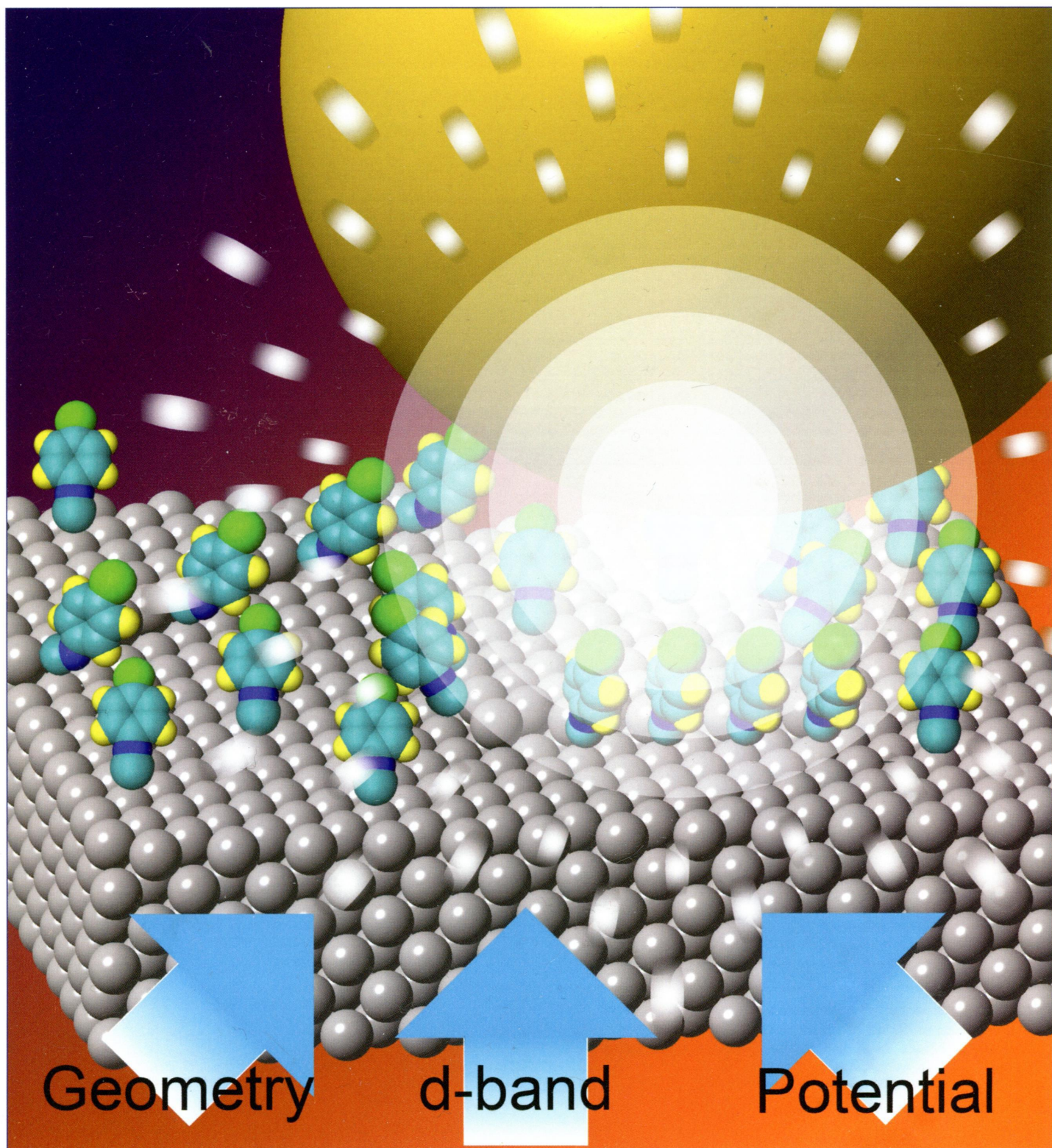


114
A 44/cs

July 23, 2014
Volume 136
Number 29
pubs.acs.org/JACS

J | A | C | S

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY



ACS Publications
Most Trusted. Most Cited. Most Read.

