

ARTICLES

Influence of Structural Variation on the Solid-State Properties of Diketopyrrolopyrrole-Based Oligophenylenethiophenes: Single-Crystal Structures, Thermal Properties, Optical Bandgaps, Energy Levels, Film Morphology, and Hole Mobility

Chunki Kim, Jianhua Liu, Jason Lin, Arnold B. Tamayo, Bright Walker, Guang Wu, and Thuc-Quyen Nguyen

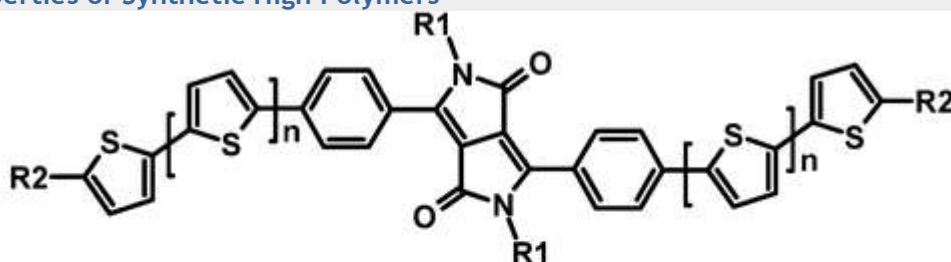
pp 1699-1709

Publication Date (Web): May 4, 2012 (Article)

DOI: 10.1021/cm202852f

 Section:

Physical Properties of Synthetic High Polymers



C6PT1C6: R1, R2=n-hexyl, n=0

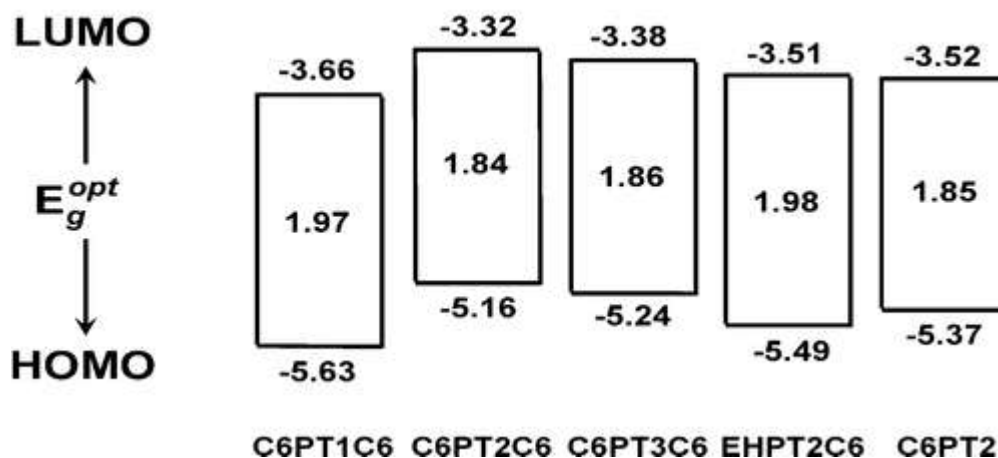
C6PT2C6: R1, R2=n-hexyl, n=1

C6PT3C6: R1, R2=n-hexyl, n=2

EHPT2C6: R1=ethylhexyl

R2=n-hexyl, n=1

C6PT2 : R1=n-hexyl,
R2=none, n=1



Tuning and Enhancing White Light Emission of II–VI Based Inorganic–Organic Hybrid Semiconductors as Single-Phased Phosphors

Xiaoming Fang, Mojgan Roushan, Ruibo Zhang, Jing Peng, Heping Zeng, and Jing Li

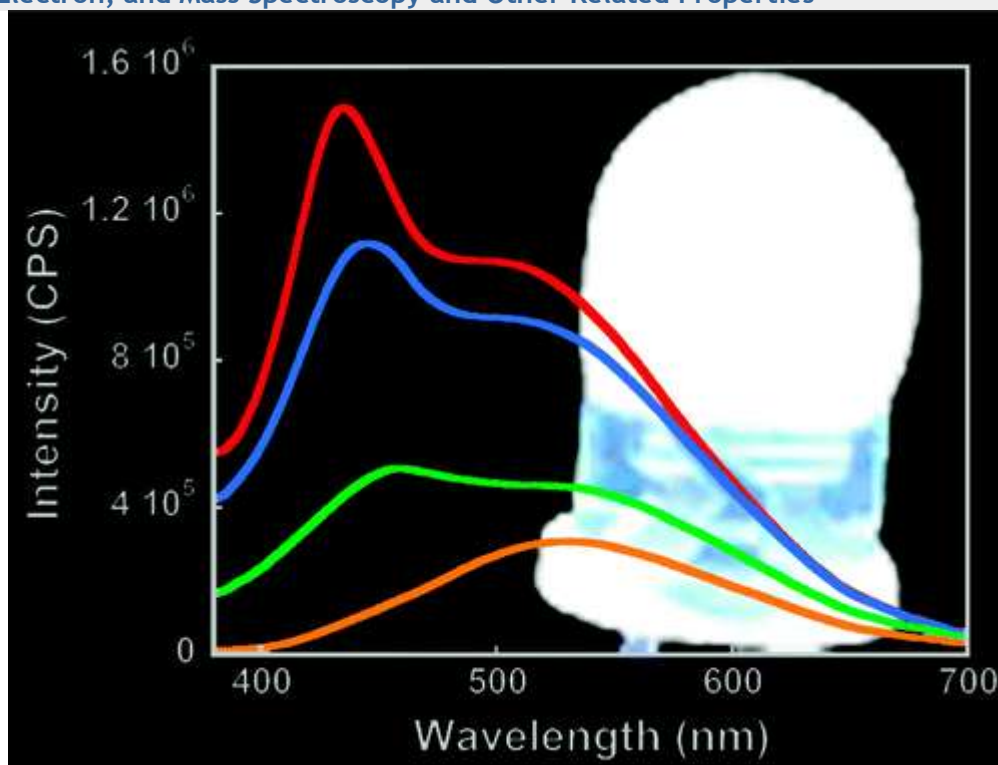
pp 1710-1717

Publication Date (Web): April 13, 2012 (Article)

DOI: 10.1021/cm203137r

CCS Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties



Gold Nanocluster Agglomeration Kinetic Studies: Evidence for Parallel Bimolecular Plus Autocatalytic Agglomeration Pathways as a Mechanism-Based Alternative to an Avrami-Based Analysis

Eric. E. Finney, Shawn P. Shields, William E. Buhro, and Richard G. Finke

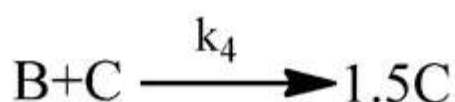
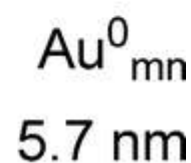
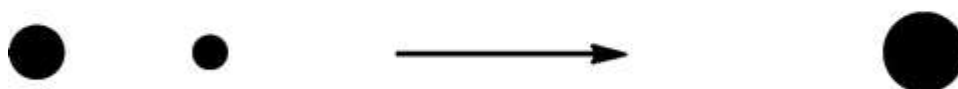
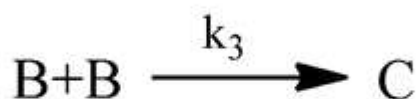
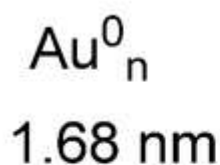
pp 1718-1725

Publication Date (Web): May 7, 2012 (Article)

DOI: 10.1021/cm203186y

Section:

Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms



Unusual Pathway of Crystallization of Zeolite ZSM-5 in a Heterogeneous System: Phenomenology and Starting Considerations

Nan Ren, Boris Subotić, Josip Bronić, Yi Tang, Maja Dutour Sikirić, Tea Mišić, Vesna Svetličić, Sanja Bosnar, and Tatjana Antonić Jelić

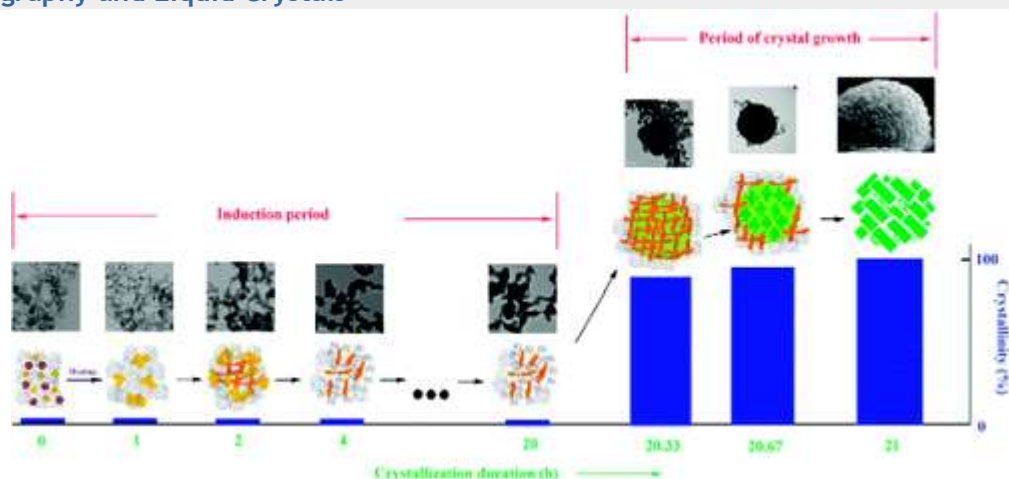
pp 1726-1737

Publication Date (Web): April 25, 2012 (Article)

DOI: 10.1021/cm203194v

Section:

Crystallography and Liquid Crystals



Yttrium-Doped Hydroxyapatite Membranes with High Proton Conductivity

Xue Wei and Matthew Z. Yates

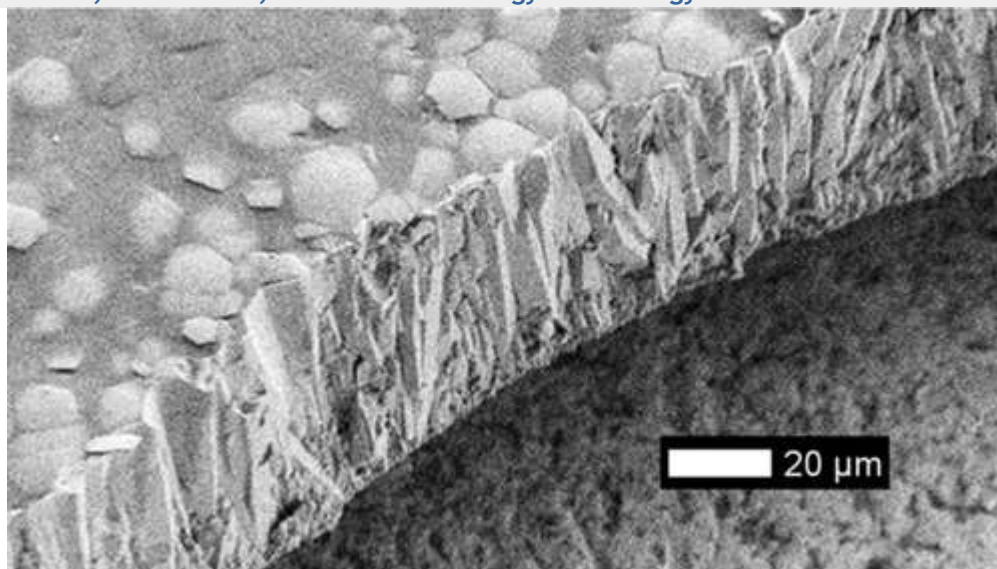
pp 1738-1743

Publication Date (Web): April 27, 2012 (Article)

DOI: 10.1021/cm203355h

Section:

Electrochemical, Radiational, and Thermal Energy Technology



Comparative Study of SWCNT Fluorination by Atomic and Molecular Fluorine

Wei Zhang, Pierre Bonnet, Marc Dubois, Christopher P. Ewels, Katia Guérin, Elodie Petit, Jean-Yves Mevellec, Loïc Vidal, Dimitri A. Ivanov, and André Hamwi

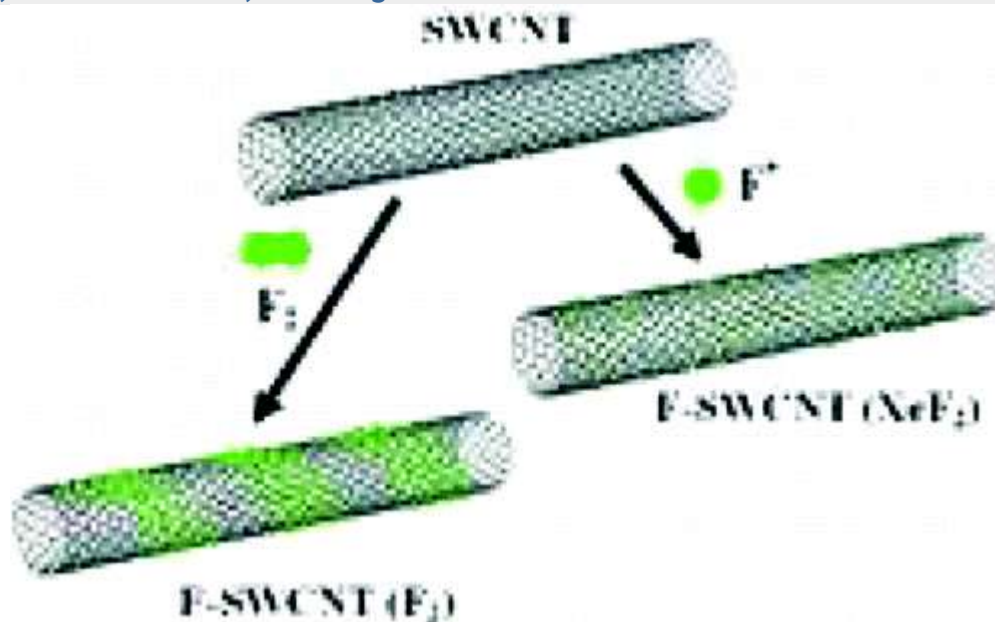
pp 1744-1751

Publication Date (Web): April 14, 2012 (Article)

DOI: 10.1021/cm203415e

Section:

Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms



Catalytic Combustion and Dehydrogenation Reactions during Atomic Layer Deposition of Platinum

Adriaan J. M. Mackus, Noémi Leick, Layton Baker, and Wilhelmus M. M. Kessels

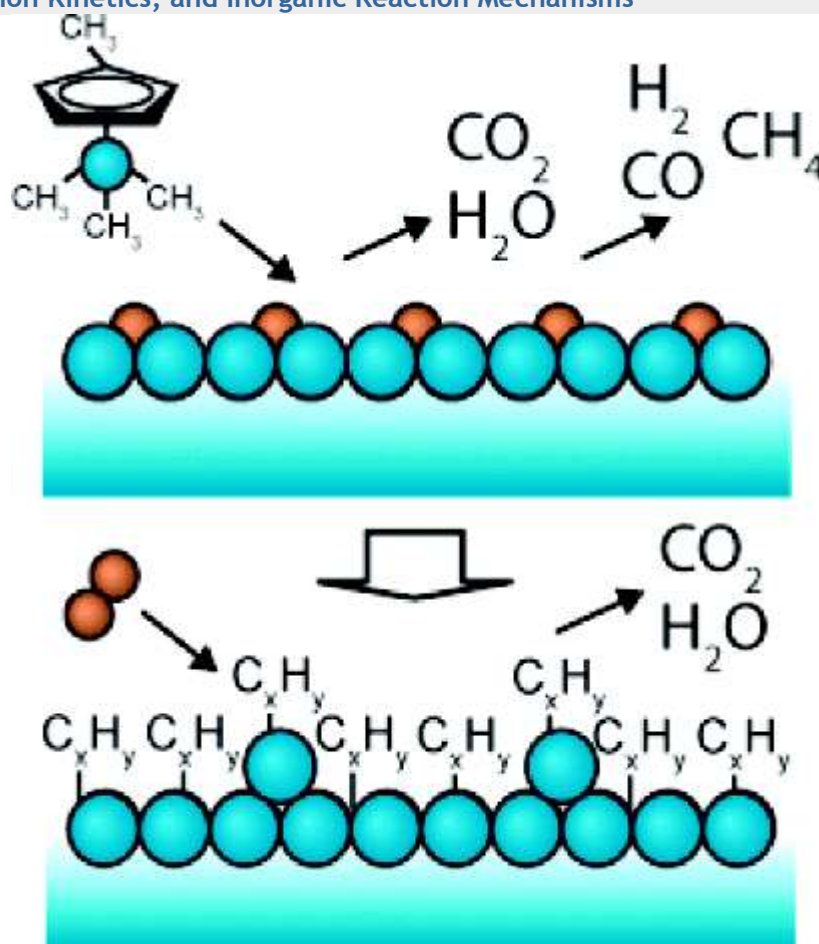
pp 1752-1761

Publication Date (Web): April 17, 2012 (Article)

DOI: 10.1021/cm203812v

Section:

Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms



Systematic Investigation of Isoindigo-Based Polymeric Field-Effect Transistors: Design Strategy and Impact of Polymer Symmetry and Backbone Curvature

Ting Lei, Yue Cao, Xu Zhou, Yang Peng, Jiang Bian, and Jian Pei

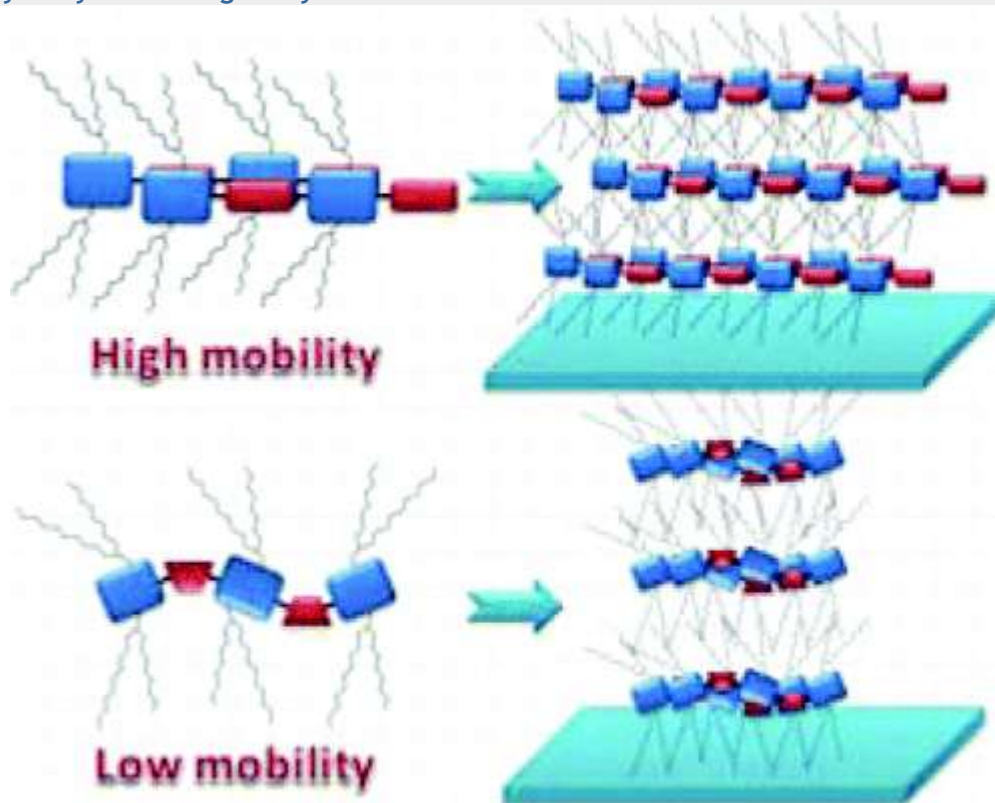
pp 1762-1770

Publication Date (Web): May 2, 2012 (Article)

