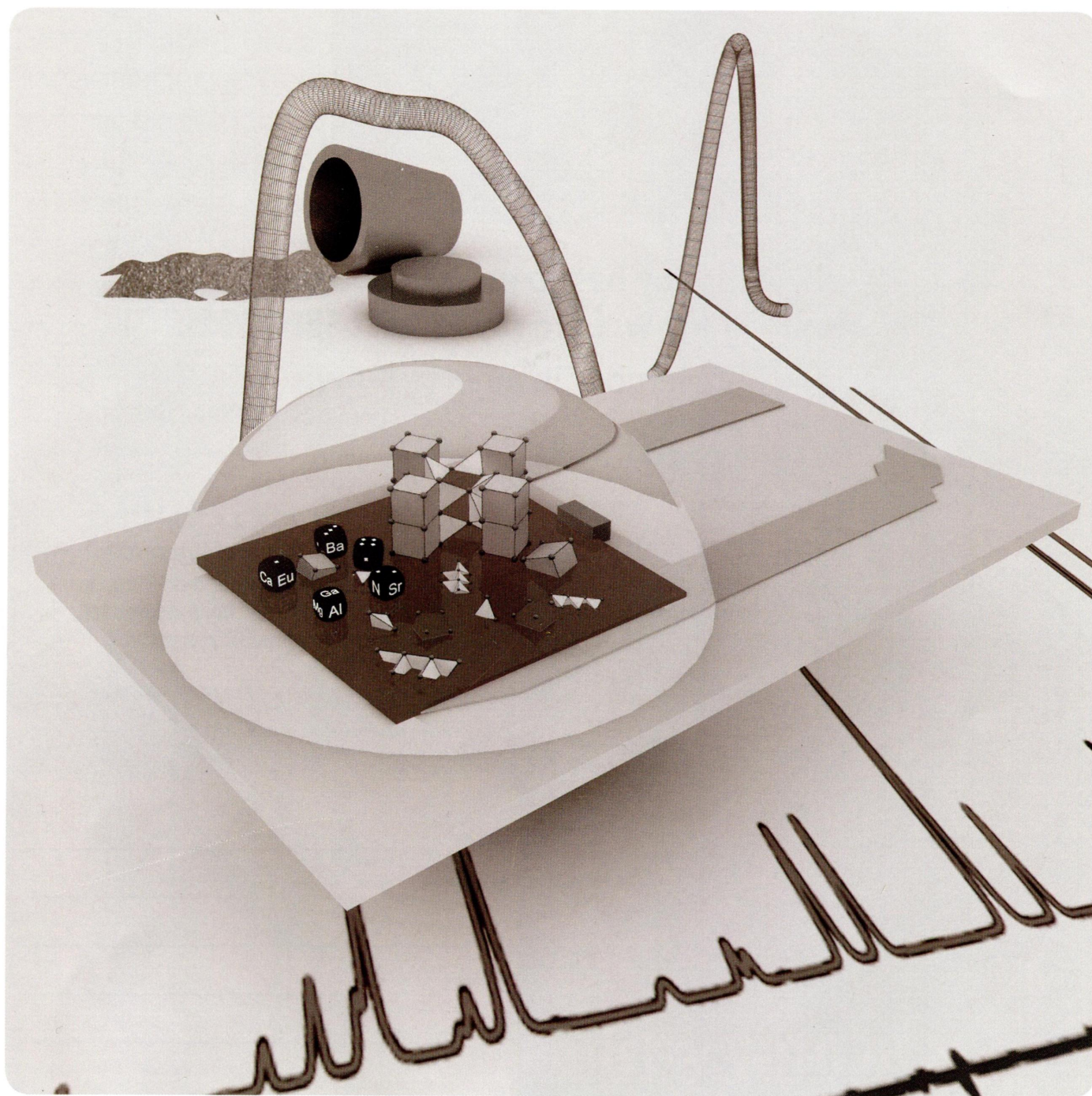


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ON THE COVER: Nitridomagnesoaluminates such as $M[\text{Mg}_2\text{Al}_2\text{N}_4]$ ($M = \text{Ca}, \text{Sr}, \text{Ba}$) show intense red luminescence under irradiation with blue light and complement recently published narrow band red-emitting materials which are discussed as next-generation LED phosphor materials. Deep investigation of the observed anomalous luminescence properties in $M[\text{Mg}_2\text{Al}_2\text{N}_4]$ ($M = \text{Ca}, \text{Sr}, \text{Ba}$) is essential to understand the correlations between all of these structurally related red emitters, which are fundamental to design narrow band luminescence of Eu^{2+} systems. For more information, see “Group (III) Nitrides $M[\text{Mg}_2\text{Al}_2\text{N}_4]$ ($M = \text{Ca}, \text{Sr}, \text{Ba}, \text{Eu}$) and $\text{Ba}[\text{Mg}_2\text{Ga}_2\text{N}_4]$ —Structural Relation and Nontypical Luminescence Properties of Eu^{2+} Doped Samples” by Philipp Pust, Frauke Hintze, Cora Hecht, Volker Weiler, Andreas Locher, Daniela Zitnanska, Sascha Harm, Detlef Wiechert, Peter J. Schmidt, and Wolfgang Schnick* (*Chem. Mater.* 2014, 26, 6113–6119).

Editorial

6087

DOI: 10.1021/cm5037343

The Nobel Prize, Social Media, and Materials

Jillian M. Buriak*

Communications

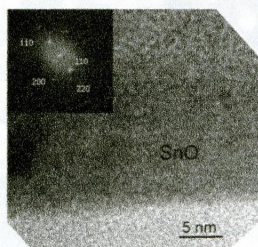
6088



DOI: 10.1021/cm503112v

