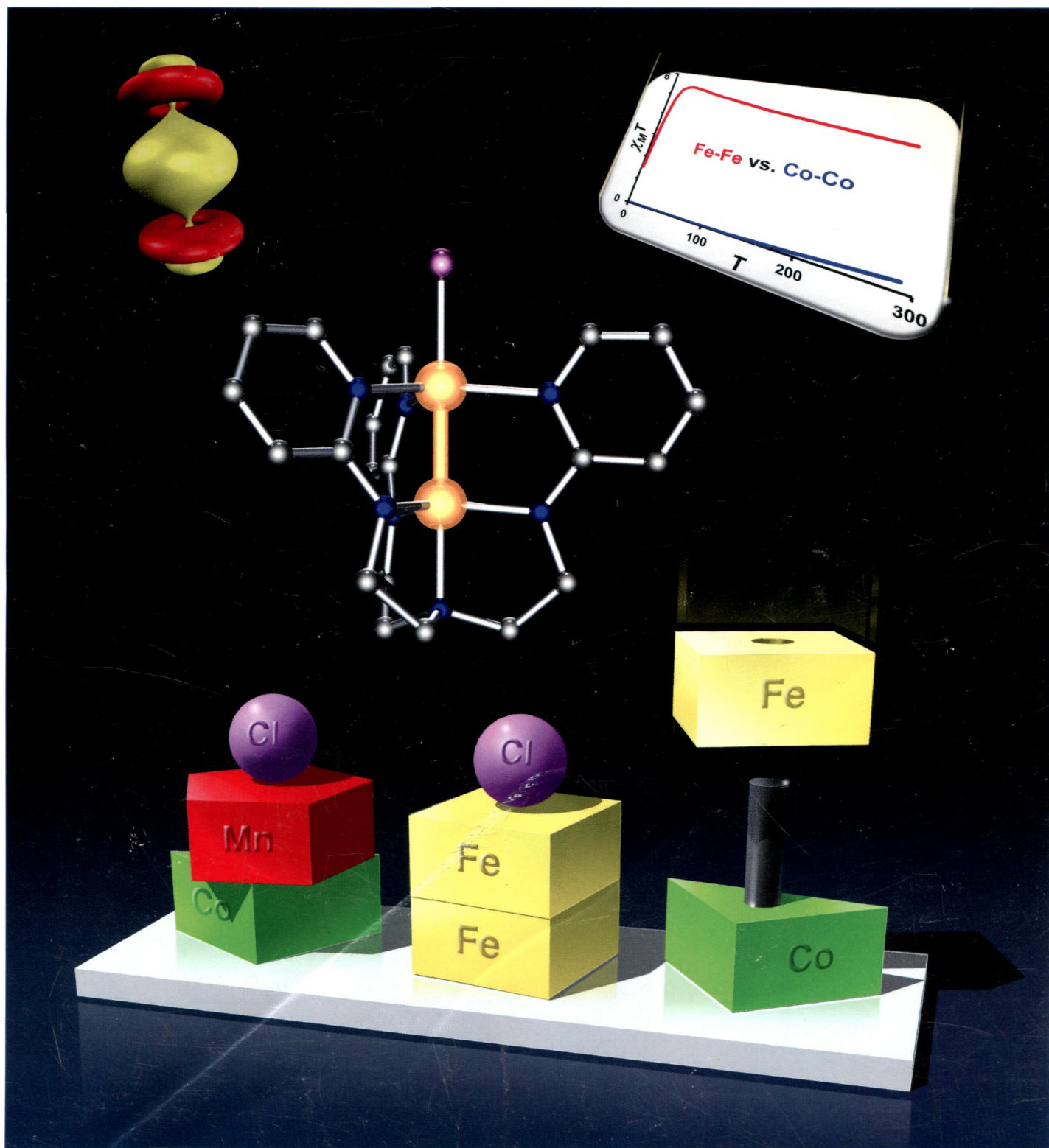


February 5, 2014
Volume 136
Number 5
pubs.acs.org/JACS

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* (5), 1681-1681

2. Chemical Activation through Super Energy Transfer Collisions

Jonathan M. Smith, Matthew Nikow, Jianqiang Ma, Michael J. Wilhelm, Yong-Chang Han, Amit R. Sharma, Joel M. Bowman, and Hai-Lung Dai

