

Chemistry Letters

<http://www.csj.jp/journals/chem-lett/>

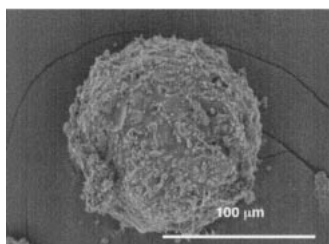
Vol.32 No.9
September, 2003

CMLTAG
ISSN 0366-7022

Copyright © 2003 The Chemical Society of Japan

- 784 Surfactant-free Preparation of Poly(lactic acid)/Hydroxyapatite Microspheres

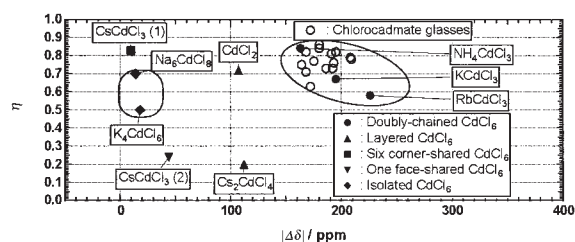
Fukue Nagata, Tatsuya Miyajima, and Yoshiyuki Yokogawa



A novel method to form surfactant-free PLA/HAP microspheres was proposed using interfacial interaction between inorganic-organic materials.

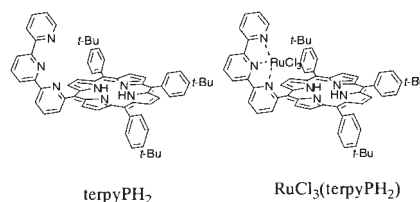
- 786 ^{113}Cd MAS and Static NMR Study of Chlorocadmate Glasses

Shinichi Sakida, Hironobu Nakata, and Yoji Kawamoto



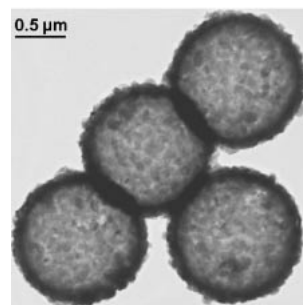
- 788 Novel Intramolecular Electron-transfer Equilibrium in a Spatially Interaction Binary System of a Metal-free Porphyrin and a Ruthenium Trichloro Terpyridyl Complex

Katsuya Mizuno, Masato Kurihara, Shigeru Takagi, and Hiroshi Nishihara



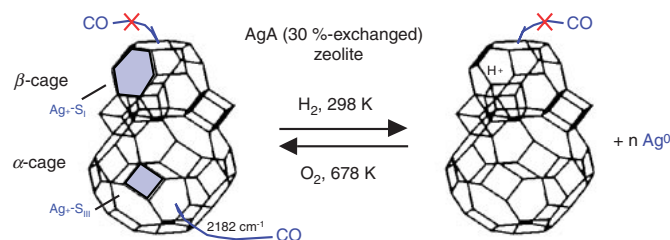
- 790 Hydrothermal Conversion of Solid Silica Beads to Hollow Silicalite-1 Sphere

Angang Dong, Yajun Wang, Yi Tang, Deju Wang, Nan Ren, Yahong Zhang, and Zi Gao



- 792 **Probing the Locations of Ag^+ and Hydroxy Groups in AgA Zeolites by in situ FTIR Spectroscopy**

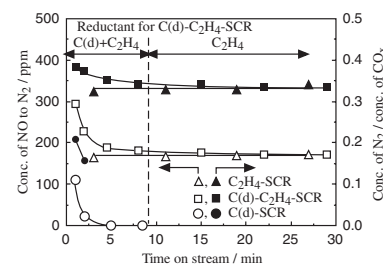
Ping Wang, Shuwu Yang, Junko N. Kondo, Kazunari Domen, and Toshihide Baba



- 794 **Carbonaceous Deposit as a Preferential Reductant in the Reduction of NO with C_2H_4 in Excess Oxygen over Alumina**

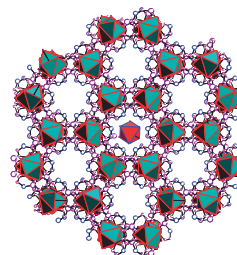
Ryuta Fujii, Sayaka Kitagawa, Kou Takahashi, Noriyasu Okazaki, and Akio Tada

Carbonaceous deposit (C(d)) which was formed on alumina by C_2H_4 pyrolysis at 550 °C reacted selectively and preferentially with a mixture of NO and O_2 in the presence of C_2H_4 , suggesting that the C(d) acts as an effective intermediate during the selective reduction of NO with C_2H_4 too.



