Synthesis and Structure-specific Functions of Patchy Nanoparticles

Toshiharu Teranishi, Masaki Saruyama, and Masayuki Kanehara

doi:10.1246/cl.2009.194

Anisotropically phase-segregated nanoparticles, so-called patchy nanoparticles, are promising materials because the close coupling of different components on the nanoscale may significantly improve the application performance or even create new properties. We demonstrate that the seed-mediated growth method is quite effective to synthesize various kinds of patchy nanoparticles consisting of a combination of metals, metal sulfides, and metal oxides.

Organic Field-effect Transistors Based on Solution-processible Dibenzotetrathiafulvalene Derivatives

Takamasa Yoshino, Koji Shibata, Hiroshi Wada, Yoshimasa Bando, Ken Ishikawa, Hideo Takezoe, and Takehiko Mori
doi:10.1246/cl.2009.200

Electronic Supporting Information
A Stable Cu$_2$O$_2$ Complex Supported by an Asymmetric Dinucleating Pentapyridine Ligand Involving an Amide Linkage

Yoshimitsu Tachi, Yumi Matsukawa, Junji Teraoka, and Shinobu Itoh


Electronic Supporting Information

Palladium-catalyzed Decarboxylative [4 + 1] Cyclization of \(\gamma\)-Methyldiene-\(\delta\)-valerolactones with Isocyanides

Soyoung Park, Ryo Shintani, and Tamio Hayashi

doi:10.1246/cl.2009.204

Electronic Supporting Information

1,4-Phenylene-bridged Subporphyrin–Porphyrin Dyad, Triad, and Tetrad

Yasuhide Inokuma, Shin-ya Hayashi, and Atsuhiro Osuka

doi:10.1246/cl.2009.206

Electronic Supporting Information

Alkoxy-substituted Derivatives of \(\pi\)-Conjugated Acyclic Anion Receptors: Effects of Substituted Positions

Hiromitsu Maeda and Nazuki Eifuku

doi:10.1246/cl.2009.208

Electronic Supporting Information

Solvothermal Preparation and Control of Phase Composition of Nanosized Rhodium Sulfide Particles

Wu-xing Zhang, Kazumichi Yanagisawa, Sumio Kamiya, and Tatsuo Shou


Electronic Supporting Information
Hollow Capsules Constructed of Poly(thiophene-3-acetic acid) and Hyperbranched Azobenzene-containing Polymeric Diazonium Salt

Haoyu Zhang, Xinyang Li, and Xiaogong Wang
doi:10.1246/cl.2009.212

Synthesis and Photoelectrochemical Behavior of Nitrogen-doped NaTaO$_3$

Xuewen Wang, Gang Liu, Zhi-Gang Chen, Feng Li, Gao Qing Lu, and Hui-Ming Cheng
doi:10.1246/cl.2009.214
Electronic Supporting Information

Development of an Active Oxygen Detector Using a Quartz Crystal Microbalance with a Carbon/Silver Layer

Hiroyuki Matsumoto, Mikihiko Matsuoka, and Kazutoshi Noda
doi:10.1246/cl.2009.216

Tetrahedral Cobalt(II) and Zinc(II) Chloride with Tetravanadate through a Tripod Coordination Mode

Taisei Kurata, Yoshihito Hayashi, and Kiyoshi Isobe
doi:10.1246/cl.2009.218
Electronic Supporting Information

Reductive Alkylation and Arylation of Single-walled Carbon Nanotubes in Ethylenediamine via Benkeser Reaction

Xinliang Tang, Qingze Jiao, Yong Cao, Pei Zhang, Hongbo Liu, Hongyu Wu, Mingji Zhou, Xuefei Li, and Yun Zhao
doi:10.1246/cl.2009.220
Electronic Supporting Information
222 Sulfated Zirconia-supported Palladium as a Highly Active and Highly Selective Catalyst for the Oxidation of Ethylene in the Vapor Phase

Tomoaki Hamada, Yoshinori Sakamoto, Yasunobu Ooka, Toshio Okuhara, and Yuichi Kamiya
doi:10.1246/cl.2009.222