DOI: 10.1021/cm300117x

Section:

Chemistry of Synthetic High Polymers



Band-Gap Engineering of Zinc Oxide Colloids via Lattice Substitution with Sulfur Leading to Materials with Advanced Properties for Optical Applications Like Full Inorganic UV Protection

Daniela Lehr, Martin Luka, Markus R. Wagner, Max Bügler, Axel Hoffmann, and Sebastian Polarz

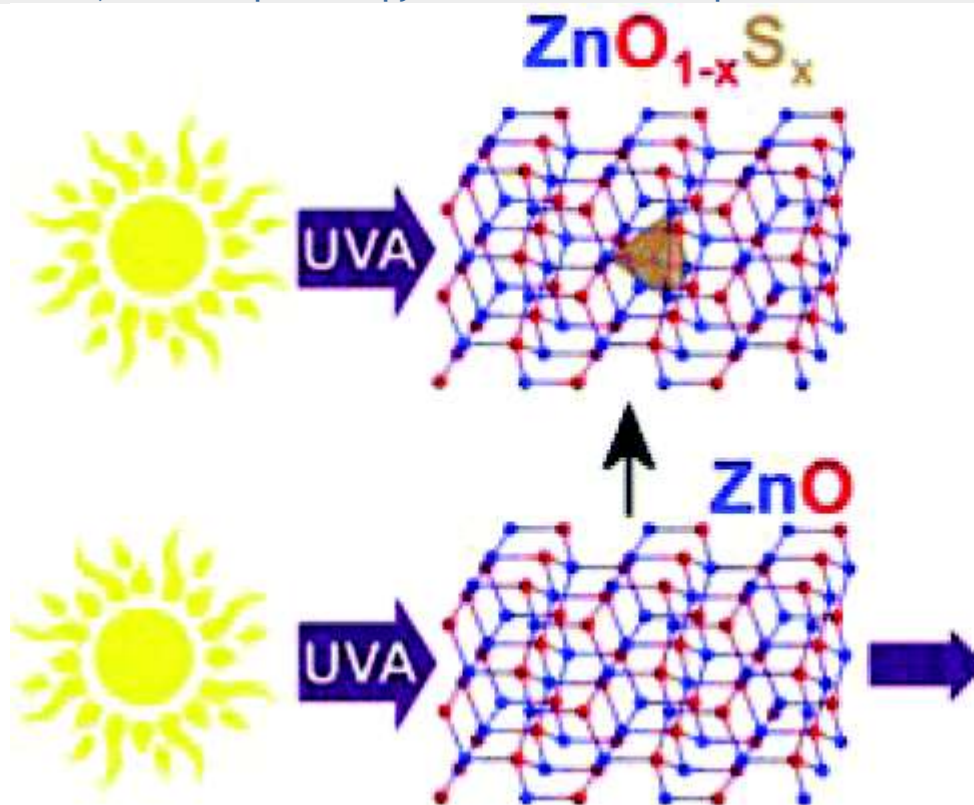
pp 1771-1778

Publication Date (Web): May 2, 2012 (Article)

DOI: 10.1021/cm300239q

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties



Synthesis of Micrometer Length Indium Sulfide Nanosheets and Study of Their Dopant Induced Photoresponse Properties

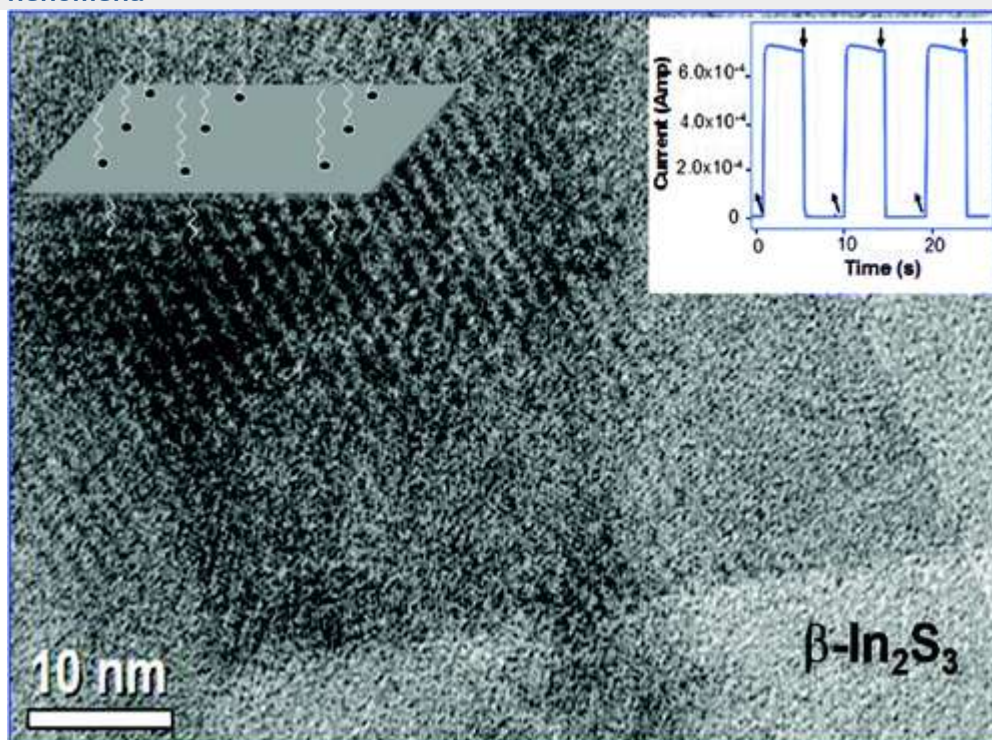
Shinjita Acharya, Mrinal Dutta, Suresh Sarkar, Durga Basak, Supriyo Chakraborty, and Narayan Pradhan

pp 1779-1785

Publication Date (Web): April 26, 2012 (Article)

DOI: 10.1021/cm3003063

Section:
Electric Phenomena



Covalent Layer-by-Layer Assembly of Water-Permeable and Water-Impermeable Polymer Multilayers on Highly Water-Soluble and Water-Sensitive Substrates

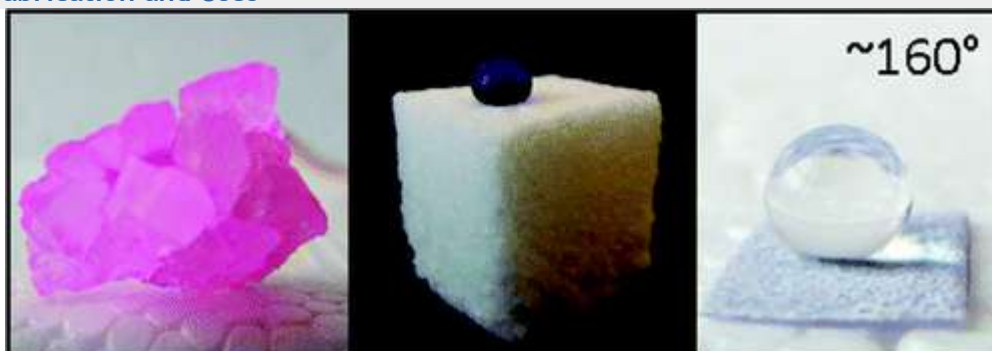
Adam H. Broderick, Uttam Manna, and David M. Lynn

pp 1786-1795

Publication Date (Web): April 30, 2012 (Article)

DOI: 10.1021/cm300307g

Section:
Plastics Fabrication and Uses



Growth Mechanism of Single-Walled Carbon Nanotubes on Iron–Copper Catalyst and Chirality Studies by Electron Diffraction

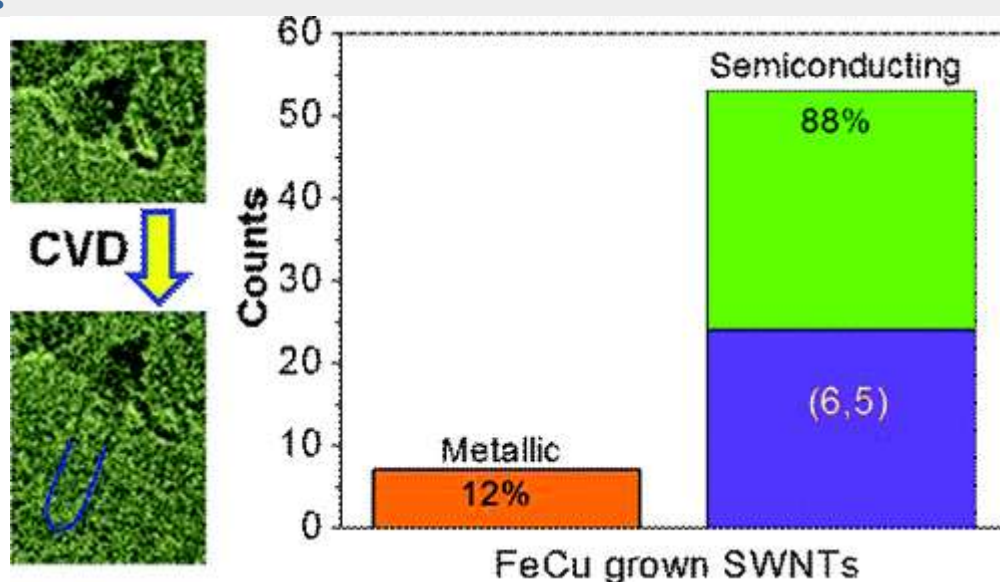
Maoshuai He, Bilu Liu, Alexander I. Chernov, Elena D. Obraztsova, Inkeri Kauppi, Hua Jiang, Ilya Anoshkin, Filippo Cavalca, Thomas W. Hansen, Jakob B. Wagner, Albert. G. Nasibulin, Esko I. Kauppinen, Juha Linnekoski, Marita Niemelä, and Juha Lehtonen

pp 1796-1801

Publication Date (Web): April 19, 2012 (Article)