Journal of the American Chemical Society **2014** *136* (5), 1682-1685

3. Photoemission Mechanism of Water-Soluble Silver Nanoclusters: Ligand-to-Metal–Metal Charge Transfer vs Strong Coupling between Surface Plasmon and Emitters

Yuting Chen, Taiqun Yang, Haifeng Pan, Yufeng Yuan, Li Chen, Mengwei Liu, Kun Zhang, Sanjun Zhang, Peng Wu, and Jianhua Xu

Journal of the American Chemical Society **2014** *136* (5), 1686-1689

4. Protic Ionic Liquids and Salts as Versatile Carbon Precursors

Shiguo Zhang, Muhammed Shah Miran, Ai Ikoma, Kaoru Dokko, and Masayoshi Watanabe

Journal of the American Chemical Society **2014** *136* (5), 1690-1693

5. Anchoring a Molecular Iron Catalyst to Solar-Responsive WO₃ Improves the Rate and Selectivity of Photoelectrochemical Water Oxidation

Benjamin M. Klepser and Bart M. Bartlett

Journal of the American Chemical Society **2014** *136* (5), 1694-1697

6. Synthetic Phosphorylation of p38 α Recapitulates Protein Kinase Activity

K. Phin Chooi, Sébastien R. G. Galan, Ritu Raj, James McCullagh, Shabaz Mohammed, Lyn H. Jones, and Benjamin G. Davis

Journal of the American Chemical Society **2014** *136* (5), 1698-1701

7. Design and Synthesis of Hydroxide Ion–Conductive Metal–Organic Frameworks Based on Salt Inclusion

Masaaki Sadakiyo, Hidetaka Kasai, Kenichi Kato, Masaki Takata, and Miho Yamauchi

Journal of the American Chemical Society **2014** *136* (5), 1702-1705

8. Self-Illuminating ⁶⁴Cu-Doped CdSe/ZnS Nanocrystals for in Vivo Tumor Imaging

Xiaolian Sun, Xinglu Huang, Jinxia Guo, Wenlei Zhu, Yong Ding, Gang Niu, Andrew Wang, Dale O. Kiesewetter, Zhong Lin Wang, Shouheng Sun, and Xiaoyuan Chen

Journal of the American Chemical Society **2014** *136* (5), 1706-1709

9. On the Observation of Intervalence Charge Transfer Bands in Hydrogen-Bonded Mixed-Valence Complexes

Gabriele Canzi, John C. Goeltz, Jane S. Henderson, Roger E. Park, Chiara Maruggi, and Clifford P. Kubiak

Journal of the American Chemical Society **2014** *136* (5), 1710-1713

10. Dynamic Assembly/Disassembly Processes of Photoresponsive DNA Origami Nanostructures Directly Visualized on a Lipid Membrane Surface

Yuki Suzuki, Masayuki Endo, Yangyang Yang, and Hiroshi Sugiyama

Journal of the American Chemical Society **2014** *136* (5), 1714-1717

11. Self-Assembly of Broadband White-Light Emitters

Emma R. Dohner, Eric T. Hoke, and Hemamala I. Karunadasa

Journal of the American Chemical Society **2014** *136* (5), 1718-1721

12. Superselective Targeting Using Multivalent Polymers

Galina V. Dubacheva, Tine Curk, Bortolo M. Mognetti, Rachel Auzély-Velty, Daan Frenkel, and Ralf P. Richter

Journal of the American Chemical Society **2014** *136* (5), 1722-1725

13. High Temperature SELMA: Evolution of DNA-Supported Oligomannose Clusters Which Are Tightly Recognized by HIV bnAb 2G12