Growth of p-Type Tin(II) Monoxide Thin Films by Atomic Layer Deposition from Bis(1-dimethylamino-2-methyl-2propoxy) tin and H_2O

Jeong Hwan Han, Yoon Jang Chung, Bo Keun Park, Seong Keun Kim, Hyo-Suk Kim, Chang Gyoum Kim,* and Taek-Mo Chung*

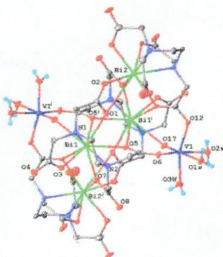


6092 **S**

DOI: 10.1021/cm502009y

Aminopolycarboxylate Bismuth(III)-Based Heterometallic Compounds as Single-Source Molecular Precursors for $\text{Bi}_4\text{V}_2\text{O}_{11}$ and Bi_2CuO_4 Mixed Oxides

Ion Bulimestru, Sergiu Shova, Nelea Popa, Pascal Roussel, Frederic Capet, Rose-Noelle Vannier, Nora Djelal, Laurence Burylo, Jean-Pierre Wignacourt, Aurelian Gulea, and Kenton H. Whitmire*

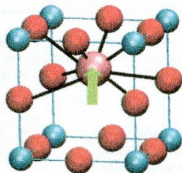


6104 **S**

DOI: 10.1021/cm502158n

A-Site Strain and Displacement in $\text{Ba}_{1-x}\text{Ca}_x\text{TiO}_3$ and $\text{Ba}_{1-x}\text{Sr}_x\text{TiO}_3$ and the Consequences for the Curie Temperature

James A. Dawson, Derek C. Sinclair, John H. Harding, and Colin L. Freeman*

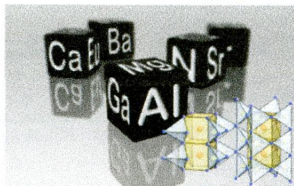


6113 **S**

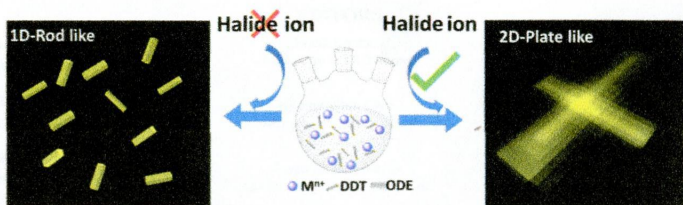
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Group (III) Nitrides $M[\text{Mg}_2\text{Al}_2\text{N}_4]$ ($M = \text{Ca}, \text{Sr}, \text{Ba}, \text{Eu}$) and $\text{Ba}[\text{Mg}_2\text{Ga}_2\text{N}_4]$ —Structural Relation and Nontypical Luminescence Properties of Eu^{2+} Doped Samples