DOI: 10.1021/cm300308k

CCS Section:
Ceramics



Template-Directed Synthesis of Silica Nanowires and Nanotubes from Cylindrical Core–Shell Polymer Brushes

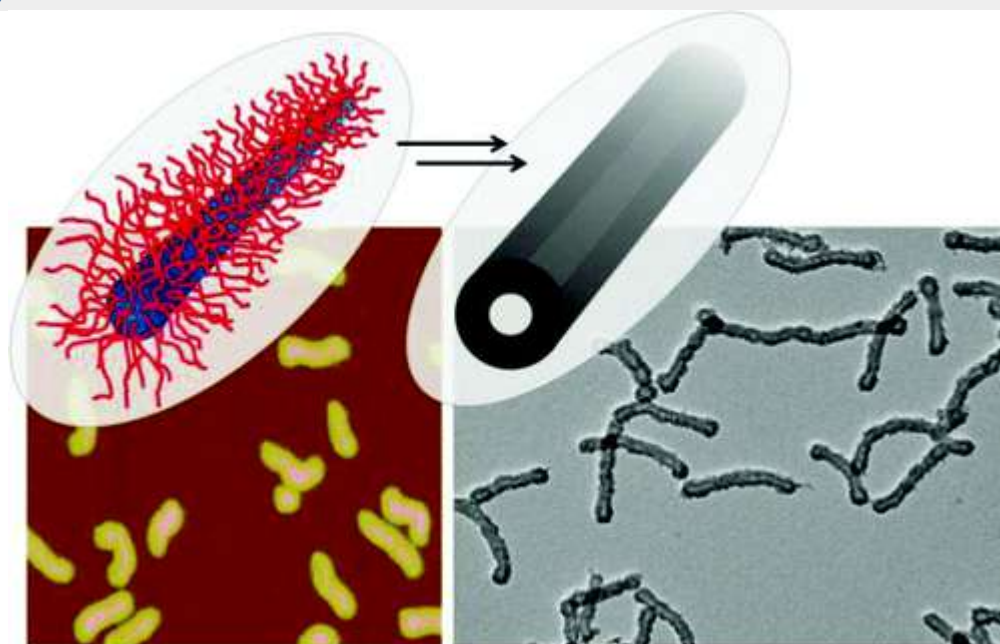
Markus Müllner, Thomas Lunkenbein, Josef Breu, Frank Caruso, and Axel H. E. Müller

pp 1802-1810

Publication Date (Web): April 25, 2012 (Article)

DOI: 10.1021/cm300312g

CCS Section:
Ceramics



Strain and Architecture-Tuned Reactivity in Ceria Nanostructures; Enhanced Catalytic Oxidation of CO to CO₂

Thi X. T. Sayle, Michelle Cantoni, Umananda M. Bhatta, Stephen C. Parker, Simon R. Hall, Günter Möbus, Marco Molinari, David Reid, Sudipta Seal, and Dean C. Sayle

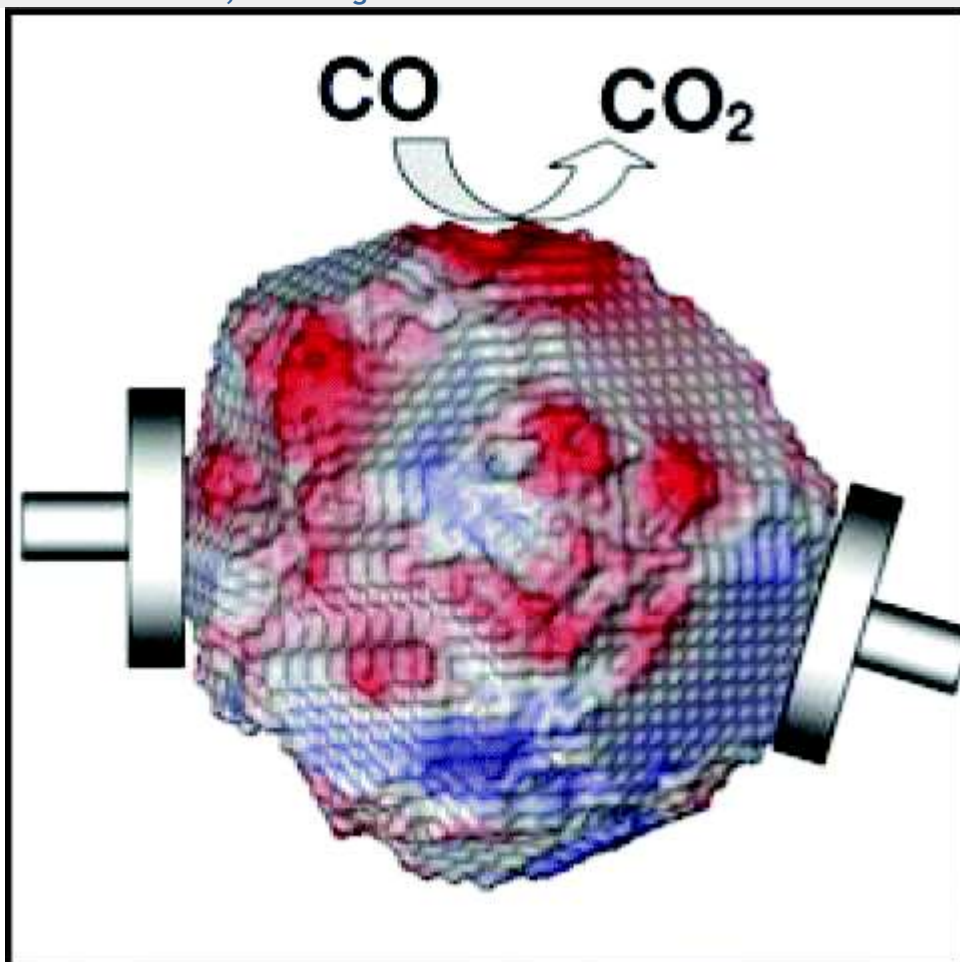
pp 1811-1821

Publication Date (Web): April 12, 2012 (Article)

DOI: 10.1021/cm3003436

CCS

Section:
Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms



Structures and Mechanisms in the Growth of Hybrid Ru–Cu₂S Nanoparticles: From Cages to Nanonets

Kathy Vinokurov, Janet E. Macdonald, and Uri Banin

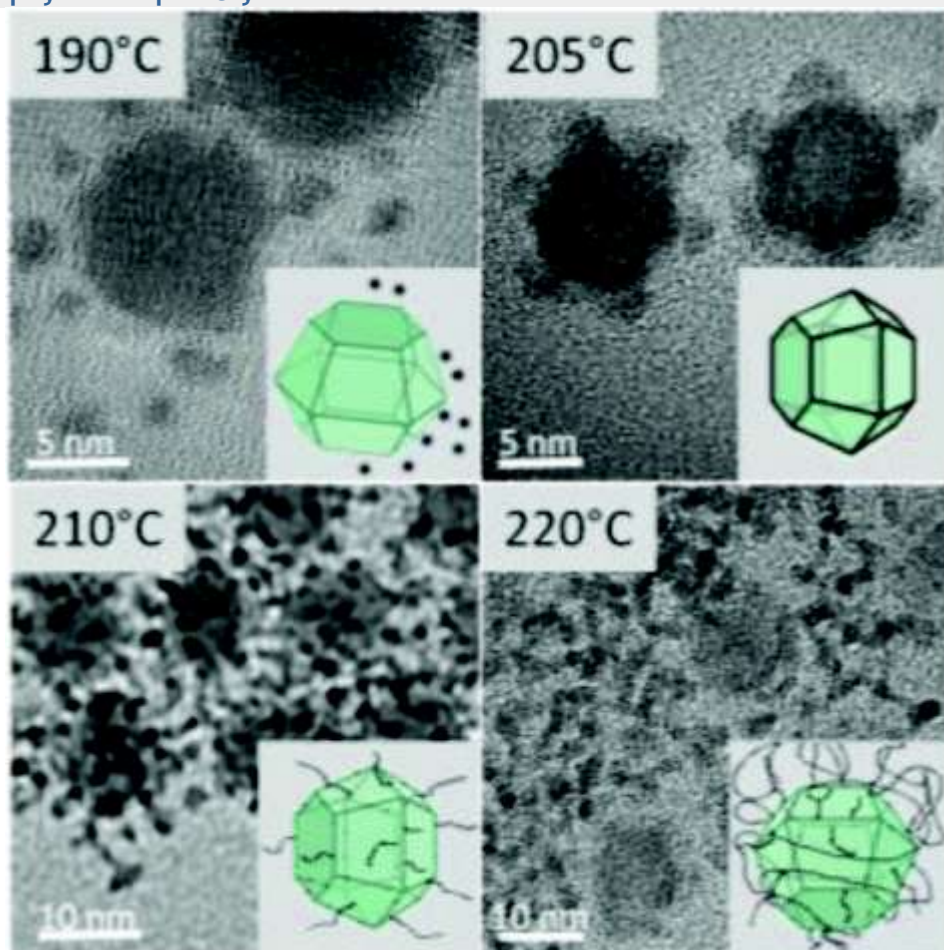
pp 1822-1827

Publication Date (Web): May 2, 2012 (Article)

DOI: 10.1021/cm3003589

CCS Section:

Crystallography and Liquid Crystals



Structure and Transformation of Amorphous Calcium Carbonate: A Solid-State ^{43}Ca NMR and Computational Molecular Dynamics Investigation

Jared Wesley Singer, A. Özgür Yazaydin, R. James Kirkpatrick, and Geoffrey M. Bowers

