (Web):** January 4, 2013 (Article)

**DOI:** 10.1021/ja305081b

 Section:

General Biochemistry

### **Unraveling the Pathway of Gold(I)-Catalyzed Olefin Hydrogenation: An Ionic Mechanism**

Aleix Comas-Vives and Gregori Ujaque

pp 1295–1305

**Publication Date (Web):** December 5, 2012 (Article)

**DOI:** 10.1021/ja305630z

 Section:

Physical Organic Chemistry

### **Quantum-Mechanical Analysis of the Energetic Contributions to $\pi$ Stacking in Nucleic Acids versus Rise, Twist, and Slide**

Trent M. Parker, Edward G. Hohenstein, Robert M. Parrish, Nicholas V. Hud, and C. David Sherrill

pp 1306–1316

**Publication Date (Web):** December 24, 2012 (Article)

**DOI:** 10.1021/ja3063309

 Section:

General Biochemistry

### **The Backbone Dynamics of the Amyloid Precursor Protein Transmembrane Helix Provides a Rationale for the Sequential Cleavage Mechanism of $\gamma$ -Secretase**

Oxana Pester, Paul J. Barrett, Daniel Hornburg, Philipp Hornburg, Rasmus Pröbstle, Simon Widmaier, Christoph Kutzner, Milena Dürrbaum, Aphrodite Kapurniotu, Charles R. Sanders, Christina Scharnagl, and Dieter Langosch

pp 1317–1329

**Publication Date (Web):** December 24, 2012 (Article)

**DOI:** 10.1021/ja3112093

 Section:

General Biochemistry



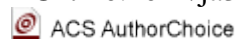
# Fluoroketone Inhibition of Ca<sup>2+</sup>-Independent Phospholipase A<sub>2</sub> through Binding Pocket Association Defined by Hydrogen/Deuterium Exchange and Molecular Dynamics

Yuan-Hao Hsu, Denis Bucher, Jian Cao, Sheng Li, Sheng-Wei Yang, George Kokotos, Virgil L. Woods, Jr, J. Andrew McCammon, and Edward A. Dennis

pp 1330–1337

**Publication Date (Web):** December 20, 2012 (Article)

**DOI:** 10.1021/ja306490g



ACS Section:

Enzymes

# A General Mechanism for the Copper- and Silver-Catalyzed Olefin Aziridination Reactions: Concomitant Involvement of the Singlet and Triplet Pathways

Lourdes Maestre, W. M. C. Sameera, M. Mar Díaz-Requejo, Feliu Maseras, and Pedro J. Pérez

pp 1338–1348

**Publication Date (Web):** December 31, 2012 (Article)

**DOI:** 10.1021/ja307229e

ACS Section:

Physical Organic Chemistry

# III–V Nanocrystals Capped with Molecular Metal Chalcogenide Ligands: High Electron Mobility and Ambipolar Photoresponse

Wenyong Liu, Jong-Soo Lee, and Dmitri V. Talapin

pp 1349–1357

**Publication Date (Web):** December 26, 2012 (Article)

**DOI:** 10.1021/ja308200f

ACS Section:

Electric Phenomena

# Multidimensional Magic Angle Spinning NMR Spectroscopy for Site-Resolved Measurement of Proton Chemical Shift Anisotropy in Biological Solids

Guangjin Hou, Sivakumar Paramasivam, Si Yan, Tatyana Polenova, and Alexander J. Vega

pp 1358–1368

**Publication Date (Web):** January 4, 2013 (Article)

**DOI:** 10.1021/ja3084972

ACS Section:

Biochemical Methods

## **Small-molecule Binding to the DNA Minor Groove Is Mediated by a Conserved Water Cluster**

DengGuo Wei, W David Wilson, and Stephen Neidle

pp 1369–1377

**Publication Date (Web):** December 31, 2012 (Article)

**DOI:** 10.1021/ja308952y

 Section:

General Biochemistry

## **Reversible and Cyclical Transformations between Solid and Hollow Nanostructures in Confined Reactions of Manganese Oxide and Silica within Nanosized Spheres**

Tae-Lin Ha, Jin Goo Kim, Soo Min Kim, and In Su Lee

pp 1378–1385

**Publication Date (Web):** November 8, 2012 (Article)

**DOI:** 10.1021/ja309142j

 Section:

Surface Chemistry and Colloids

## **Large-Scale Production of Edge-Selectively Functionalized Graphene Nanoplatelets via Ball Milling and Their Use as Metal-Free Electrocatalysts for Oxygen Reduction Reaction**