www.acs.org

Content

1. Spotlights on Recent JACS Publications

ACS Contributing Correspondents

Journal of the American Chemical Society **2014** 136 (29), 10173-10173

2. Polymerization-Induced Self-Assembly of Block Copolymer Nano-objects via RAFT Aqueous Dispersion Polymerization

Nicholas J. Warren and Steven P. Armes

Journal of the American Chemical Society **2014** 136 (29), 10174-10185

3. Mixing, Diffusion, and Percolation in Binary Supported Membranes Containing Mixtures of Lipids and Amphiphilic Block Copolymers

Douglas L. Gettel, Jeremy Sanborn, Mira A. Patel, Hans-Peter de Hoog, Bo Liedberg, Madhavan Nallani, and Atul N. Parikh

Journal of the American Chemical Society **2014** 136 (29), 10186-10189

4. Elucidation of the Cryptic Epimerase Activity of Redox-Inactive Ketoreductase Domains from Modular Polyketide Synthases by Tandem Equilibrium Isotope Exchange

Ashish Garg, Xinqiang Xie, Adrian Keatinge-Clay, Chaitan Khosla, and David E. Cane

Journal of the American Chemical Society **2014** 136 (29), 10190-10193

5. Small Circular DNA Molecules Act as Rigid Motifs To Build DNA Nanotubes

Hongning Zheng, Minyu Xiao, Qin Yan, Yinzhou Ma, and Shou-Jun Xiao

Journal of the American Chemical Society **2014** 136 (29), 10194-10197

6. Water Oxidation by a Nickel-Glycine Catalyst

Dong Wang, Giovanna Ghirlanda, and James P. Allen

Journal of the American Chemical Society **2014** 136 (29), 10198-10201

7. Copper-Catalyzed Intermolecular Trifluoromethylarylation of Alkenes: Mutual Activation of Arylboronic Acid and CF₃⁺ Reagent

Fei Wang, Dinghai Wang, Xin Mu, Pinhong Chen, and Guosheng Liu

Journal of the American Chemical Society **2014** 136 (29), 10202-10205

8. Synthesis of Structurally Ordered Pt₃Ti and Pt₃V Nanoparticles as Methanol Oxidation Catalysts

Zhiming Cui, Hao Chen, Mengtian Zhao, Daniel Marshall, Yingchao Yu, Héctor Abruña, and Francis J DiSalvo

Journal of the American Chemical Society **2014** 136 (29), 10206-10209

- 9. Synthesis of the Rosette-Inducing Factor RIF-1 and Analogs**
Christine Beemelmans, Arielle Woznica, Rosanna A. Alegado, Alexandra M. Cantley, Nicole King, and Jon Clardy
Journal of the American Chemical Society **2014** 136 (29), 10210-10213
- 10. Polycondensation of Polymer Brushes via DNA Hybridization**
Xueguang Lu, Eleanor Watts, Fei Jia, Xuyu Tan, and Ke Zhang
Journal of the American Chemical Society **2014** 136 (29), 10214-10217
- 11. New Chemistry from an Old Reagent: Mono- and Dinuclear Macrocyclic Uranium(III) Complexes from [U(BH₄)₃(THF)₂]**
Polly L. Arnold, Charlotte J. Stevens, Joy H. Farnaby, Michael G. Gardiner, Gary S. Nichol, and Jason B. Love
Journal of the American Chemical Society **2014** 136 (29), 10218-10221
- 12. Shape-Dependent Hydrogen-Storage Properties in Pd Nanocrystals: Which Does Hydrogen Prefer, Octahedron (111) or Cube (100)?**
Guangqin Li, Hirokazu Kobayashi, Shun Dekura, Ryuichi Ikeda, Yoshiki Kubota, Kenichi Kato, Masaki Takata, Tomokazu Yamamoto, Syo Matsumura, and Hiroshi Kitagawa
Journal of the American Chemical Society **2014** 136 (29), 10222-10225
- 13. A Multi-iron System Capable of Rapid N₂ Formation and N₂ Cleavage**
K. Cory MacLeod, David J. Vinyard, and Patrick L. Holland
Journal of the American Chemical Society **2014** 136 (29), 10226-10229
- 14. NO₂- Activation and Reduction to NO by a Nonheme Fe(NO₂)₂ Complex**
Brian C. Sanders, Sayed M. Hassan, and Todd C. Harrop
Journal of the American Chemical Society **2014** 136 (29), 10230-10233
- 15. Lewis Acid-Assisted Formic Acid Dehydrogenation Using a Pincer-Supported Iron Catalyst**
Elizabeth A. Bielinski, Paraskevi O. Lagaditis, Yuanyuan Zhang, Brandon Q. Mercado, Christian Würtele, Wesley H. Bernskoetter, Nilay Hazari, and Sven Schneider
Journal of the American Chemical Society **2014** 136 (29), 10234-10237
- 16. Transition-Metal-Free Controlled Polymerization of 2-Perfluoroaryl-5-trimethylsilylthiophenes**
Takanobu Sanji and Tomokazu Iyoda
Journal of the American Chemical Society **2014** 136 (29), 10238-10241
- 17. Environmentally Benign Synthesis of Ultrathin Metal Telluride Nanowires**
Haoran Yang, Scott W. Finefrock, Jonatan D. Albarracin Caballero, and Yue Wu
Journal of the American Chemical Society **2014** 136 (29), 10242-10245