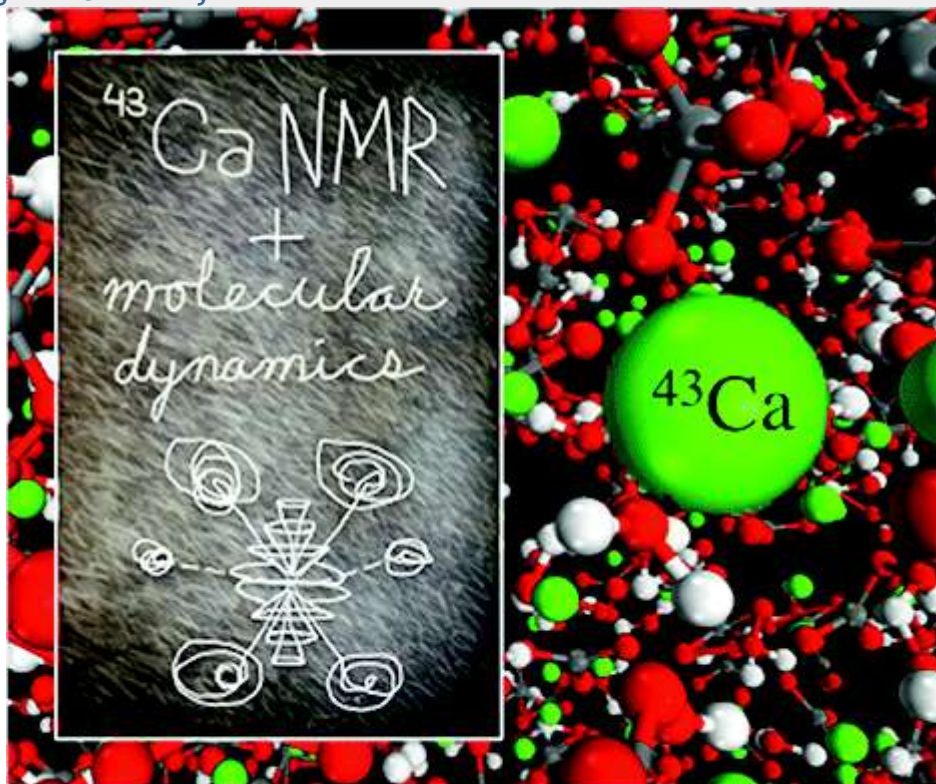
pp 1828-1836

Publication Date (Web): April 23, 2012 (Article)

DOI: 10.1021/cm300389q

CCS Section:

General Physical Chemistry



Amorphous Calcium Carbonate

Mesoporous ZnS Thin Films Prepared by a Nanocasting Route

Achim Fischereder, Maria Luz Martinez-Ricci, Alejandro Wolosiuk, Wernfried Haas, Ferdinand Hofer, Gregor Trimmel, and Galo J. A. A. Soler-Illia

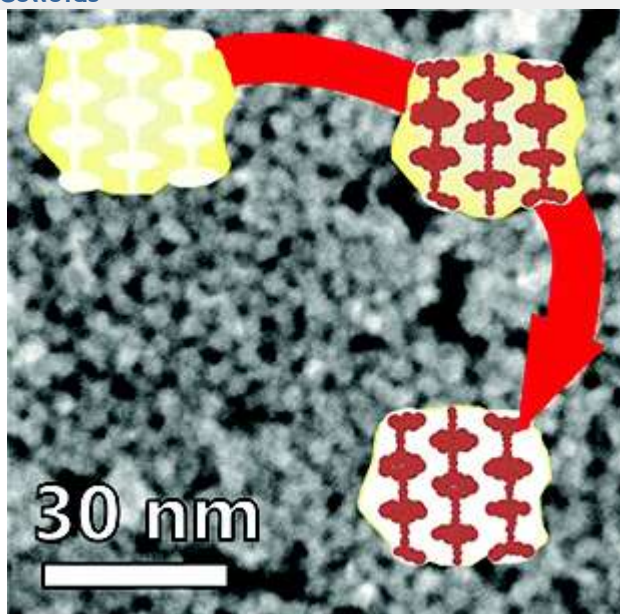
pp 1837-1845

Publication Date (Web): April 26, 2012 (Article)

DOI: 10.1021/cm300395m

Section:

Surface Chemistry and Colloids



Synthesis, Structure, and Electrochemical Properties of the Layered Sodium Insertion Cathode Material: $\text{NaNi}_{1/3}\text{Mn}_{1/3}\text{Co}_{1/3}\text{O}_2$

M. Sathiya, K. Hemalatha, K. Ramesha, J.-M. Tarascon, and A. S. Prakash

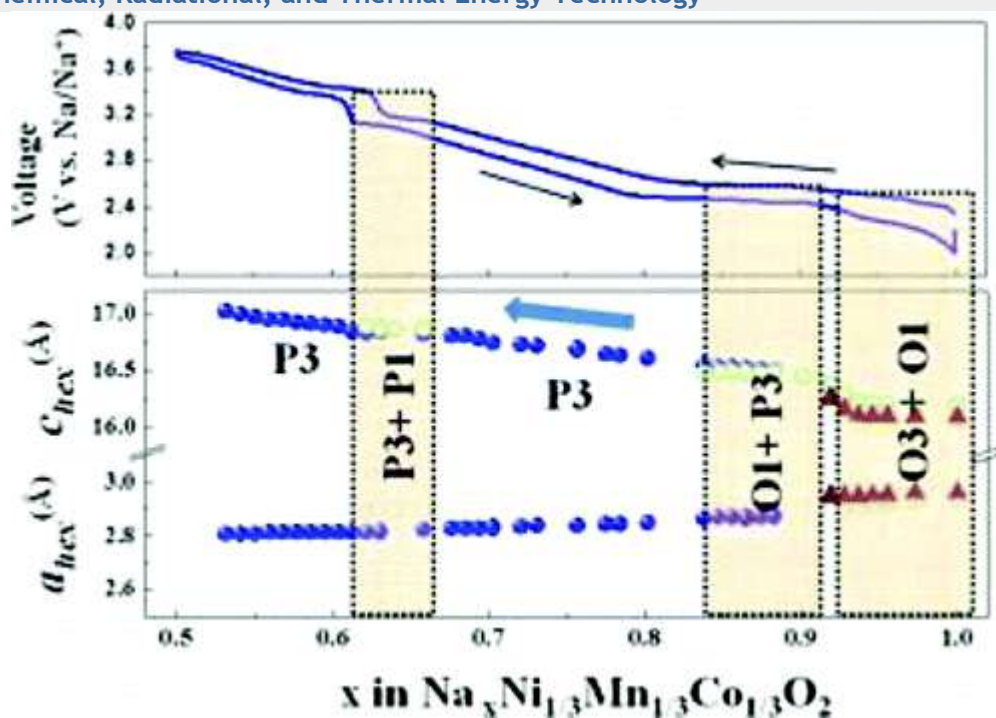
pp 1846-1853

Publication Date (Web): April 17, 2012 (Article)

DOI: 10.1021/cm300466b

Section:

Electrochemical, Radiational, and Thermal Energy Technology



Sb and Se Substitution in CsBi_4Te_6 : The Semiconductors CsM_4Q_6 ($\text{M} = \text{Bi}, \text{Sb}$; $\text{Q} = \text{Te}, \text{Se}$), $\text{Cs}_2\text{Bi}_{10}\text{Q}_{15}$, and CsBi_5Q_8

Duck Young Chung, Ctirad Uher, and Mercouri G. Kanatzidis

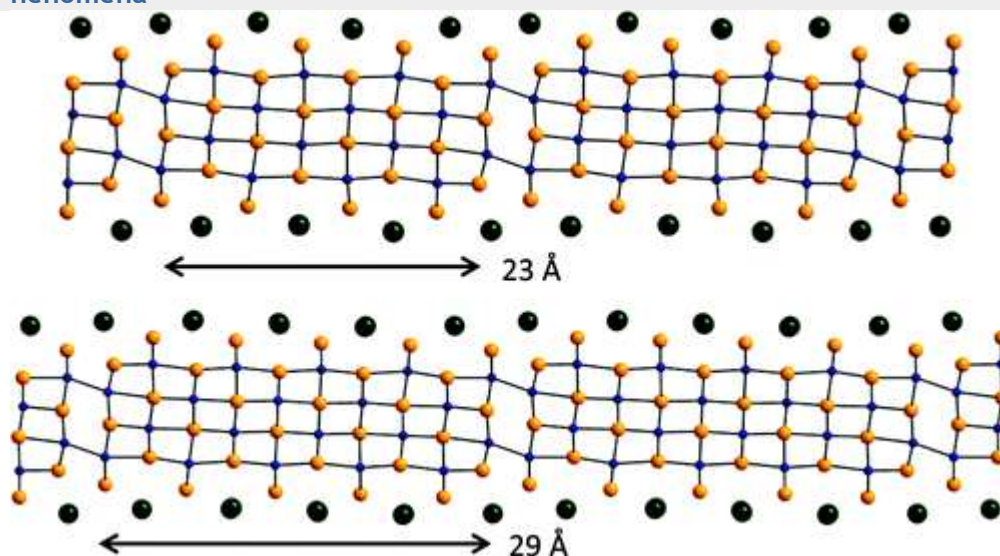
pp 1854-1863

Publication Date (Web): April 23, 2012 (Article)

DOI: 10.1021/cm300490v

Section:

Electric Phenomena



On the State of Pd in Perovskite-Type Oxidation Catalysts of Composition $\text{A}(\text{B},\text{Pd})\text{O}_{3\pm\delta}$ ($\text{A} = \text{La}, \text{Y}$; $\text{B} = \text{Mn}, \text{Fe}, \text{Co}$)

Arnim Eyssler, Alexander Winkler, Olga Safonova, Maarten Nachtegaal, Santhosh Kumar Matam, Paul Hug, Anke Weidenkaff, and Davide Ferri