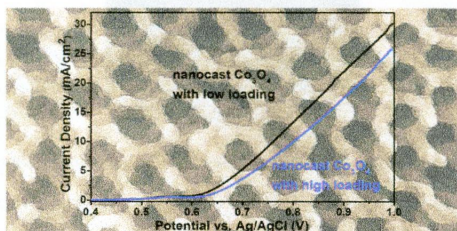
Philipp Pust, Frauke Hintze, Cora Hecht, Volker Weiler, Andreas Locher, Daniela Zitnanska, Sascha Harm, Detlef Wiechert, Peter J. Schmidt, and Wolfgang Schnick*



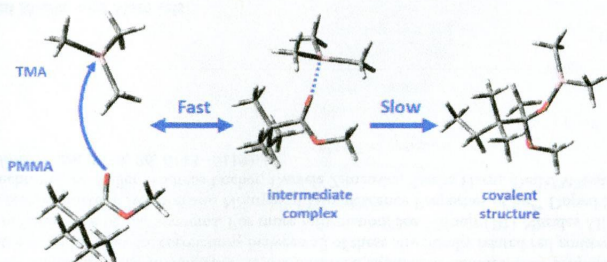
Promoting 2D Growth in Colloidal Transition Metal Sulfide Semiconductor Nanostructures via Halide Ions
Wen-Ya Wu, Sabyasachi Chakraborty, Corina K. L. Chang, Asim Guchhait, Ming Lin,* and Yinthal Chan*



Impacts of Geometry, Symmetry, and Morphology of Nanocast Co_3O_4 on Its Catalytic Activity for Water Oxidation
Xiaohui Deng, Wolfgang N. Schmidt, and Harun Tüysüz*

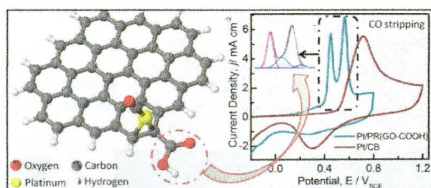


New Insight into the Mechanism of Sequential Infiltration Synthesis from Infrared Spectroscopy
Mahua Biswas, Joseph A. Libera, Seth B. Darling,* and Jeffrey W. Elam*



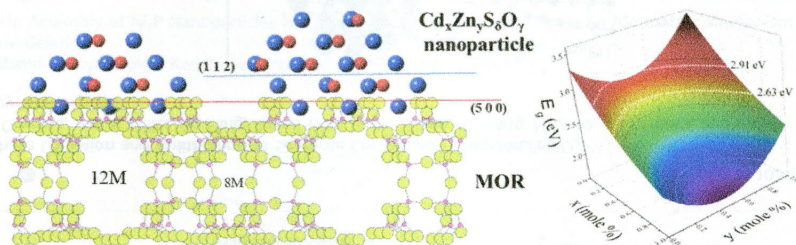
Carboxyl Group Enhanced CO Tolerant GO Supported Pt Catalysts: DFT and Electrochemical Analysis

S. Sharma,* M. N. Groves, J. Fennell, N. Soin, S. L. Horswell, and C. Malardier-Jugroot



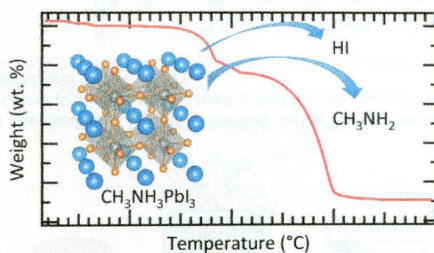
Atomic and Electronic Structure of Quaternary $Cd_xZn_yS_8O_7$ Nanoparticles Grown on Mordenite

Oscar E. Jaime-Acuña,* Humberto Villavicencio, Jesús A. Díaz-Hernández, Vitalii Petranovskii, Manuel Herrera, and Oscar Raymond-Herrera*



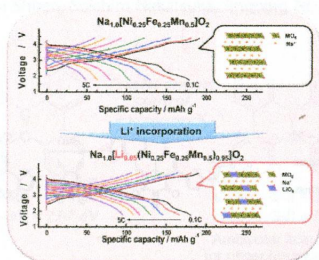
Thermal Behavior of Methylammonium Lead-Trihalide Perovskite Photovoltaic Light Harvesters