224 Direct Approach to Multi-substituted Pyrroles from 2-Propynylamine and 1,3-Diketone or β-Keto Ester Using Bi(OTf)₃ Catalyst

Kimihiro Komeyama, Motoyoshi Miyagi, and Ken Takaki
doi:10.1246/cl.2009.224
Electronic Supporting Information

226 Photochemical Reaction of Poly(ethylene glycol) on Gold Nanorods Induced by Near Infrared Pulsed-laser Irradiation

Shuji Yamashita, Yasuro Niidome, Yoshiki Katayama, and Takuro Niidome
doi:10.1246/cl.2009.226
Electronic Supporting Information

228 Water-dissolvable and Reactive KCdCl₃ Nanowires: Precursor and Template for Preparation of CdS and CdSe Nanotubes

Hua Tong, Ying-Jie Zhu, and Xiao-Lin Liu
doi:10.1246/cl.2009.228

230 Crystal Structure of Complex of Gallocatechin Gallate and Caffeine

Takashi Ishizu, Hiroyuki Tsutsumi, Takashi Sato, Hideji Yamamoto, and Motoo Shiro
doi:10.1246/cl.2009.230

A merohedrally twinned crystal of the complex of (-)-gallocatechin gallate and caffeine was prepared in aqueous solution, and X-ray crystallographic analysis was performed.
232 Characterization of High-pressure-induced Murine Erythroleukemia Cell Apoptosis by Proton Spin–Lattice Relaxation Times of Intracellular Water

Satoshi Katsuki and Takeo Yamaguchi

234 Single-molecule Imaging with an Inexpensive UV-LED Light Source

Akifumi Hattori, Satoshi Habuchi, and Martin Vacha
doi:10.1246/cl.2009.234

236 Kinetic Salt Effects on an Ionic Reaction in Ionic Liquid/Methanol Mixtures —Viscosity and Coulombic Screening Effects—

Kenji Takahashi, Hiroaki Tezuka, Toshifumi Satoh, Yosuke Katsumura, Masayoshi Watanabe, Robert A. Crowell, and James F. Wishart
doi:10.1246/cl.2009.236

238 Correlation between Photocatalytic Activities and Structural and Physical Properties of Titanium(IV) Oxide Powders

Orlando-Omar Prieto-Mahaney, Naoya Murakami, Ryu Abe, and Bunsho Ohtani
doi:10.1246/cl.2009.238
Electronic Supporting Information

240 Formation of Lyotropic Liquid Crystals from a Fatty Acid and a Nitrogenous Heterocyclic Compound in Water

Fumin Ma, Xiao Chen, Yurong Zhao, Xudong Wang, Bo Jing, Fengqing Gao, and Huayu Qiu
doi:10.1246/cl.2009.240
Electronic Supporting Information

Lyotropic liquid crystalline (LLC) phases of lauric acid in water have been successfully constructed with the aid of a N-heterocyclic compound in water. This novel ternary system can exhibit Lα phase with its lamellar spacing changing regularly in a wide concentration range.
242  **Sonication-assisted Fabrication of Hierarchical Microspheres of Mg–Al Layered Double Hydroxide**

Hierarchical microspheres of Mg₃Al−CO₃-LDH were fabricated by sonication in a mixed solvent. The MgAl-LDHs showed high efficiency in decolorizing Eriochrome Blue Black K dye for their unique morphology accompanied by a large surface area.

Xiaomin Ni, Huagu Zheng, Yanlong Shan, Xiang Jin, Xiukun Xiao, and Guangxuan Liao
doi:10.1246/cl.2009.242

Electronic Supporting Information

244  **An Inorganic–Organic Hybrid Possessing a Two-dimensional Ti–O Network and Surface Ethoxy Groups Prepared via a Reaction of Titanium Oxychloride with Lithium Ethoxide**

Natsuki Watanabe, Yoshitaka Kamochi, Seiichi Tahara, Nobuhiro Kumada, and Yoshiyuki Sugahara
doi:10.1246/cl.2009.244

246  **Catalytic atropo-Enantioselective Preparation of Axially Chiral Biaryl Compounds**