- 796 **$\{[\text{In}_3(\text{pzdc})_6]^{3-}\}_\infty$: A Metal–Organic Framework of Distorted NbO-like Net (pzdc = Pyrazine-2,3-dicarboxylato)**

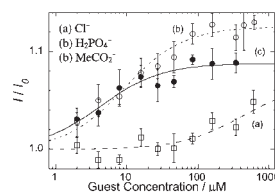
Yun-Qi Tian, Chen-Xin Cai, Xue-Jun Yuan, Yi-Zhi Li, Tian-Wei Wang, and Xiao-Zeng You



- 798 **Anion Recognition at the Solid/Liquid Interface as Studied by Second Harmonic Generation Spectroscopy**

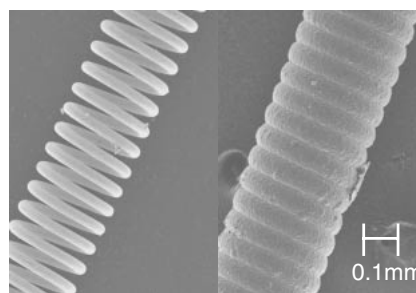
Akira Yamaguchi, Ryo Kato, Seiichi Nishizawa, and Norio Teramae

A self-assembled monolayer of thiourea-based anion receptor was formed at a gold surface, and its surface specific binding selectivity for monovalent inorganic anions was revealed by second harmonic generation spectroscopy.



- 800 **Polypyrrole–metal Coil Composites as Fibrous Artificial Muscles**

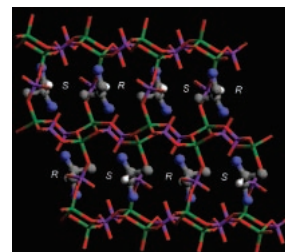
Susumu Hara, Tetsuji Zama, Shingo Sewa, Wataru Takashima, and Keiichi Kaneto



802 **Solution-mediated Synthesis of a Three-dimensional Zincophosphate in the Presence of Racemic 1,2-Diaminopropane**

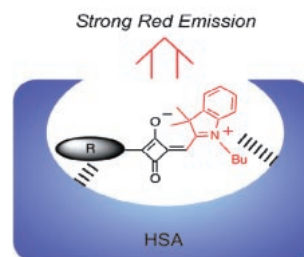
Yan Xing, Yunling Liu, Guanghua Li, Zhan Shi, Li Liu, He Meng, and Wenqin Pang

By using racemic 1,2-diaminopropane, a three-dimensional zincophosphate has been solvothermally synthesized. Its distinctive feature is the enantiomers of organic amine being separated as *R* and *S* configuration in alternating 8-membered channels.



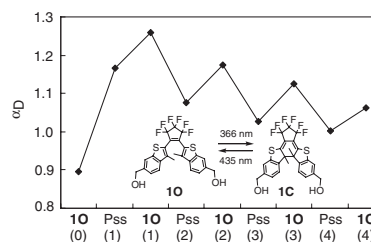
804 **Red Luminescent Squarylium Dyes for Non-covalent HSA Labeling**

Hiroyuki Nakazumi, Chista L. Colyer, Koji Kaihara, Shigeyuki Yagi, and Yutaka Hyodo