In-Yup Jeon, Hyun-Jung Choi, Sun-Min Jung, Jeong-Min Seo, Min-Jung Kim, Liming Dai, and Jong-Beom Baek

pp 1386–1393

**Publication Date (Web):** October 30, 2012 (Article)

**DOI:** 10.1021/ja3091643

 Section:

Electrochemical, Radiational, and Thermal Energy Technology

## **Besting Vitamin E: Sidechain Substitution is Key to the Reactivity of Naphthyridinol Antioxidants in Lipid Bilayers**

Bo Li, Jitendra R. Harjani, Nicholas S. Cormier, Hasam Madarati, Jeffrey Atkinson, Gonzalo Cosa, and Derek A. Pratt

pp 1394–1405

**Publication Date (Web):** December 31, 2012 (Article)

**DOI:** 10.1021/ja309153x

 Section:

General Biochemistry

## **Enzyme Molecules as Nanomotors**

Samudra Sengupta, Krishna K. Dey, Hari S. Muddana, Tristan Tabouillot, Michael E. Ibele, Peter J. Butler, and Ayusman Sen  
pp 1406–1414

**Publication Date (Web):** January 10, 2013 (Article)

**DOI:** 10.1021/ja3091615

 Section:

General Biochemistry

## **Folding and Binding of an Intrinsically Disordered Protein: Fast, but Not ‘Diffusion-Limited’**

Joseph M. Rogers, Annette Steward, and Jane Clarke

pp 1415–1422

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

**DOI:** 10.1021/ja309527h

 Section:

General Biochemistry

## **Living Unimodal Growth of Polyion Complex Vesicles via Two-Dimensional Supramolecular Polymerization**

Yasutaka Anraku, Akihiro Kishimura, Yuichi Yamasaki, and Kazunori Kataoka

pp 1423–1429

**Publication Date (Web):** January 4, 2013 (Article)

**DOI:** 10.1021/ja3096587

 Section:

Physical Properties of Synthetic High Polymers

## **Synthesis and Characterization of Quarteranethene: Elucidating the Characteristics of the Edge State of Graphene Nanoribbons at the Molecular Level**

Akihito Konishi, Yasukazu Hirao, Kouzou Matsumoto, Hiroyuki Kurata, Ryohei Kishi, Yasuteru Shigeta, Masayoshi Nakano, Kazuya Tokunaga, Kenji Kamada, and Takashi Kubo

pp 1430–1437

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

**DOI:** 10.1021/ja309599m

 Section:

Physical Organic Chemistry

## **Nanoparticle Adhesion to the Cell Membrane and Its Effect on Nanoparticle Uptake Efficiency**

Anna Lesniak, Anna Salvati, Maria J. Santos-Martinez, Marek W. Radomski, Kenneth A. Dawson, and Christoffer Åberg

pp 1438–1444

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

DOI: 10.1021/ja309812z

Section:

General Biochemistry

## **Interaction of Cisplatin with Adenine and Guanine: A Combined IRMPD, MS/MS, and Theoretical Study**

Barbara Chiavarino, Maria Elisa Crestoni, Simonetta Fornarini, Debora Scuderi, and Jean-Yves Salpin

pp 1445–1455

**Publication Date (Web):** December 28, 2012 (Article)

DOI: 10.1021/ja309857d

Section:

Inorganic Chemicals and Reactions

## **Mechanism and Origins of Ligand-Controlled Selectivities in [Ni(NHC)]-Catalyzed Intramolecular (5 + 2) Cycloadditions and Homo-Ene Reactions: A Theoretical Study**

Xin Hong, Peng Liu, and K. N. Houk

pp 1456–1462

**Publication Date (Web):** December 31, 2012 (Article)

DOI: 10.1021/ja309873z

Section:

Physical Organic Chemistry

## **Stereoselective Rh<sub>2</sub>(*S*-IBAZ)<sub>4</sub>-Catalyzed Cyclopropanation of Alkenes, Alkynes, and Allenes: Asymmetric Synthesis of Diaceptor Cyclopropylphosphonates and Alkylidenecyclopropanes**

Vincent N. G. Lindsay, Dominic Fiset, Philipp J. Gritsch, Soula Azzi, and André B. Charette

pp 1463–1470

**Publication Date (Web):** January 4, 2013 (Article)

DOI: 10.1021/ja3099728

Section:

Organometallic and Organometalloidal Compounds

## **Mechanism and the Origins of Stereospecificity in Copper-Catalyzed Ring Expansion of Vinyl Oxiranes: A Traceless Dual Transition-Metal-Mediated Process**

Thomas J. L. Mustard, Daniel J. Mack, Jon T. Njardarson, and Paul Ha-Yeon Cheong

pp 1471–1475

**Publication Date (Web):** December 31, 2012 (Article)

DOI: 10.1021/ja310065z

 Section:

Physical Organic Chemistry

## Direct STM Elucidation of the Effects of Atomic-Level Structure on Pt(111) Electrodes for Dissolved CO Oxidation

Junji Inukai, Donald A. Tryk, Takahiro Abe, Mitsuru Wakisaka, Hiroyuki Uchida, and Masahiro Watanabe

pp 1476–1490

Publication Date (Web): January 7, 2013 (Article)

DOI: 10.1021/ja309886p

 Section:

Electrochemistry

## Single Molecule Characterization of the Interactions between Amyloid- $\beta$ Peptides and the Membranes of Hippocampal Cells

Priyanka Narayan, Kristina A. Ganzinger, James McColl, Laura Weimann, Sarah Meehan, Seema Qamar, John A. Carver, Mark R. Wilson, Peter St. George-Hyslop, Christopher M. Dobson, and David Klenerman

pp 1491–1498

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

DOI: 10.1021/ja3103567

 ACS AuthorChoice

 Section:

General Biochemistry

## Engineering Catalytic Contacts and Thermal Stability: Gold/Iron Oxide Binary Nanocrystal Superlattices for CO Oxidation

Yijin Kang, Xingchen Ye, Jun Chen, Liang Qi, Rosa E. Diaz, Vicky Doan-Nguyen, Guozhong Xing, Cherie R. Kagan, Ju Li, Raymond J. Gorte, Eric A. Stach, and Christopher B. Murray

pp 1499–1505

Publication Date (Web): January 7, 2013 (Article)

DOI: 10.1021/ja310427u

 Section:

Air Pollution and Industrial Hygiene

## Heterogeneous Ceria Catalyst with Water-Tolerant Lewis Acidic Sites for One-Pot Synthesis of 1,3-Diols via Prins Condensation and Hydrolysis Reactions

Yehong Wang, Feng Wang, Qi Song, Qin Xin, Shutao Xu, and Jie Xu

pp 1506–1515

**Publication Date (Web):** December 10, 2012 (Article)

**DOI:** 10.1021/ja310498c

Section:

General Organic Chemistry

## **A New Strategy for Intracellular Delivery of Enzyme Using Mesoporous Silica Nanoparticles: Superoxide Dismutase**

Yi-Ping Chen, Chien-Tsu Chen, Yann Hung, Chih-Ming Chou, Tsang-Pai Liu, Ming-Ren Liang, Chao-Tsen Chen, and Chung-Yuan Mou

pp 1516–1523

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

**DOI:** 10.1021/ja3105208

Section:

Pharmaceuticals

## **Two-Dimensional Mesoporous Carbon Nanosheets and Their Derived Graphene Nanosheets: Synthesis and Efficient Lithium Ion Storage**

Yin Fang, Yingying Lv, Renchao Che, Haoyu Wu, Xuehua Zhang, Dong Gu, Gengfeng Zheng, and Dongyuan Zhao

pp 1524–1530

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

**DOI:** 10.1021/ja310849c

Section:

Electrochemical, Radiational, and Thermal Energy Technology

## **Confounding the Paradigm: Peculiarities of Amyloid Fibril Nucleation**

Dimo Kashchiev, Raffaella Cabriolu, and Stefan Auer

pp 1531–1539

**Publication Date (Web):** January 10, 2013 (Article)

**DOI:** 10.1021/ja311228d

Section:

General Biochemistry

## **Spiroketal Formation and Modification in Avermectin Biosynthesis Involves a Dual Activity of AveC**

Peng Sun, Qunfei Zhao, Futao Yu, Hua Zhang, Zhuhua Wu, Yinyan Wang, Yan Wang, Qinglin Zhang, and Wen Liu

pp 1540–1548

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

**DOI:** 10.1021/ja311339u

Section:  
Enzymes

## **Mechanistic Investigation of Oxidative Mannich Reaction with *tert*-Butyl Hydroperoxide. The Role of Transition Metal Salt**