Tomoko Ashizawa and Tohru Yamada
doi:10.1246/cl.2009.246

Electronic Supporting Information

248  **Radical Addition of Alkyl Halides to 2-Methylene-1,3-dithiane Monoxide as a Ketene Equivalent**

Suguru Yoshida, Hideki Yorimitsu, and Koichiro Oshima
doi:10.1246/cl.2009.248

250  **Preparation of Porous Conjugated Polymers Using Amphiphilic Triblock Copolymers PEO–PPO–PEO as Structure-directing Agents**

Mutsumi Kimura, Terutsune Osawa, Naoya Adachi, Yoko Tatewaki, Tadashi Fukawa, and Hirofusa Shirai
doi:10.1246/cl.2009.250
252  **A Facile Pathway to Synthesize One-dimensional Selenium (Se) with Controllable Morphology**

Zhiqiang Yang, Sreeram Cingarapu, and Kenneth J. Klabunde  
doi:10.1246/cl.2009.252

254  **Circularly Polarized Luminescence from Supramolecular Chiral Complexes of Achiral Conjugated Polymers and a Neutral Polysaccharide**

Shuichi Haraguchi, Munenori Numata, Chun Li, Yoko Nakano, Michiya Fujiki, and Seiji Shinkai  
doi:10.1246/cl.2009.254  
Electronic Supporting Information

256  **Pd/Graphite as a Superior Catalyst for the Direct Synthesis of Hydrogen Peroxide from H₂ and O₂**

Bizhong Hu, Qinghong Zhang, and Ye Wang  
doi:10.1246/cl.2009.256  
Electronic Supporting Information

258  **Fabrication of Hollow TiO₂ Fibers Templat ed by Electrospun Aqueous Poly(ethylene oxide) (PEO) Solution**

Shinsuke Nagamine, Yoshitaka Tanaka, and Masahiro Oshima  
doi:10.1246/cl.2009.258

260  **Preparation and Electrochemical Properties of Pt@C Nanocomposites**

Li Sun, Yongnan Zhao, Jianguo Yu, and Huiqi Wang  
Electronic Supporting Information
An Immobilized Lipase Microfluidic Reactor for Enantioselective Hydrolysis of Ester

Yan Gao, Runtao Zhong, Jianhua Qin, and Bingcheng Lin
doi:10.1246/cl.2009.262

Effects of Trehalose on the Swelling Behavior of Hydrogel —Visualization of the Preferential Hydration of Disaccharides—

Takao Furuki, Taichi Ito, Naoki Asakawa, Yoshio Inoue, and Minoru Sakurai
doi:10.1246/cl.2009.264

Stability of Chemically Modified Indium–Tin–Oxide Surfaces against Water

Masashi Hattori, Kosaku Suga, and Masamichi Fujihira
doi:10.1246/cl.2009.266

Depolymerization of Poly(ethylene terephthalate) to Terephthalic Acid and Ethylene Glycol in High-temperature Liquid Water

Osamu Sato, Eiichi Mine, Mitsumasa Osada, Norihito Hiyoshi, Aritomo Yamaguchi, Kyoko K. Bando, Yoshio Masuda, and Masayuki Shirai
doi:10.1246/cl.2009.268

Esulatin G, a Novel Nor-diterpenoid from Euphorbia esula

Yu-Bo Wang, Hong-Bing Wang, Ping Ji, Jie Guo, Hui-Zi Jin, and Guo-Wei Qin
doi:10.1246/cl.2009.270

Electronic Supporting Information
272 Synthesis and Photoinduced Cross-linking Reactions of 4,5,8-Trimethylpsoralen-incorporated Oligodeoxyribonucleotide

Akio Kobori, Kazutaka Takaya, Maiko Higuchi, Asako Yamayoshi, and Akira Murakami
doi:10.1246/cl.2009.272

274 Ordered Pillar Array Structures of TiO$_2$ by Nanoimprinting Using Anodic Porous Alumina as Molds

Takashi Yanagishita, Takehide Endo, Yukiyasu Yamaguchi, Kazuyuki Nishio, and Hideki Masuda
doi:10.1246/cl.2009.274