Amalie Dualeh, Peng Gao, Sang Il Seok, Mohammad Khaja Nazeeruddin, and Michael Grätzel*



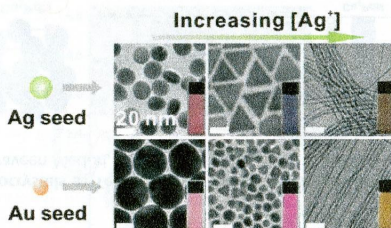
High Capacity O3-Type Na[Li_{0.05}(Ni_{0.25}Fe_{0.25}Mn_{0.5})_{0.95}]O₂ Cathode for Sodium Ion Batteries

Seung-Min Oh, Seung-Taek Myung, Jang-Yeon Hwang, Bruno Scrosati, Khalil Amine, and Yang-Kook Sun*



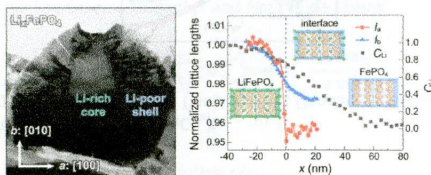
Silver Seeds and Aromatic Surfactants Facilitate the Growth of Anisotropic Metal Nanoparticles: Gold Triangular Nanoprisms and Ultrathin Nanowires

Zhaoxia Qian and So-Jung Park*



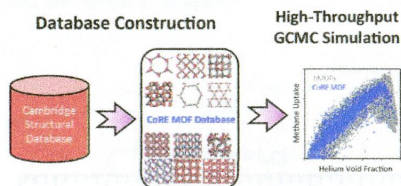
Phase Boundary Structure of Li_xFePO₄ Cathode Material Revealed by Atomic-Resolution Scanning Transmission Electron Microscopy

Akiho Nakamura, Sho Furutsuki, Shin-ichi Nishimura, Tetsuya Tohei, Yukio Sato, Naoya Shibata, Atsuo Yamada, and Yuichi Ikuhara*



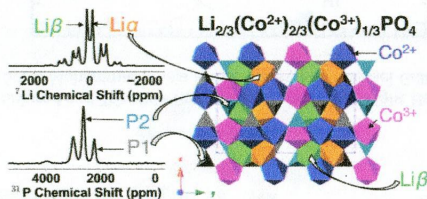
Computation-Ready, Experimental Metal–Organic Frameworks: A Tool To Enable High-Throughput Screening of Nanoporous Crystals

Yongchul G. Chung, Jeffrey Camp, Maciej Haranczyk, Benjamin J. Sikora, Wojciech Bury, Vaiva Krungleviciute, Taner Yildirim, Omar K. Farha, David S. Sholl,* and Randall Q. Snurr*



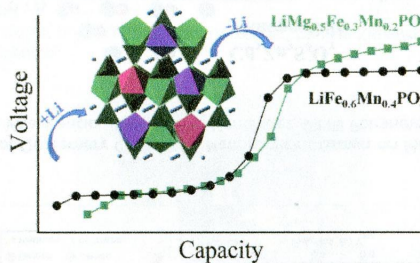
Identifying the Structure of the Intermediate, $\text{Li}_{2/3}\text{CoPO}_4$, Formed during Electrochemical Cycling of LiCoPO_4

Fiona C. Strobridge, Raphaële J. Clément, Michal Leskes, Derek S. Middlemiss, Olaf J. Borkiewicz, Kamila M. Wiaderek, Karina W. Chapman, Peter J. Chupas, and Clare P. Grey*



Single-Phase Lithiation and Delithiation of Simferite Compounds $\text{Li}(\text{Mg},\text{Mn},\text{Fe})\text{PO}_4$

Fredrick Omenya, Joel K. Miller, Jin Fang, Bohua Wen, Ruibo Zhang, Qi Wang, Natasha A. Chernova, and M. Stanley Whittingham*

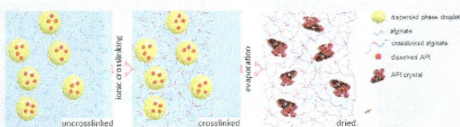


6213 5

DOI: 10.1021/cm502834h

Composite Hydrogels Laden with Crystalline Active Pharmaceutical Ingredients of Controlled Size and Loading

Huseyin Burak Eral, Marcus O'Mahony, Robert Shaw, Bernhard L. Trout, Allan S. Myerson, and Patrick S. Doyle*