Maxim O. Ratnikov and Michael P. Doyle  
pp 1549–1557

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

**DOI:** 10.1021/ja3113559

Section:

Physical Organic Chemistry

## **Moderating Strain without Sacrificing Reactivity: Design of Fast and Tunable Noncatalyzed Alkyne–Azide Cycloadditions via Stereoelectronically Controlled Transition State Stabilization**

Brian Gold, Gregory B. Dudley, and Igor V. Alabugin  
pp 1558–1569

**Publication Date (Web):** December 31, 2012 (Article)

**DOI:** 10.1021/ja3114196

Section:

Physical Organic Chemistry

## **Viologen-Mediated Assembly of and Sensing with Carboxylatopillar[5]arene-Modified Gold Nanoparticles**

Hui Li, Dai-Xiong Chen, Yu-Long Sun, Yue Bing Zheng, Li-Li Tan, Paul S. Weiss, and Ying-Wei Yang  
pp 1570–1576

**Publication Date (Web):** December 20, 2012 (Article)

**DOI:** 10.1021/ja3115168

Section:

Biochemical Methods

## **Bare-Minimum Fluorous Mixture Synthesis of a Stereoisomer Library of 4,8,12-Trimethylnonadecanols and Predictions of NMR Spectra of Saturated Oligoisoprenoid Stereoisomers**

Edmund A.-H. Yeh, Eveline Kumli, Krishnan Damodaran, and Dennis P. Curran  
pp 1577–1584

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

DOI: 10.1021/ja311606u

 Section:

Terpenes and Terpenoids

## **Simplifying Nickel(0) Catalysis: An Air-Stable Nickel Precatalyst for the Internally Selective Benzylolation of Terminal Alkenes**

Eric A. Standley and Timothy F. Jamison

pp 1585–1592

**Publication Date (Web):** January 14, 2013 (Article)

DOI: 10.1021/ja3116718

 Section:

Aliphatic Compounds

## **I-Motif-Programmed Functionalization of DNA Nanocircles**

Tao Li and Michael Famulok

pp 1593–1599

**Publication Date (Web):** January 13, 2013 (Article)

DOI: 10.1021/ja3118224

 ACS AuthorChoice

 Section:

General Biochemistry

## **A Pd(0)-Mediated Indole (Macro)cyclization Reaction**

Steven P. Breazzano, Yam B. Poudel, and Dale L. Boger

pp 1600–1606

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

DOI: 10.1021/ja3121394

 Section:

Heterocyclic Compounds (More than One Hetero Atom)

## **Understanding the High Photocatalytic Activity of (B, Ag)-Codoped TiO<sub>2</sub> under Solar-Light Irradiation with XPS, Solid-State NMR, and DFT Calculations**

Ningdong Feng, Qiang Wang, Anmin Zheng, Zhengfeng Zhang, Jie Fan, Shang-Bin Liu, Jean-Paul Amoureux, and Feng Deng

pp 1607–1616

**Publication Date (Web):** January 15, 2013 (Article)

DOI: 10.1021/ja312205c

 Section:

Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes



# Transforming Thymidine into a Magnetic Resonance Imaging Probe for Monitoring Gene Expression

Amnon Bar-Shir, Guanshu Liu, Yajie Liang, Nirbhay N. Yadav, Michael T. McMahon, Piotr Walczak, Sridhar Nimmagadda, Martin G. Pomper, Keri A. Tallman, Marc M. Greenberg, Peter C.M. van Zijl, Jeff W.M. Bulte, and Assaf A. Gilad

pp 1617–1624

**Publication Date (Web):** January 4, 2013 (Article)

**DOI:** 10.1021/ja312353e

Section:

Biochemical Methods

## Additions and Corrections

# Correction to How Lipid Unsaturation, Peroxyl Radical Partitioning, and Chromanol Lipophilic Tail Affect the Antioxidant Activity of $\alpha$ -Tocopherol: Direct Visualization via High-Throughput Fluorescence Studies Conducted with Fluorogenic $\alpha$ -Tocopherol Analogues

Katerina Krumova, Sayuri Friedland, and Gonzalo Cosa

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General Biochemistry

# Benzimidazole and Related Ligands for Cu-Catalyzed Azide–Alkyne Cycloaddition

Valentin O. Rodionov, Stanislav I. Presolski, Sean Gardinier, Yeon-Hee Lim, and M. G. Finn

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Physical Organic Chemistry