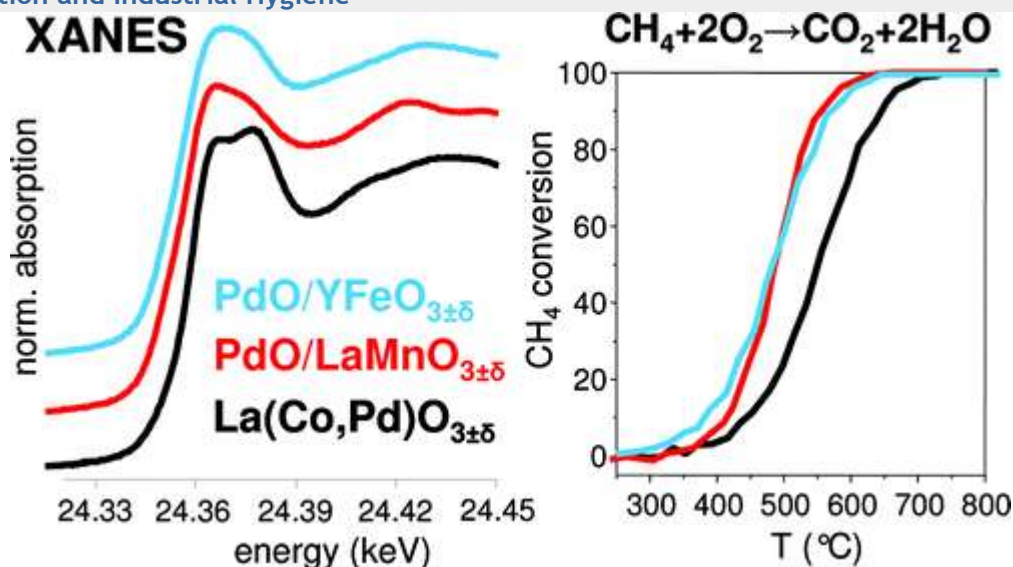
pp 1864-1875

Publication Date (Web): April 25, 2012 (Article)

DOI: 10.1021/cm300571y

Section:

Air Pollution and Industrial Hygiene



Highly Enhanced Concentration and Stability of Reactive Ce^{3+} on Doped CeO_2 Surface Revealed In Operando

William C. Chueh, Anthony H. McDaniel, Michael E. Grass, Yong Hao, Naila Jabeen, Zhi Liu, Sossina M. Haile, Kevin F. McCarty, Hendrik Bluhm, and Farid El Gabaly

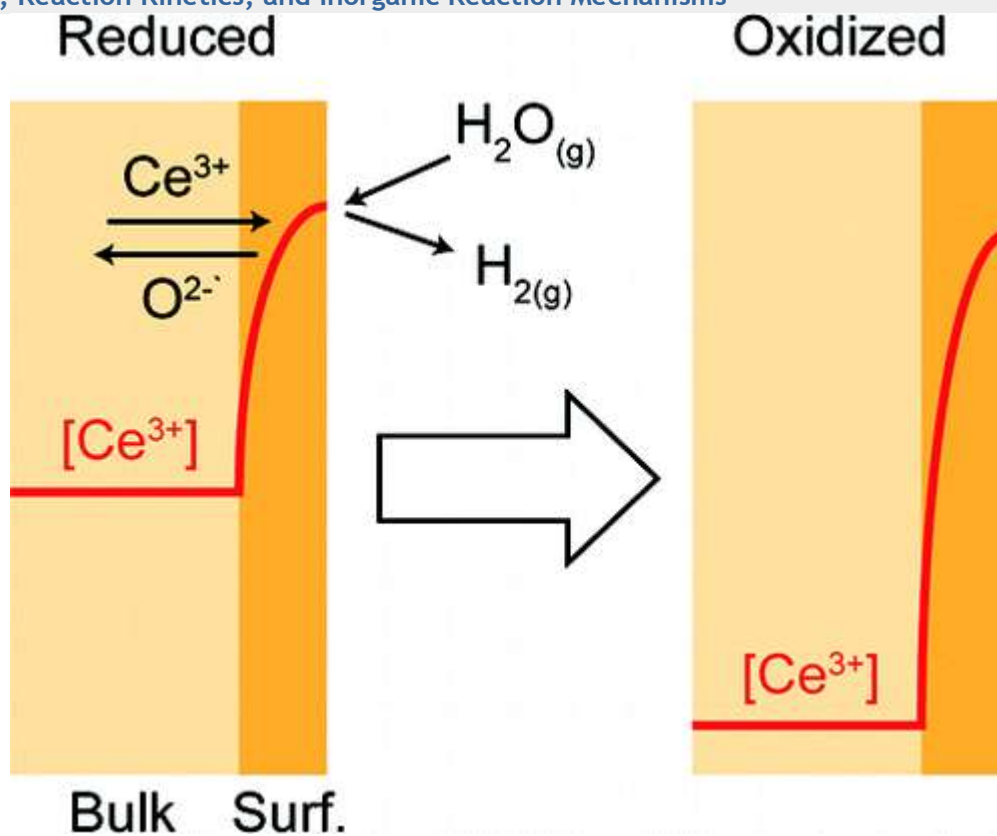
pp 1876-1882

Publication Date (Web): April 25, 2012 (Article)

DOI: 10.1021/cm300574v

Section:

Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms



3-D Molecular Mixtures of Catalytically Functionalized $[\text{vinylSiO}_{1.5}]_{10}/[\text{vinylSiO}_{1.5}]_{12}$. Photophysical Characterization of Second Generation Derivatives

Jae Hwan Jung, Joseph C. Furgal, Theodore Goodson, III, Tomonobu Mizumo, Matthew Schwartz, Kathleen Chou, Jean-François Vonet, and Richard M. Laine

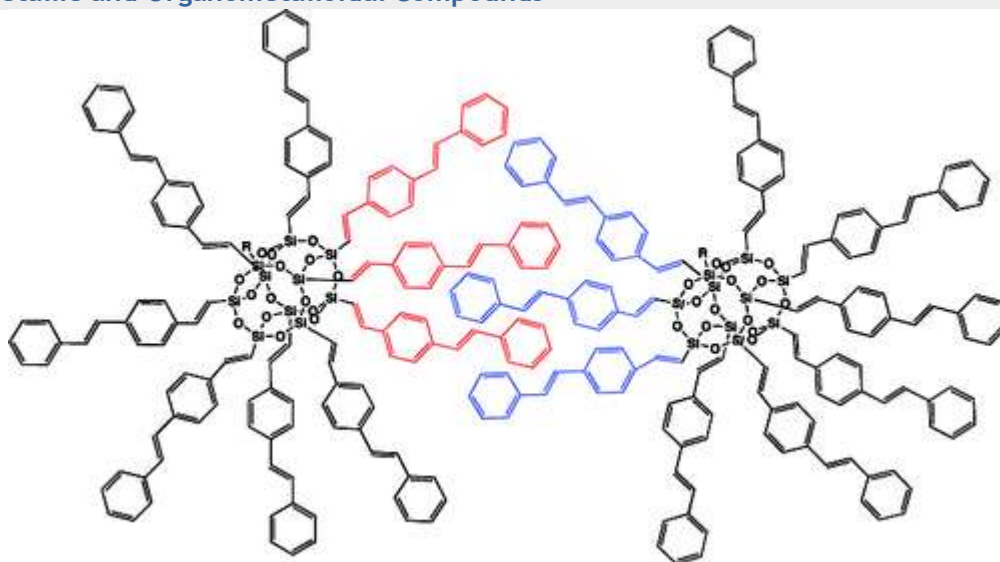
pp 1883-1895

Publication Date (Web): April 25, 2012 (Article)

DOI: 10.1021/cm300587s

CCS Section:

Organometallic and Organometalloidal Compounds



Stable Green Electroluminescence from an Iridium Tris-Heteroleptic Ionic Complex

Daniel Tordera, Manuel Delgado, Enrique Ortí, Henk J. Bolink, Julien Frey, Md. Khaja Nazeeruddin, and Etienne Baranoff

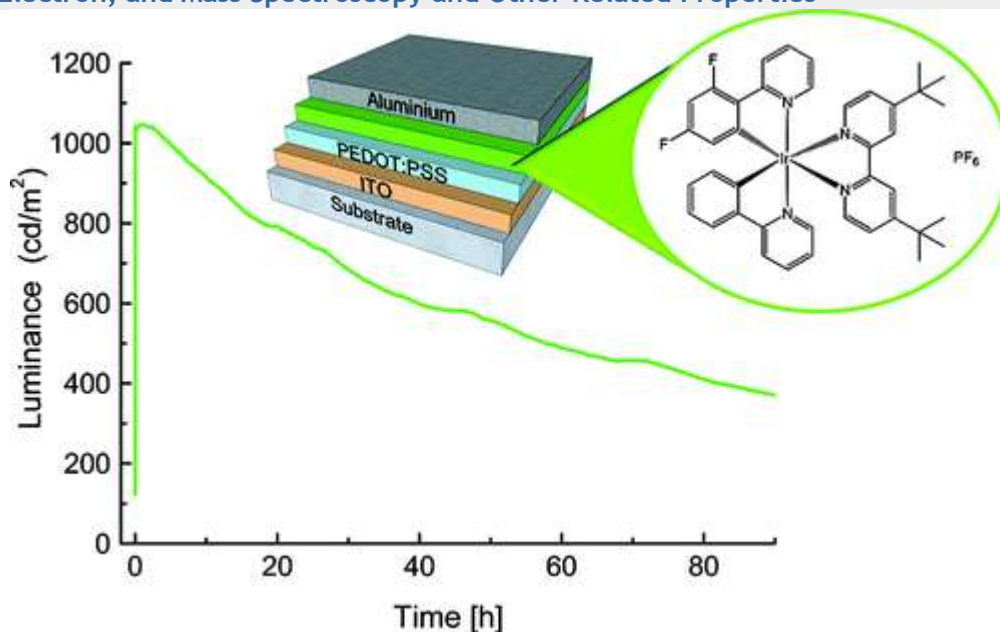
pp 1896-1903

Publication Date (Web): April 23, 2012 (Article)

DOI: 10.1021/cm3011716

CCS Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties



Atomic Resolution Coordination Mapping in $\text{Ca}_2\text{FeCoO}_5$ Brownmillerite by Spatially Resolved Electron Energy-Loss Spectroscopy