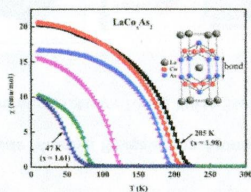


6221 5

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Tunable Cobalt Vacancies and Related Properties in LaCo_2As_2

Shijie Shen, Gang Wang,* Shifeng Jin, Qingzhen Huang, Tianping Ying, Dandan Li, Xiaofang Lai, Tingting Zhou, Han Zhang, Zhiping Lin, Xiaozhi Wu, and Xiaolong Chen*

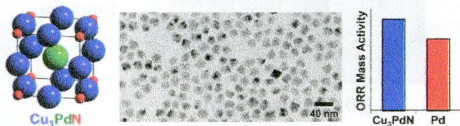


6226 5

DOI: 10.1021/cm5029723

Solution Synthesis of Cu_3PdN Nanocrystals as Ternary Metal Nitride Electrocatalysts for the Oxygen Reduction Reaction

Dimitri D. Vaughn II, Jose Araujo, Praveen Meduri, Juan F. Callejas, Michael A. Hickner, and Raymond E. Schaak*

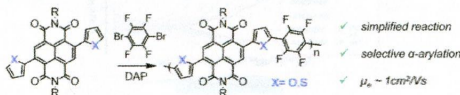


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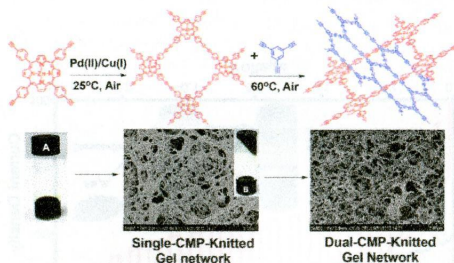
Structure–Function Relationships of High-Electron Mobility Naphthalene Diimide Copolymers Prepared Via Direct Arylation

Alessandro Luzio, Daniele Fazzi, Fritz Nübling, Rukiya Matsidik, Alexander Straub, Hartmut Komber, Ester Giussani, Scott E. Watkins, Mario Barbatti, Walter Thiel, Eliot Gann, Lars Thomsen, Christopher R. McNeill, Mario Caironi, and Michael Sommer*



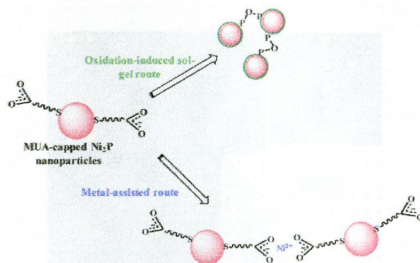
Gelation of Metalloporphyrin-Based Conjugated Microporous Polymers by Oxidative Homocoupling of Terminal Alkynes

Keyi Wu, Jia Guo,* and Changchun Wang



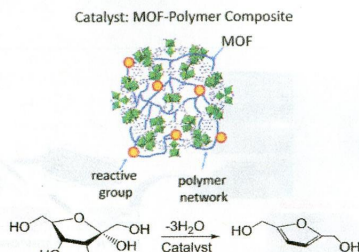
Bottom-Up Assembly of Ni₂P Nanoparticles into Three-Dimensional Architectures: An Alternative Mechanism for Phosphide Gelation

Asha Hitihami-Mudiyanselage, Keerthi Senevirathne, and Stephanie L. Brock*



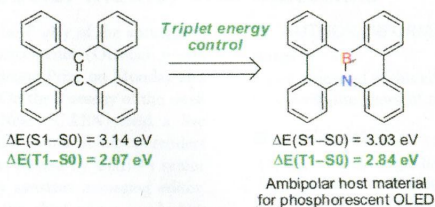
Functional Networks of Organic and Coordination Polymers: Catalysis of Fructose Conversion

Lev Bromberg, Xiao Su, and T. Alan Hatton*



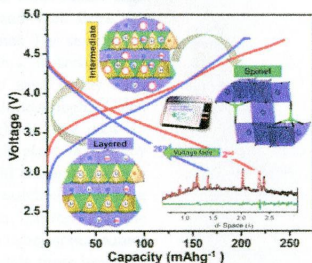
Triplet-Energy Control of Polycyclic Aromatic Hydrocarbons by BN Replacement: Development of Ambipolar Host Materials for Phosphorescent Organic Light-Emitting Diodes