- 18. Photorelaxation Induced by Water–Chromophore Electron Transfer**
Mario Barbatti
Journal of the American Chemical Society **2014** 136 (29), 10246-10249
- 19. Remote Control of Axial Chirality: Aminocatalytic Desymmetrization of N-Arylmaleimides via Vinylogous Michael Addition**
Nicola Di Iorio, Paolo Righi, Andrea Mazzanti, Michele Mancinelli, Alessia Ciogli, and Giorgio Bencivenni
Journal of the American Chemical Society **2014** 136 (29), 10250-10253
- 20. Arm-Cleavable Microgel Star Polymers: A Versatile Strategy for Direct Core Analysis and Functionalization**
Takaya Terashima, Saki Nishioka, Yuta Koda, Mikihiro Takenaka, and Mitsuo Sawamoto
Journal of the American Chemical Society **2014** 136 (29), 10254-10257
- 21. Branch-Selective, Iridium-Catalyzed Hydroarylation of Monosubstituted Alkenes via a Cooperative Destabilization Strategy**
Giacomo E. M. Crisenza, Niall G. McCreanor, and John F. Bower
Journal of the American Chemical Society **2014** 136 (29), 10258-10261
- 22. Cooperative Transition Metal/Lewis Acid Bond-Activation Reactions by a Bidentate (Boryl)iminomethane Complex: A Significant Metal–Borane Interaction Promoted by a Small Bite-Angle LZ Chelate**
Brandon R. Barnett, Curtis E. Moore, Arnold L. Rheingold, and Joshua S. Figueroa
Journal of the American Chemical Society **2014** 136 (29), 10262-10265
- 23. Mild Aminoacylation of Indoles and Pyrroles through a Three-Component Reaction with Ynol Ethers and Sulfonyl Azides**
Joshua S. Alford and Huw M. L. Davies
Journal of the American Chemical Society **2014** 136 (29), 10266-10269
- 24. Synthesis of (–)-Pseudotabersonine, (–)-Pseudovincadifformine, and (+)-Coronaridine Enabled by Photoredox Catalysis in Flow**
Joel W. Beatty and Corey R. J. Stephenson
Journal of the American Chemical Society **2014** 136 (29), 10270-10273
- 25. Total Synthesis of (–)-Crinipellin A**
Taek Kang, Seog Boem Song, Won-Yeob Kim, Byung Gyu Kim, and Hee-Yoon Lee
Journal of the American Chemical Society **2014** 136 (29), 10274-10276
- 26. Specific and Nonspecific Interactions in Ultraweak Protein–Protein Associations Revealed by Solvent Paramagnetic Relaxation Enhancements**
Helle Johansson, Malene Ringkjøbing Jensen, Henrik Gesmar, Sebastian Meier, Joachim M. Vinther, Camille Keeler, Michael E. Hodsdon, and Jens J. Led
Journal of the American Chemical Society **2014** 136 (29), 10277-10286