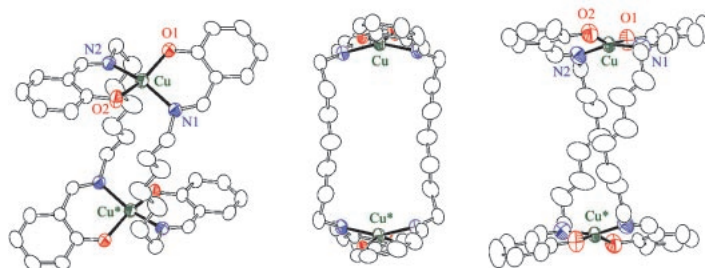
806 **Reversible Change in Optical Rotation by Photochromism of Diarylethenes in the Stretched DNA-Quaternary Ammonium Ion Complex Films**

Masako Saito, Yayoi Yokoyama, and Yasushi Yokoyama



808 **Structure of Cofacial Cyclic Dimer with Schiff Base Ligands**

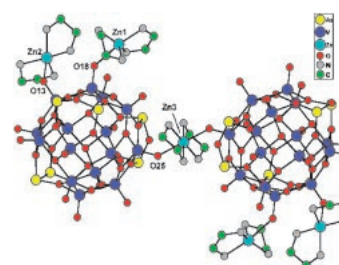
Satoshi Yamashita, Masayuki Nihei, and Hiroki Oshio



810 **[{Zn(en)}₂As₆V₁₅O₄₂(H₂O)₂]{Zn(en)}₂·2-Hen·3H₂O. The First Dimeric Arsenic-Vanadium Cluster Linked by Zn(en)₂ Complex Bridge**

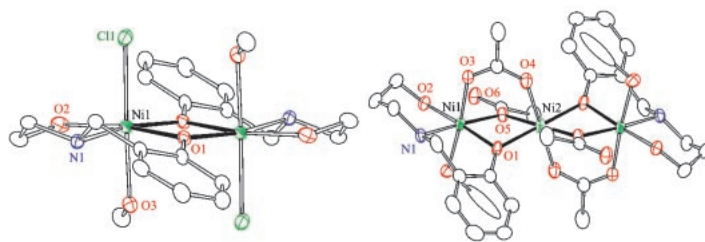
Shou-Tian Zheng, Jie Zhang, and Guo-Yu Yang

The polyanion complex [{Zn(en)}₂As₆V₁₅O₄₂(H₂O)₂]{Zn(en)}₂·2Hen·3H₂O has been hydrothermally synthesized and characterized. X-ray crystallographic study showed that the compound is the first dimeric arsenic-vanadium cluster, containing two {As₆V₁₅O₄₂(H₂O)} units supported by two transition metal complex groups and further linked through one complex bridge.



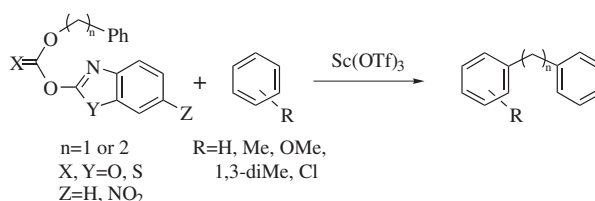
- 812 **Structures and Magnetic Properties of Di- and Trinuclear Nickel(II) Complexes with Phenoxo and Acetato Bridges**

Satoshi Koizumi, Masayuki Nihei, and Hiroki Oshio



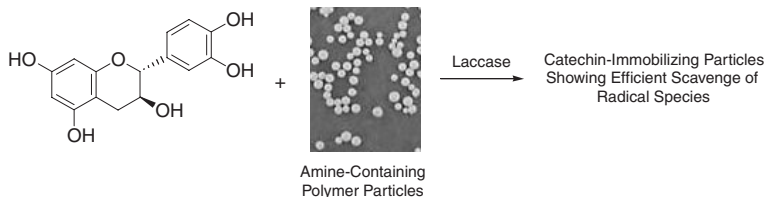
- 814 **Friedel–Crafts Benzylation and Phenethylation Reactions Using Benzyl and Phenethyl Benzothiazol-2-yl Carbonate Derivatives**

Teruaki Mukaiyama, Hiroaki Kamiyama, and Hiroyuki Yamanaka



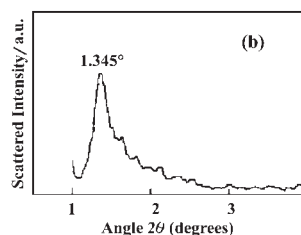
- 816 **Antioxidant Polymer Particles. Enzymatic Immobilization of Catechin on Polymer Particles**