Sigma Hashimoto, Toshiaki Ikuta, Kazushi Shiren, Soichiro Nakatsuka, Jingping Ni, Masaharu Nakamura,* and Takuji Hatakeyama*



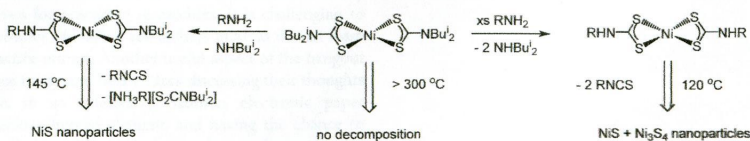
Unraveling the Voltage-Fade Mechanism in High-Energy-Density Lithium-Ion Batteries: Origin of the Tetrahedral Cations for Spinell Conversion

Debasish Mohanty,* Jianlin Li, Daniel P. Abraham, Ashfia Huq, E. Andrew Payzant, David L. Wood III,* and Claus Daniel*



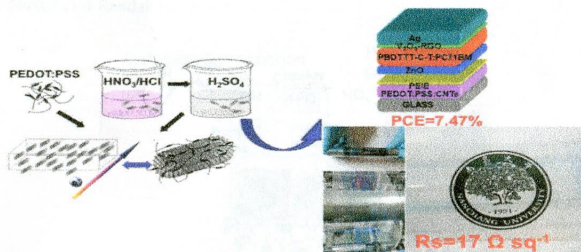
Active Nature of Primary Amines during Thermal Decomposition of Nickel Dithiocarbamates to Nickel Sulfide Nanoparticles

Nathan Hollingsworth,* Anna Roffey, Husn-Ubayda Islam, Maxime Mercy, Alberto Roldan, Wim Bras, Mariette Wolthers, C. Richard A. Catlow, Gopinathan Sankar, Graeme Hogarth,* and Nora H. de Leeuw



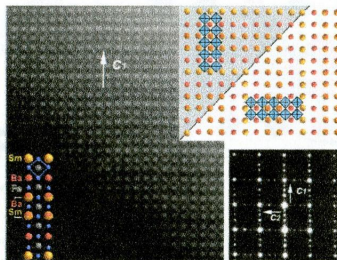
Large-Scale Flexible and Highly Conductive Carbon Transparent Electrodes via Roll-to-Roll Process and Its High Performance Lab-Scale Indium Tin Oxide-Free Polymer Solar Cells

Xiaotian Hu, Lie Chen, Yong Zhang, Qiao Hu, Junliang Yang, and Yiwang Chen*



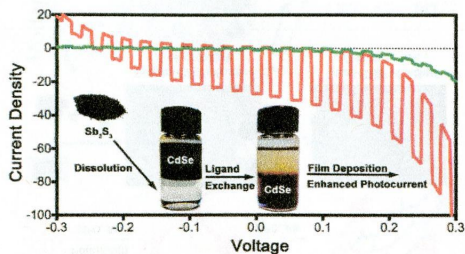
Nanoscale Ordering in Oxygen Deficient Quintuple Perovskite $\text{Sm}_{2-x}\text{Ba}_{3+2x}\text{Fe}_5\text{O}_{15-3x}$: Implication for Magnetism and Oxygen Stoichiometry

Nadezhda E. Volkova, Oleg I. Lebedev, Ludmila Ya. Gavrilova, Stuart Turner, Nicolas Gauquelin, Md. Motin Seikh, Vincent Caignaert, Vladimir A. Cherepanov,* Bernard Raveau,* and Gustaaf Van Tendeloo



Ligand Exchange of Colloidal CdSe Nanocrystals with Stibanates Derived from Sb_2S_3 Dissolved in a Thiol-Amine Mixture

Jannise J. Buckley, Matthew J. Greaney, and Richard L. Brutchey*



Correction to The Magic-Size Nanocluster (CdSe)₃₄ as a Low-Temperature Nucleant for Cadmium Selenide Nanocrystals; Room-Temperature Growth of Crystalline Quantum Platelets

Yuanyuan Wang, Ying Zhang, Fudong Wang, Daryl E. Giblin, Jessica Hoy, Henry W. Rohrs, Richard A. Loomis, and William E. Buhro*