- 27. First-Principles Study of Phenol Hydrogenation on Pt and Ni Catalysts in Aqueous Phase**
Yeohoon Yoon, Roger Rousseau, Robert S. Weber, Donghai Mei, and Johannes A. Lercher
Journal of the American Chemical Society **2014** 136 (29), 10287-10298
- 28. Effects of Atomic Geometry and Electronic Structure of Platinum Surfaces on Molecular Adsorbates Studied by Gap-Mode SERS**
Jian Hu, Masahiro Tanabe, Jun Sato, Kohei Uosaki, and Katsuyoshi Ikeda
Journal of the American Chemical Society **2014** 136 (29), 10299-10307
- 29. Photodissociation of Conformer-Selected Ubiquitin Ions Reveals Site-Specific Cis/Trans Isomerization of Proline Peptide Bonds**
Stephan Warnke, Carsten Baldauf, Michael T. Bowers, Kevin Pagel, and Gert von Helden
Journal of the American Chemical Society **2014** 136 (29), 10308-10314
- 30. Thermodynamic Mechanism for the Evasion of Antibody Neutralization in Flaviviruses**
Rodrigo A. Maillard, Tong Liu, David W. C. Beasley, Alan D. T. Barrett, Vincent J. Hilser, and J. Ching Lee
Journal of the American Chemical Society **2014** 136 (29), 10315-10324
- 31. Differential Control of Heme Reactivity in Alpha and Beta Subunits of Hemoglobin: A Combined Raman Spectroscopic and Computational Study**
Eric M. Jones, Emanuele Monza, Gurusamy Balakrishnan, George C. Blouin, Piotr J. Mak, Qianhong Zhu, James R. Kincaid, Victor Guallar, and Thomas G. Spiro
Journal of the American Chemical Society **2014** 136 (29), 10325-10339
- 32. A Multi-State, Allosterically-Regulated Molecular Receptor With Switchable Selectivity**
Jose Mendez-Arroyo, Joaquín Barroso-Flores, Alejo M. Lifschitz, Amy A. Sarjeant, Charlotte L. Stern, and Chad A. Mirkin
Journal of the American Chemical Society **2014** 136 (29), 10340-10348
- 33. Probing the Electrostatics of Active Site Microenvironments along the Catalytic Cycle for Escherichia coli Dihydrofolate Reductase**
C. Tony Liu, Joshua P. Layfield, Robert J. Stewart, III, Jarrod B. French, Philip Hanoian, John B. Asbury, Sharon Hammes-Schiffer, and Stephen J. Benkovic
Journal of the American Chemical Society **2014** 136 (29), 10349-10360
- 34. Electronic States of the Quasilinear Molecule Propargylene (HCCCH) from Negative Ion Photoelectron Spectroscopy**
David L. Osborn, Kristen M. Vogelhuber, Scott W. Wren, Elisa M. Miller, Yu-Ju Lu, Amanda S. Case, Leonid Sheps, Robert J. McMahon, John F. Stanton, Lawrence B. Harding, Branko Ruscic, and W. Carl Lineberger

Journal of the American Chemical Society **2014** 136 (29), 10361-10372

35. Mechanisms of syn-Insertion of Alkynes and Allenes into Gold–Silicon Bonds: A Comprehensive Experimental/Theoretical Study

Maximilian Joost, Laura Estevez, Sonia Mallet-Ladeira, Karinne Miqueu, Abderrahmane Amgoune, and Didier Bourissou

Journal of the American Chemical Society **2014** 136 (29), 10373-10382

36. DNA-Controlled Partition of Carbon Nanotubes in Polymer Aqueous Two-Phase Systems

Geyou Ao, Constantine Y. Khripin, and Ming Zheng

Journal of the American Chemical Society **2014** 136 (29), 10383-10392

37. Half-Unit-Cell α -Fe₂O₃ Semiconductor Nanosheets with Intrinsic and Robust Ferromagnetism

Weiren Cheng, Jingfu He, Tao Yao, Zhihu Sun, Yong Jiang, Qinghua Liu, Shan Jiang, Fengchun Hu, Zhi Xie, Bo He, Wensheng Yan, and Shiqiang Wei

Journal of the American Chemical Society **2014** 136 (29), 10393-10398

38. Water–Polysaccharide Interactions in the Primary Cell Wall of *Arabidopsis thaliana* from Polarization Transfer Solid-State NMR