J. Sebastian Temme, Iain S. MacPherson, John F. DeCoursey, and Isaac J. Krauss

Journal of the American Chemical Society **2014** *136* (5), 1726-1729

14. Crystalline Carbon Nitride Nanosheets for Improved Visible-Light Hydrogen Evolution

Katharina Schwinghammer, Maria B. Mesch, Viola Duppel, Christian Ziegler, Jürgen Senker, and Bettina V. Lotsch

Journal of the American Chemical Society **2014** *136* (5), 1730-1733

15. Nanostructured Tin Catalysts for Selective Electrochemical Reduction of Carbon Dioxide to Formate

Sheng Zhang, Peng Kang, and Thomas J. Meyer

Journal of the American Chemical Society **2014** *136* (5), 1734-1737

16. Core–Shell Palladium Nanoparticle@Metal–Organic Frameworks as Multifunctional Catalysts for Cascade Reactions

Meiting Zhao, Ke Deng, Liangan He, Yong Liu, Guodong Li, Huijun Zhao, and Zhiyong Tang

Journal of the American Chemical Society **2014** *136* (5), 1738-1741

17. Synthesis of One-Dimensional Metal-Containing Insulated Molecular Wire with Versatile Properties Directed toward Molecular Electronics Materials

Hiroshi Masai, Jun Terao, Shu Seki, Shigeto Nakashima, Manabu Kiguchi, Kento Okoshi, Tetsuaki Fujihara, and Yasushi Tsuji

Journal of the American Chemical Society **2014** *136* (5), 1742-1745

18. A Homochiral Metal–Organic Framework as an Effective Asymmetric Catalyst for Cyanohydrin Synthesis

Ke Mo, Yuhua Yang, and Yong Cui

Journal of the American Chemical Society **2014** *136* (5), 1746-1749

19. The Major G-Quadruplex Formed in the Human BCL-2 Proximal Promoter Adopts a Parallel Structure with a 13-nt Loop in K⁺ Solution

Prashansa Agrawal, Clement Lin, Raveendra I. Mathad, Megan Carver, and Danzhou Yang

Journal of the American Chemical Society **2014** *136* (5), 1750-1753

20. Dph3 Is an Electron Donor for Dph1-Dph2 in the First Step of Eukaryotic Diphthamide Biosynthesis

Min Dong, Xiaoyang Su, Boris Dzikovski, Emily E. Dando, Xuling Zhu, Jintang Du, Jack H. Freed, and Hening Lin

Journal of the American Chemical Society **2014** *136* (5), 1754-1757

21. Titanium Nitride-Nickel Nanocomposite as Heterogeneous Catalyst for the Hydrogenolysis of Aryl Ethers

Valerio Molinari, Cristina Giordano, Markus Antonietti, and Davide Esposito

Journal of the American Chemical Society **2014** *136* (5), 1758-1761

22. In Situ Live Observation of Nucleation and Dissolution of Sodium Chlorate Nanoparticles by Transmission Electron Microscopy

Yuki Kimura, Hiromasa Niinomi, Katsuo Tsukamoto, and Juan M. García-Ruiz

Journal of the American Chemical Society **2014** *136* (5), 1762-1765

23. Pd-Catalyzed Intramolecular Aminohydroxylation of Alkenes with Hydrogen Peroxide as Oxidant and Water as Nucleophile

Haitao Zhu, Pinhong Chen, and Guosheng Liu

Journal of the American Chemical Society **2014** *136* (5), 1766-1769

24. Stabilization of a Cobalt–Cobalt Bond by Two Cyclic Alkyl Amino Carbenes

Kartik Chandra Mondal, Prinson P. Samuel, Herbert W. Roesky, Elena Carl, Regine Herbst-Irmer, Dietmar Stalke, Brigitte Schwederski, Wolfgang Kaim, Liviu Ungur, Liviu F. Chibotaru, Markus Hermann, and Gernot Frenking