Stuart Turner, Johan Verbeeck, Farshid Ramezanipour, John E. Greedan, Gustaaf Van Tendeloo, and Gianluigi A. Botton

pp 1904-1909

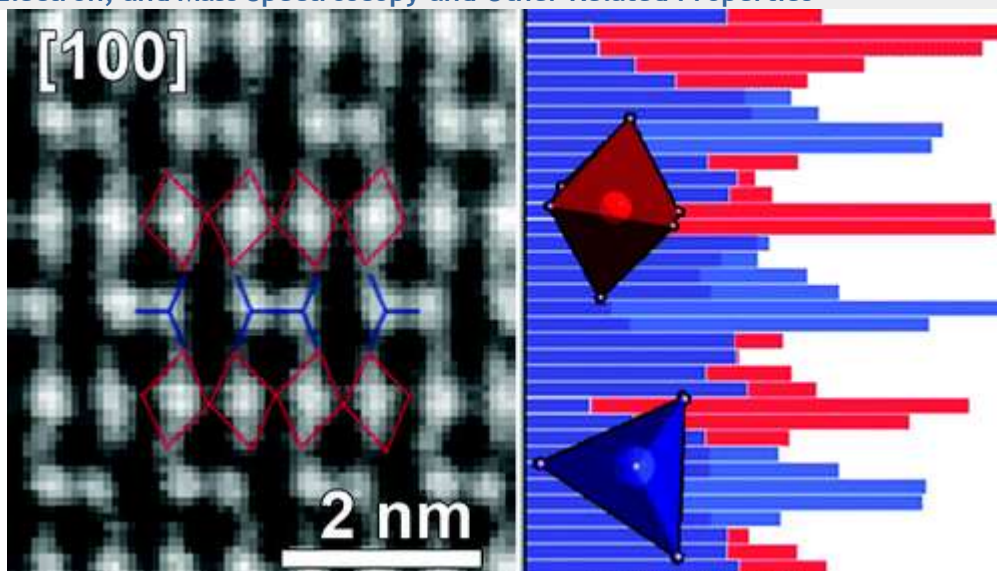
Publication Date (Web): April 25, 2012 (Article)

DOI: 10.1021/cm300640g

CCS

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties



Oxygen-Storage Materials $\text{BaYMn}_2\text{O}_{5+\delta}$ from the Quantum-Chemical Point of View

Michael Gilleßen, Marck Lumeij, Janine George, Ralf Stoffel, Teruki Motohashi, Shinichi Kikkawa, and Richard Dronskowski

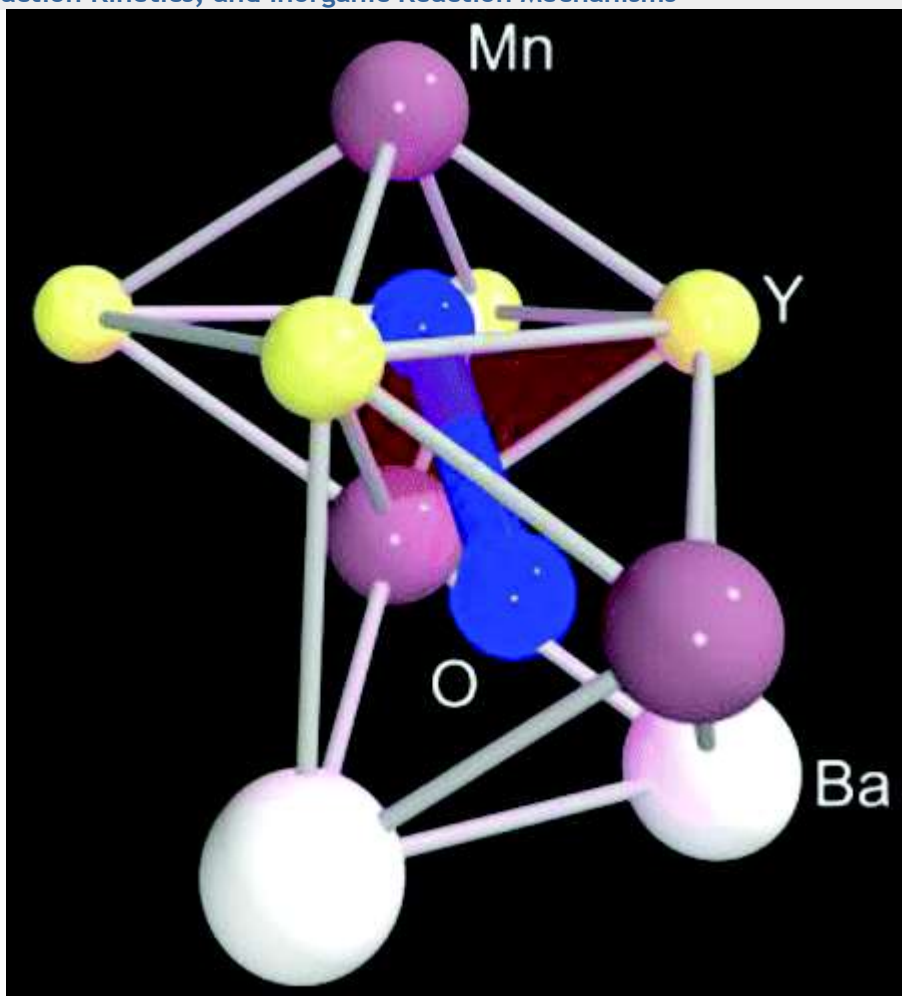
pp 1910-1916

Publication Date (Web): May 3, 2012 (Article)

DOI: 10.1021/cm300655y

CCS Section:

Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms



Synthetic Architecture of Multiple Core–Shell and Yolk–Shell Structures of $(\text{Cu}_2\text{O}@)_n\text{Cu}_2\text{O}$ ($n = 1-4$) with Centricity and Eccentricity

Christopher C. Yec and Hua Chun Zeng

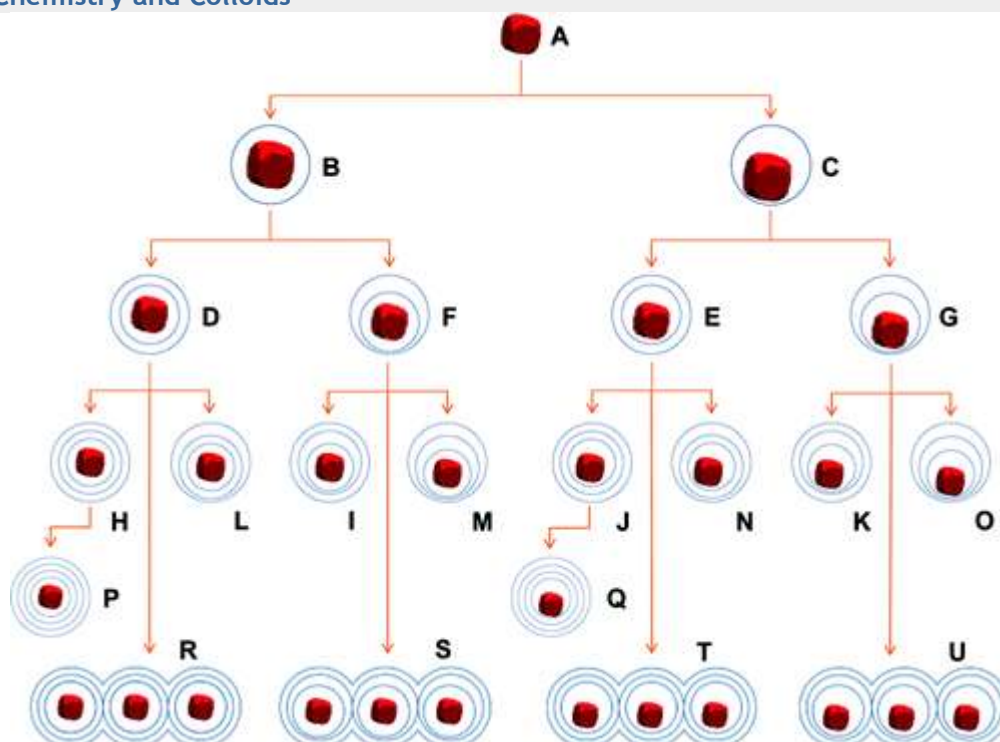
pp 1917-1929

Publication Date (Web): April 30, 2012 (Article)

DOI: 10.1021/cm300672r

Section:

Surface Chemistry and Colloids



Hybrid Zeolitic Imidazolate Frameworks: Controlling Framework Porosity and Functionality by Mixed-Linker Synthesis

Joshua A. Thompson, Catherine R. Blad, Nicholas A. Brunelli, Megan E. Lydon, Ryan P. Lively, Christopher W. Jones, and Sankar Nair

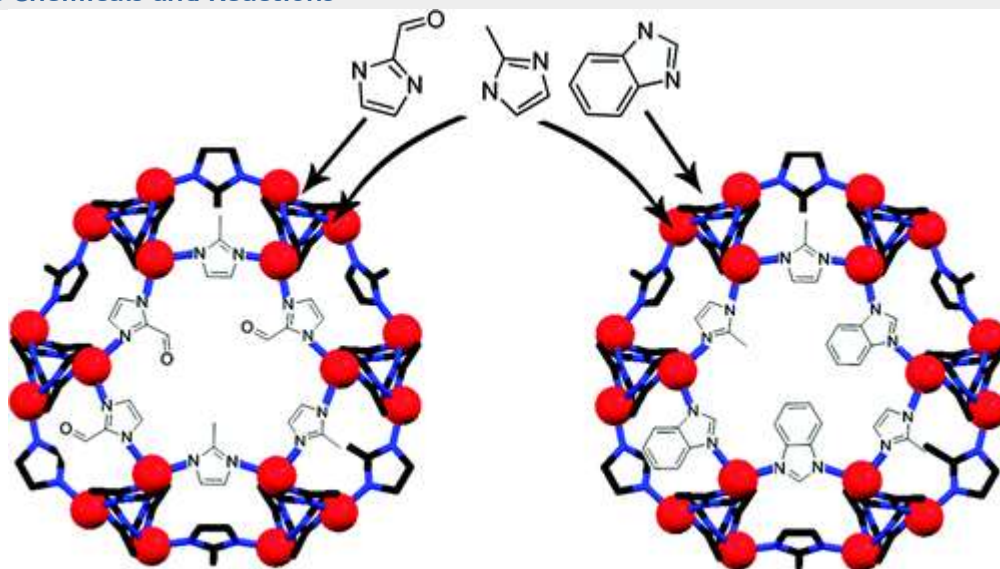
pp 1930-1936

Publication Date (Web): April 22, 2012 (Article)