Paul B. White, Tuo Wang, Yong Bum Park, Daniel J. Cosgrove, and Mei Hong

Journal of the American Chemical Society **2014** 136 (29), 10399-10409

39. Ion-Regulated Allosteric Binding of Fullerenes (C₆₀ and C₇₀) by Tetrathiafulvalene-Calix[4]pyrroles

Christina M. Davis, Jong Min Lim, Karina R. Larsen, Dong Sub Kim, Young Mo Sung, Dani M. Lyons, Vincent M. Lynch, Kent A. Nielsen, Jan O. Jeppesen, Dongho Kim, Jung Su Park, and Jonathan L. Sessler

Journal of the American Chemical Society **2014** 136 (29), 10410-10417

40. The Trifluoromethyl Group as a Conformational Stabilizer and Probe: Conformational Analysis of Cinchona Alkaloid Scaffolds

G. K. Surya Prakash, Fang Wang, Martin Rahm, Zhe Zhang, Chuanfa Ni, Jingguo Shen, and George A. Olah

Journal of the American Chemical Society **2014** 136 (29), 10418-10431

41. Electrochemical and Spectroelectrochemical Characterization of an Iridium-Based Molecular Catalyst for Water Splitting: Turnover Frequencies, Stability, and Electrolyte Effects

Oscar Diaz-Morales, Thomas J. P. Hersbach, Dennis G. H. Hetterscheid, Joost N. H. Reek, and Marc T. M. Koper

Journal of the American Chemical Society **2014** 136 (29), 10432-10439

42. Hydration of Gaseous m-Aminobenzoic Acid: Ionic vs Neutral Hydrogen Bonding and Water Bridges

Terrence M. Chang, Satrajit Chakrabarty, and Evan R. Williams
Journal of the American Chemical Society **2014** 136 (29), 10440-10449

**43. Mechanistic Studies on the Substrate-Tolerant Lanthipeptide Synthetase
ProcM**

Subha Mukherjee and Wilfred A. van der Donk
Journal of the American Chemical Society **2014** 136 (29), 10450-10459

**44. Very Large Cooperative Effects in Heterobimetallic Titanium-Chromium
Catalysts for Ethylene Polymerization/Copolymerization**

Shaofeng Liu, Alessandro Motta, Aidan R. Mouat, Massimiliano Delferro, and Tobin J. Marks
Journal of the American Chemical Society **2014** 136 (29), 10460-10469

45. Unusual Reaction of [NiFe]-Hydrogenases with Cyanide

Suzannah V. Hexter, Min-Wen Chung, Kylie A. Vincent, and Fraser A. Armstrong
Journal of the American Chemical Society **2014** 136 (29), 10470-10477

46. In Situ Hybridization of Superparamagnetic Iron-Biomolecule Nanoparticles

Nafiseh Moghimi, Apraku David Donkor, Mamata Mohapatra, Joseph Palathinkal Thomas, Zhengding Su, Xiaowu (Shirley) Tang, and Kam Tong Leung
Journal of the American Chemical Society **2014** 136 (29), 10478-10485

47. Length-Dependent Conductance of Oligothiophenes

Brian Capozzi, Emma J. Dell, Timothy C. Berkelbach, David R. Reichman, Latha Venkataraman, and Luis M. Campos
Journal of the American Chemical Society **2014** 136 (29), 10486-10492

48. Mechanochemistry with Metallosupramolecular Polymers

Diederik W. R. Balkenende, Souleymane Coulibaly, Sandor Balog, Yoan C. Simon, Gina L. Fiore, and Christoph Weder
Journal of the American Chemical Society **2014** 136 (29), 10493-10498

**49. From Trigonal Bipyramidal to Platonic Solids: Self-Assembly and Self-Sorting
Study of Terpyridine-Based 3D Architectures**

Ming Wang, Chao Wang, Xin-Qi Hao, Xiaohong Li, Tyler J Vaughn, Yan-Yan Zhang, Yihua Yu, Zhong-Yu Li, Mao-Ping Song, Hai-Bo Yang, and Xiaopeng Li
Journal of the American Chemical Society **2014** 136 (29), 10499-10507

**50. Strategies to Enhance Cyclopolymerization using Third-Generation Grubbs
Catalyst**

Eun-Hye Kang, So Young Yu, In Sun Lee, Seong Eon Park, and Tae-Lim Choi
Journal of the American Chemical Society **2014** 136 (29), 10508-10514