Journal of the American Chemical Society **2014** *136* (5), 1770-1773

25. Probing Site Cooperativity of Frustrated Phosphine/Borane Lewis Pairs by a Polymerization Study

Tieqi Xu and Eugene Y.-X. Chen

Journal of the American Chemical Society **2014** *136* (5), 1774-1777

26. Activation of Aryl Halides at Gold(I): Practical Synthesis of (P,C) Cyclometalated Gold(III) Complexes

Johannes Guenther, Sonia Mallet-Ladeira, Laura Estevez, Karinne Miqueu, Abderrahmane Amgoune, and Didier Bourissou

Journal of the American Chemical Society **2014** *136* (5), 1778-1781

27. Template Synthesis of Gold Nanoparticles with an Organic Molecular Cage

Ryan McCaffrey, Hai Long, Yinghua Jin, Aric Sanders, Wounjhang Park, and Wei Zhang

Journal of the American Chemical Society **2014** *136* (5), 1782-1785

28. Recognition of Polyfluorinated Compounds Through Self-Aggregation in a Cavity

Hiroki Takezawa, Takashi Murase, Giuseppe Resnati, Pierangelo Metrangolo, and Makoto Fujita

Journal of the American Chemical Society **2014** *136* (5), 1786-1788

29. Nickel-Catalyzed Site-Selective Alkylation of Unactivated C(sp³)–H Bonds

Xuesong Wu, Yan Zhao, and Haibo Ge

Journal of the American Chemical Society **2014** *136* (5), 1789-1792

30. Examining Photoinduced Energy Transfer in *Pseudomonas aeruginosa* Azurin

Peter H. Tobin and Corey J. Wilson

Journal of the American Chemical Society **2014** *136* (5), 1793-1802

31. Disclosure of Key Stereoelectronic Factors for Efficient H₂ Binding and Cleavage in the Active Site of [NiFe]-Hydrogenases

Maurizio Bruschi, Matteo Tiberti, Alessandro Guerra, and Luca De Gioia

Journal of the American Chemical Society **2014** *136* (5), 1803-1814

32. Microhydration Effects on the Encapsulation of Potassium Ion by Dibenzo-18-Crown-6

Yoshiya Inokuchi, Takayuki Ebata, Thomas R. Rizzo, and Oleg V. Boyarkin

Journal of the American Chemical Society **2014** *136* (5), 1815-1824

33. Probing of an Adsorbate-Specific Excited State on an Organic Insulating Surface by Two-Photon Photoemission Spectroscopy

Masahiro Shibuta, Naoyuki Hirata, Toyooki Eguchi, and Atsushi Nakajima

Journal of the American Chemical Society **2014** *136* (5), 1825-1831

34. Conductance of Tailored Molecular Segments: A Rudimentary Assessment by Landauer Formulation

Min-Jie Huang, Liang-Yan Hsu, Ming-Dung Fu, Su-Ting Chuang, Fang-Wei Tien, and Chun-hsien Chen

Journal of the American Chemical Society **2014** *136* (5), 1832-1841

35. Role of the Metal in the Bonding and Properties of Bimetallic Complexes Involving Manganese, Iron, and Cobalt

Stephen J. Tereniak, Rebecca K. Carlson, Laura J. Clouston, Victor G. Young, Jr., Eckhard Bill, Rémi Maurice, Yu-Sheng Chen, Hyun Jung Kim, Laura Gagliardi, and Connie C. Lu

Journal of the American Chemical Society **2014** *136* (5), 1842-1855

36. One Photon Yields Two Isomerizations: Large Atomic Displacements during Electronic Excited-State Dynamics in Ruthenium Sulfoxide Complexes

Komal Garg, Albert W. King, and Jeffrey J. Rack

Journal of the American Chemical Society **2014** *136* (5), 1856-1863

37. Solid Solution Alloy Nanoparticles of Immiscible Pd and Ru Elements Neighboring on Rh: Changeover of the Thermodynamic Behavior for Hydrogen Storage and Enhanced CO-Oxidizing Ability

Kohei Kusada, Hirokazu Kobayashi, Ryuichi Ikeda, Yoshiki Kubota, Masaki Takata, Shoichi Toh, Tomokazu Yamamoto, Syo Matsumura, Naoya Sumi, Katsutoshi Sato, Katsutoshi Nagaoka, and Hiroshi Kitagawa