DOI: 10.1021/cm3006953

CCS Section:

Inorganic Chemicals and Reactions



Functional Monolithic Polymeric Organic Framework Aerogel as Reducing and Hosting Media for Ag nanoparticles and Application in Capturing of Iodine Vapors

Alexandros P. Katsoulidis, Jiaqing He, and Mercouri G. Kanatzidis

pp 1937-1943

Publication Date (Web): May 9, 2012 (Article)

DOI: 10.1021/cm300696g

CCS Section:

Plastics Fabrication and Uses



Alkylene-Chain Effect on Microwire Growth and Crystal Packing of π -Moieties

Lin Ding, Hai-Bin Li, Ting Lei, Han-Ze Ying, Rui-Bo Wang, Yan Zhou, Zhong-Min Su, and Jian Pei

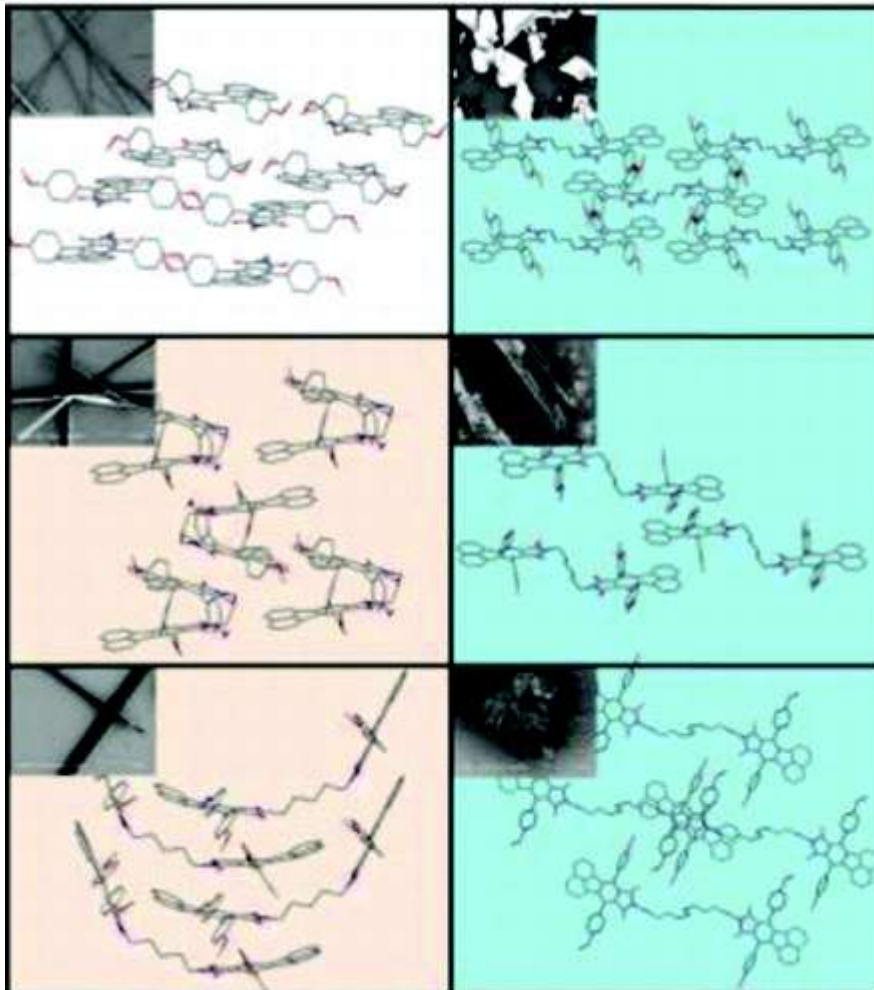
pp 1944-1949

Publication Date (Web): April 23, 2012 (Article)

DOI: 10.1021/cm300747v

Section:

Heterocyclic Compounds (One Hetero Atom)



Creation of Light Scattering Images in a Polymer Film by Quantum Amplified Isomerization

Mark R. Mis and Douglas R. Robello

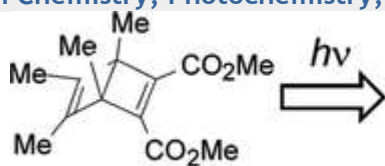
pp 1950-1953

Publication Date (Web): April 30, 2012 (Article)

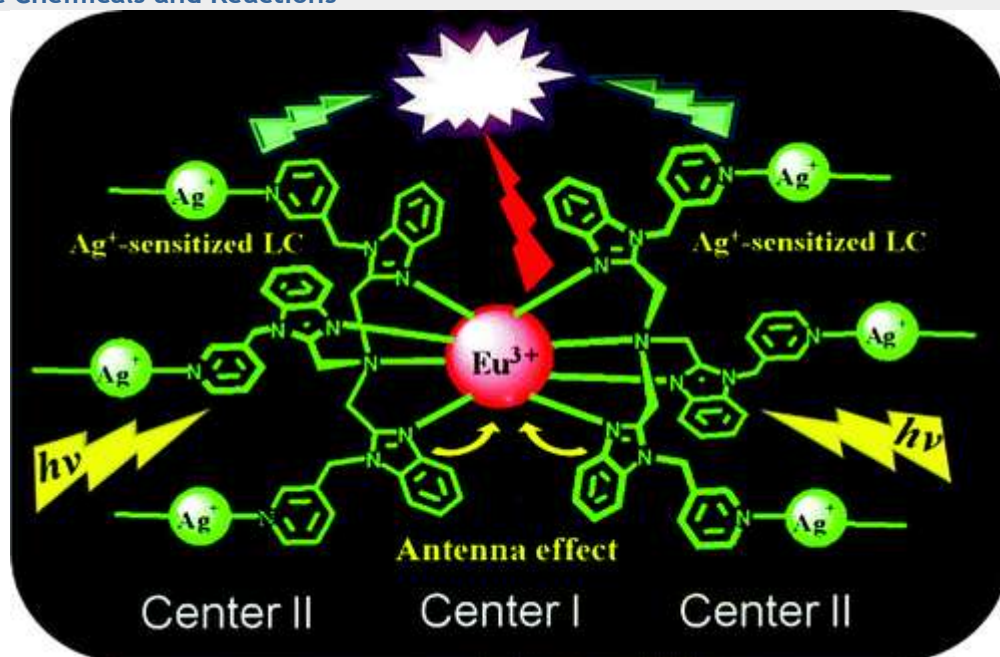
DOI: 10.1021/cm300815t

Section:

Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes



Foundation Science
& Technology Center



Efficient White-Light-Emitting Diodes Fabricated from Highly Fluorescent Copper Indium Sulfide Core/Shell Quantum Dots

Woo-Seuk Song and Heesun Yang

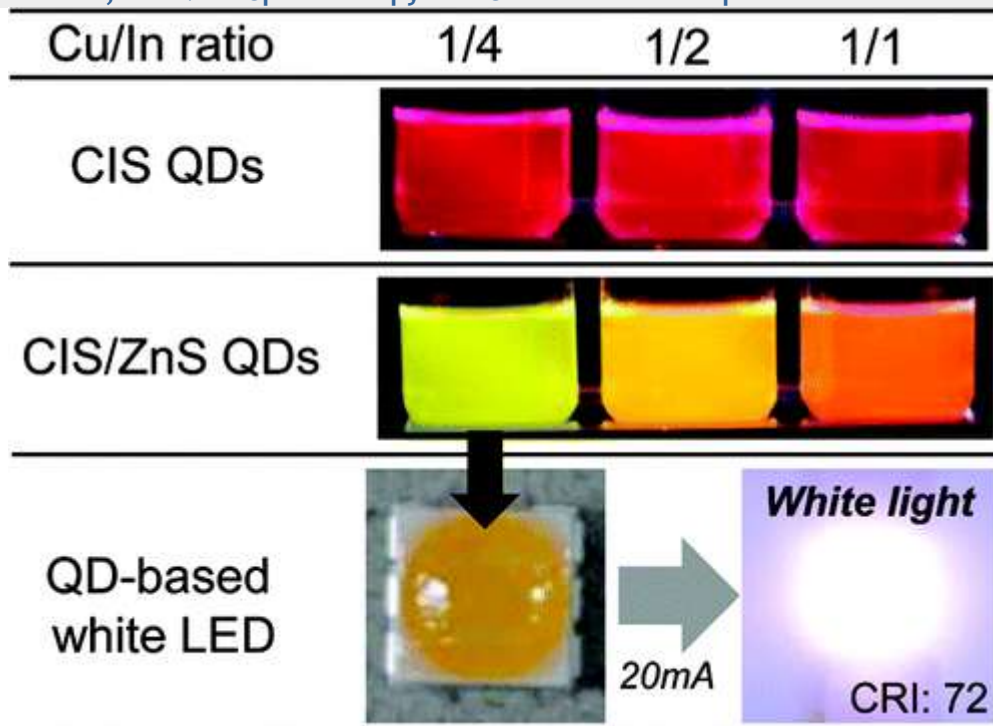
pp 1961-1967

Publication Date (Web): April 25, 2012 (Article)

DOI: 10.1021/cm300837z

Section:

Optical, Electron, and Mass Spectroscopy and Other Related Properties



Supramolecular Template-Directed Synthesis of Soluble Quadruple-Chain Ladder Polyphenylsiloxane (Ph-QCLP) with High Molecular Weight

Zhize Chen, Zhibo Li, Hongxia Guo, Jintao Zhang, Zhongjie Ren, Shouke Yan, Ping Xie, and Rongben Zhang

pp 1968-1973

Publication Date (Web): May 1, 2012 (Article)

DOI: 10.1021/cm300951x

CCS Section:

Chemistry of Synthetic High Polymers