- 51. Dramatically Different Kinetics and Mechanism at Solid/Liquid and Solid/Gas Interfaces for Catalytic Isopropanol Oxidation over Size-Controlled Platinum Nanoparticles**
Hailiang Wang, Andras Sapi, Christopher M. Thompson, Fudong Liu, Danylo Zhrebetskyy, James M. Krier, Lindsay M. Carl, Xiaojun Cai, Lin-Wang Wang, and Gabor A. Somorjai
Journal of the American Chemical Society **2014** 136 (29), 10515-10520
- 52. Uniform Doping of Metal Oxide Nanowires Using Solid State Diffusion**
Joaquin Resasco, Neil P. Dasgupta, Josep Roque Rosell, Jinghua Guo, and Peidong Yang
Journal of the American Chemical Society **2014** 136 (29), 10521-10526
- 53. Clickable Degradable Aliphatic Polyesters via Copolymerization with Alkyne Epoxy Esters: Synthesis and Postfunctionalization with Organic Dyes**
Nele S. Teske, Julia Voigt, and V. Prasad Shastri
Journal of the American Chemical Society **2014** 136 (29), 10527-10533
- 54. Regioselective Benzyl Radical Addition to an Open-Shell Cluster Metallofullerene. Crystallographic Studies of Cocrystallized Sc₃C₂@Ih-C₈₀ and Its Singly Bonded Derivative**
Hongyun Fang, Hailin Cong, Mitsuaki Suzuki, Lipiao Bao, Bing Yu, Yunpeng Xie, Naomi Mizorogi, Marilyn M. Olmstead, Alan L. Balch, Shigeru Nagase, Takeshi Akasaka, and Xing Lu
Journal of the American Chemical Society **2014** 136 (29), 10534-10540
- 55. Correction to “Baulamycins A and B, Broad-Spectrum Antibiotics Identified as Inhibitors of Siderophore Biosynthesis in Staphylococcus aureus and Bacillus anthracis”**
Ashootosh Tripathi, Michael M. Schofield, George E. Chlipala, Pamela J. Schultz, Isaiah Yim, Sean A. Newmister, Tyler D. Nusca, Jamie B. Scaglione, Philip C. Hanna, Giselle Tamayo-Castillo, and David H. Sherman
Journal of the American Chemical Society **2014** 136 (29), 10541-10541
- 56. Correction to “Chiral Arrangement of Achiral Au Nanoparticles by Supramolecular Assembly of Helical Nanofiber Templates”**
Sung Ho Jung, Jiwon Jeon, Hyungjun Kim, Justyn Jaworski, and Jong Hwa Jung
Journal of the American Chemical Society **2014** 136 (29), 10542-10542
- 57. Correction to “Influence of Pyrazolate vs N-Heterocyclic Carbene Ligands on the Slow Magnetic Relaxation of Homoleptic Trischelate Lanthanide(III) and Uranium(III) Complexes”**
Katie R. Meihaus, Stefan G. Minasian, Wayne W. Lukens, Jr., Stosh A. Kozimor, David K. Shuh, Tolek Tyliczszak, and Jeffrey R. Long
Journal of the American Chemical Society **2014** 136 (29), 10543-10543

58. Correction to “Formation of Vinyl-, Vinylhalide- or Acyl-Substituted Quaternary Carbon Stereogenic Centers through NHC–Cu-Catalyzed Enantioselective Conjugate Additions of Si-Containing Vinylaluminums to β -Substituted Cyclic Enones”

Tricia L. May, Jennifer A. Dabrowski, and Amir H. Hoveyda

Journal of the American Chemical Society **2014** 136 (29), 10544-10544

59. Correction to “Dynamic Introduction of Cell Adhesive Factor via Reversible Multicovalent Phenylboronic Acid/cis-Diol Polymeric Complexes”

Guoqing Pan, Bingbing Guo, Yue Ma, Wenguo Cui, Fan He, Bin Li, Huilin Yang, and Kenneth J. Shea

Journal of the American Chemical Society **2014** 136 (29), 10545-10545

60. Correction to “Nonionic Triblock and Star Diblock Copolymer and Oligomeric Surfactant Syntheses of Highly Ordered, Hydrothermally Stable, Mesoporous Silica Structures”

Dongyuan Zhao, Qisheng Huo, Jianglin Feng, Bradley F. Chmelka, and Galen D. Stucky

Journal of the American Chemical Society **2014** 136 (29), 10546-10546