Journal of the American Chemical Society **2014** *136* (5), 1864-1871

38. Potential Gradient and Photocatalytic Activity of an Ultrathin p–n Junction Surface Prepared with Two-Dimensional Semiconducting Nanocrystals

Shintaro Ida, Akihide Takashiba, Shota Koga, Hidehisa Hagiwara, and Tatsumi Ishihara

Journal of the American Chemical Society **2014** *136* (5), 1872-1878

39. Generalized Platform for Antibody Detection using the Antibody Catalyzed Water Oxidation Pathway

M. Elizabeth Welch, Nicole L. Ritzert, Hongjun Chen, Norah L. Smith, Michele E. Tague, Youyong Xu, Barbara A. Baird, Héctor D. Abruña, and Christopher K. Ober

Journal of the American Chemical Society **2014** *136* (5), 1879-1883

40. An Interface-Directed Coassembly Approach To Synthesize Uniform Large-Pore Mesoporous Silica Spheres

Minghong Wang, Zhenkun Sun, Qin Yue, Jie Yang, Xiqing Wang, Yonghui Deng, Chengzhong Yu, and Dongyuan Zhao

Journal of the American Chemical Society **2014** *136* (5), 1884-1892

41. Protein NMR Structures Refined with Rosetta Have Higher Accuracy Relative to Corresponding X-ray Crystal Structures

Binchen Mao, Roberto Tejero, David Baker, and Gaetano T. Montelione

Journal of the American Chemical Society **2014** *136* (5), 1893-1906

42. Structural Study of Citrate Layers on Gold Nanoparticles: Role of Intermolecular Interactions in Stabilizing Nanoparticles

Jong-Won Park and Jennifer S. Shumaker-Parry

Journal of the American Chemical Society **2014** *136* (5), 1907-1921

43. Restriction of the Conformational Dynamics of the Cyclic Acyldepsipeptide Antibiotics Improves Their Antibacterial Activity

Daniel W. Carney, Karl R. Schmitz, Jonathan V. Truong, Robert T. Sauer, and Jason K. Sello

Journal of the American Chemical Society **2014** *136* (5), 1922-1929

44. A Four-Step Mechanism for the Formation of Supported-Nanoparticle Heterogenous Catalysts in Contact with Solution: The Conversion of Ir(1,5-COD)Cl/ γ -Al₂O₃ to Ir(0)-170/ γ -Al₂O₃

Patrick D. Kent, Joseph E. Mondloch, and Richard G. Finke

Journal of the American Chemical Society **2014** *136* (5), 1930-1941

45. Self-Assembly of Ultralong Polyion Nanoladders Facilitated by Ionic Recognition and Molecular Stiffness

Limin Xu, Lingxiang Jiang, Markus Drechsler, Yu Sun, Zhirong Liu, Jianbin Huang, Ben Zhong Tang, Zhibo Li, Martien A. Cohen Stuart, and Yun Yan

Journal of the American Chemical Society **2014** *136* (5), 1942-1947

46. Estimating the Acidity of Transition Metal Hydride and Dihydrogen Complexes by Adding Ligand Acidity Constants

Robert H. Morris

Journal of the American Chemical Society **2014** *136* (5), 1948-1959

47. Mechanism, Reactivity, and Selectivity in Palladium-Catalyzed Redox-Relay Heck Arylations of Alkenyl Alcohols

Liping Xu, Margaret J. Hilton, Xinhao Zhang, Per-Ola Norrby, Yun-Dong Wu, Matthew S. Sigman, and Olaf Wiest

Journal of the American Chemical Society **2014** *136* (5), 1960-1967

48. Mechanistic Insights into the Role of Alkylamine in the Synthesis of CdSe Nanocrystals

Raúl García-Rodríguez and Haitao Liu

Journal of the American Chemical Society **2014** *136* (5), 1968-1975

49. Synthesis and Biological Evaluation of Bis-CNB-GABA, a Photoactivatable Neurotransmitter with Low Receptor Interference and Chemical Two-Photon Uncaging Properties