276 Gel-hydrothermal Preparation of Hollow CoFe$_2$O$_4$ Nanospheres and Their Properties

Lingyun Chen, Chenglan Zhao, and Junfeng Bai
doi:10.1246/cl.2009.276
Electronic Supporting Information

278 Speciation of Iron in Humic Substances by X-ray Absorption Fine Structure and Its Effect on the Complexation between Humic Substances and Trace Metal Ions

Yuhei Yamamoto, Yoshio Takahashi, and Hiroshi Shimizu
doi:10.1246/cl.2009.278
Electronic Supporting Information

280 Template-free Approach to Core–Shell-structured Co$_3$O$_4$ Microspheres

Xiangfeng Guan, Guangshe Li, Lihua Zhou, Liping Li, and Xiaoqing Qiu
doi:10.1246/cl.2009.280
Electronic Supporting Information
282 Rumphellolide I, a Novel Caryophyllane-related Tetrahydropyran Norsesquiterpenoid from Gorgonian Coral *Rumphella antipathies*

Ping-Jyun Sung, Yin-Di Su, Tsong-Long Hwang, Li-Fan Chuang, Hsu-Ming Chung, Jih-Jung Chen, Jan-Jung Li, Lee-Shing Fang, and Wei-Hsien Wang  
doi:10.1246/cl.2009.282

284 Direct Conversion of Ethane to Ethylene Oxide over Ni–Ag–O Catalyst

Ethylene oxide was directly synthesized by oxidation of ethane over Ni–Ag–O catalyst.

Ying Wu, Binfu Wu, Yiming He, and Tinghua Wu  
doi:10.1246/cl.2009.284

286 Synthesis and Characterization of 2,3,7,8,12,13-Hexabromotruxene and Its Hexaaryl Derivatives

Wen-Yong Lai, Qi-Yuan He, Zhun Ma, and Wei Huang  
doi:10.1246/cl.2009.286  
Electronic Supporting Information

288 Controllable Fabrication of Multibranched TiO$_2$ Nanotubes via a Two-step Anodization Method

Multi-branched TiO$_2$ nanotubes have been controllably fabricated.

Zhen Jin, Guang Tao Fei, Xiao Ye Hu, Shao Hui Xu, and Li De Zhang  
doi:10.1246/cl.2009.288  
Electronic Supporting Information

290 Removal of Perchlorate Anion from an Aqueous Solution by Encapsulation in an Anion-templated Self-assembled Molecular Capsule

Takeshi Hirakawa, Maiko Yamaguchi, Naoto Ito, Makoto Miyazawa, Naoko Nishina, Mitsuru Kondo, Ryuji Ikeya, Sachiko Yasue, Kenji Maeda, and Fumio Uchida  
doi:10.1246/cl.2009.290  
Electronic Supporting Information
292  Sensitive Detection of Hydroxyl Radical Production in Ultrasonic Field with an Electrochemiluminescence Optical Sensor

Jiye Jin, Hiroaki Kumeta, Fumiki Takahashi, and Yoshiyuki Asakura
doi:10.1246/cl.2009.292
Electronic Supporting Information

294  Crystal Structure and FET Characteristics of an n-Type Thiophene/Phenylene Co-oligomer of 1,4-Bis[5-[4-(trifluoromethyl)phenyl]thiophen-2-yl]benzene

Shu Hotta, Yasuhiro Shimizu, Takeshi Yamao, Midori Goto, and Reiko Azumi
doi:10.1246/cl.2009.294
Electronic Supporting Information

296  Catalytic Use of Strontium Hexamethyldisilazide in the Asymmetric Michael Addition of Malonate to Chalcone Derivatives

Shū Kobayashi, Miyuki Yamaguchi, Magno Agostinho, and Uwe Schneider
doi:10.1246/cl.2009.296

298  Photoluminescence Wavelength Control of Fluorene Derivatives through H-bonding and Protonation

Nobuhiko Kawatsuki, Yuta Minami, and Joenghwan Lee
doi:10.1246/cl.2009.298
Electronic Supporting Information