Diana D. Shi, Federico F. Trigo, Martin F. Semmelhack, and Samuel S.-H. Wang

Journal of the American Chemical Society **2014** *136* (5), 1976-1981

50. Controlling Leakage Currents: The Role of the Binding Group and Purity of the Precursors for Self-Assembled Monolayers in the Performance of Molecular Diodes

Li Jiang, Li Yuan, Liang Cao, and Christian A. Nijhuis

Journal of the American Chemical Society **2014** *136* (5), 1982-1991

51. Quantum Dots Encapsulated within Phospholipid Membranes: Phase-Dependent Structure, Photostability, and Site-Selective Functionalization

Weiwei Zheng, Yang Liu, Ana West, Erin E. Schuler, Kevin Yehl, R. Brian Dyer, James T. Kindt, and Khalid Salaita

Journal of the American Chemical Society **2014** *136* (5), 1992-1999

52. Quantitative Analysis of the Water Occupancy around the Selectivity Filter of a K⁺ Channel in Different Gating Modes

Markus Weingarth, Elwin A. W. van der Cruijssen, Jared Ostmeier, Sylke Lievestro, Benoît Roux, and Marc Baldus

Journal of the American Chemical Society **2014** *136* (5), 2000-2007

53. Carbohydrate-Lectin Recognition of Sequence-Defined Heteromultivalent Glycooligomers

Daniela Ponader, Pauline Maffre, Jonas Aretz, Daniel Pussak, Nina M. Ninnemann, Stephan Schmidt, Peter H. Seeberger, Christoph Rademacher, G. Ulrich Nienhaus, and Laura Hartmann

Journal of the American Chemical Society **2014** *136* (5), 2008-2016

54. Mechanisms and Origins of Switchable Chemoselectivity of Ni-Catalyzed C(aryl)-O and C(acyl)-O Activation of Aryl Esters with Phosphine Ligands

Xin Hong, Yong Liang, and K. N. Houk

Journal of the American Chemical Society **2014** *136* (5), 2017-2025

55. Bimolecular Photoinduced Electron Transfer Beyond the Diffusion Limit: The Rehm-Weller Experiment Revisited with Femtosecond Time Resolution

Arnulf Rosspeintner, Gonzalo Angulo, and Eric Vauthey

Journal of the American Chemical Society **2014** *136* (5), 2026-2032

56. Synthesis and Nonenzymatic Template-Directed Polymerization of 2'-Amino-2'-deoxythreose Nucleotides

J. Craig Blain, Alonso Ricardo, and Jack W. Szostak

Journal of the American Chemical Society **2014** *136* (5), 2033-2039

57. Specific Ion Effects in Amphiphile Hydration and Interface Stabilization

Rüdiger Scheu, Yixing Chen, Hilton B. de Aguiar, Blake M. Rankin, Dor Ben-Amotz, and Sylvie Roke

Journal of the American Chemical Society **2014** *136* (5), 2040-2047

58. Atomistic Study of Energy Funneling in the Light-Harvesting Complex of Green Sulfur Bacteria

Joonsuk Huh, Semion K. Saikin, Jennifer C. Brookes, Stéphanie Valleau, Takatoshi Fujita, and Alán Aspuru-Guzik

Journal of the American Chemical Society **2014** *136* (5), 2048-2057

59. Quantitative Analysis of rRNA Modifications Using Stable Isotope Labeling and Mass Spectrometry

Anna M. Popova and James R. Williamson

Journal of the American Chemical Society **2014** *136* (5), 2058-2069

60. Crystallization in Sequence-Defined Peptoid Diblock Copolymers Induced by Microphase Separation

Jing Sun, Alexander A. Teran, Xunxun Liao, Nitash P. Balsara, and Ronald N. Zuckermann

Journal of the American Chemical Society **2014** *136* (5), 2070-2077

61. Monofunctional Hyperbranched Ethylene Oligomers

Thomas Wiedemann, Gregor Voit, Alexandra Tchernook, Philipp Roesle, Inigo Göttker-Schnetmann, and Stefan Mecking

Journal of the American Chemical Society **2014** *136* (5), 2078-2085

62. Thioamide-Based Fluorescent Protease Sensors

Jacob M. Goldberg, Xing Chen, Nataline Meinhardt, Doron C. Greenbaum, and E. James Petersson

Journal of the American Chemical Society **2014** *136* (5), 2086-2093

63. Toward Metal Complexes That Can Directionally Walk Along Tracks: Controlled Stepping of a Molecular Biped with a Palladium(II) Foot

Jonathon E. Beves, Victor Blanco, Barry A. Blight, Romen Carrillo, Daniel M. D'Souza, David Howgego, David A. Leigh, Alexandra M. Z. Slawin, and Mark D. Symes

Journal of the American Chemical Society **2014** *136* (5), 2094-2100

64. Anion- π Catalysis

Yingjie Zhao, César Beuchat, Yuya Domoto, Jadwiga Gajewy, Adam Wilson, Jiri Mareda, Naomi Sakai, and Stefan Matile

Journal of the American Chemical Society **2014** *136* (5), 2101-2111

65. Chiral Guest Binding as a Probe of Macrocycle Dynamics and Tautomerism in a Conjugated Tetrapyrrole

Jan Labuta, Zdenek Futera, Shinsuke Ishihara, Hana Kouřilová, Yoshitaka Tateyama, Katsuhiko Ariga, and Jonathan P. Hill

Journal of the American Chemical Society **2014** *136* (5), 2112-2118

66. Total Syntheses of (-)-Pyrimidoblamic Acid and P-3A

Adam S. Duerfeldt and Dale L. Boger

Journal of the American Chemical Society **2014** *136* (5), 2119-2125

67. The Chiral Potential of Phenanthriplatin and Its Influence on Guanine Binding

Timothy C. Johnstone and Stephen J. Lippard

Journal of the American Chemical Society **2014** *136* (5), 2126-2134

68. "Conformation Locked" Strong Electron-Deficient Poly(p-Phenylene Vinylene) Derivatives for Ambient-Stable n-Type Field-Effect Transistors: Synthesis, Properties, and Effects of Fluorine Substitution Position

Ting Lei, Xin Xia, Jie-Yu Wang, Chen-Jiang Liu, and Jian Pei

Journal of the American Chemical Society **2014** *136* (5), 2135-2141

69. A Single Molecule Level Study of the Temperature-Dependent Kinetics for the Formation of Metal Porphyrin Monolayers on Au(111) from Solution

Ashish Bhattarai, Ursula Mazur, and K. W. Hipps

Journal of the American Chemical Society **2014** *136* (5), 2142-2148

70. A Broadly Applicable NHC–Cu-Catalyzed Approach for Efficient, Site-, and Enantioselective Coupling of Readily Accessible (Pinacolato)alkenylboron Compounds to Allylic Phosphates and Applications to Natural Product Synthesis

Fang Gao, James L. Carr, and Amir H. Hoveyda

Journal of the American Chemical Society **2014** *136* (5), 2149-2161

71. Photoinduced, Copper-Catalyzed Alkylation of Amides with Unactivated Secondary Alkyl Halides at Room Temperature

Hien-Quang Do, Shoshana Bachman, Alex C. Bissember, Jonas C. Peters, and Gregory C. Fu

Journal of the American Chemical Society **2014** *136* (5), 2162-2167

72. Aromatic Oligoamide β -Sheet Foldamers

Laure Sebaoun, Victor Maurizot, Thierry Granier, Brice Kauffmann, and Ivan Huc

Journal of the American Chemical Society **2014** *136* (5), 2168-2174

73. Correction to Microscopic Analysis of Protein Oxidative Damage: Effect of Carbonylation on Structure, Dynamics, and Aggregability of Villin Headpiece

Drazen Petrov and Bojan Zagrovic

Journal of the American Chemical Society **2014** *136* (5), 2175-2176