Noriko Ihara, Yoichi Tachibana, Joo Eun Chung, Motoichi Kurisawa, Hiroshi Uyama, and Shiro Kobayashi



- 818 **Composite Nano-structured Materials Consisting of CdS Clusters and Heteropolyanions $PW_{12}O_{40}^{3-}$**

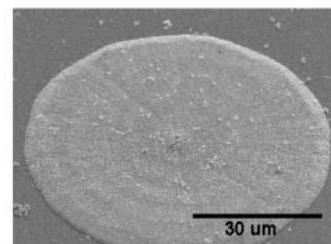
Degang Fu and Yu Zhang



- 820 **Formation of Silicate-mediated $CaCO_3$ Films**

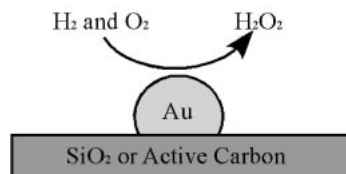
Akiko Kotachi, Takashi Miura, and Hiroaki Imai

The presence of silicate anions miniaturized the crystal grains of $CaCO_3$ and mediated a film formation through a two-dimensional arrangement of the growth subunits on the specific surface as a mortar component.



- 822 **Direct Production of Hydrogen Peroxide from H_2 and O_2 over Highly Dispersed Au catalysts**

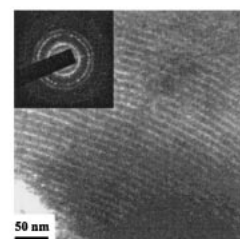
Mitsutaka Okumura, Yasutaka Kitagawa, Kizashi Yamaguchi, Tomoki Akita, Susumu Tsubota, and Masatake Haruta



- 824 **Ordered Nanowire Arrays of Metal Sulfides Templated by Mesoporous Silica SBA-15 via a Simple Impregnation Reaction**

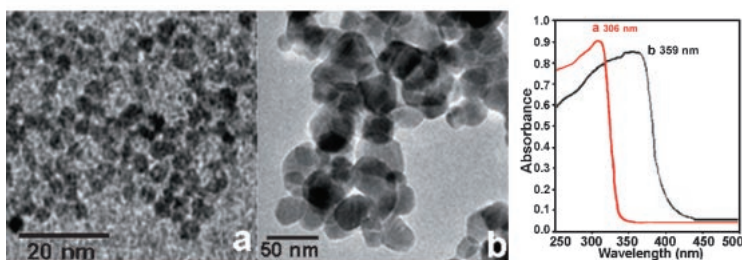
Xiaoying Liu, Bozhi Tian, Chengzhong Yu, Bo Tu, Zheng Liu, Osamu Terasaki, and Dongyuan Zhao

Well-patterned crystalline nanowire arrays of binary compound metal sulfides, CdS, ZnS and In_2S_3 , were synthesized by a simple impregnation reaction procedure from two separate precursors (metal and sulfur precursors) using mesoporous SBA-15 as a hard template.



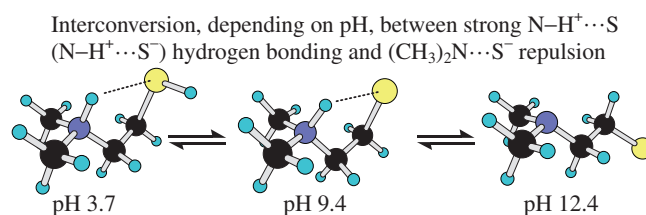
- 826 **Salt-assisted Solid-state Chemical Reaction. Synthesis of ZnO Nanocrystals**

Liming Shen, Luchun Guo, Ningzhong Bao, and Kazumichi Yanagisawa

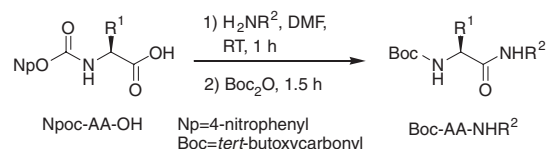


- 828 **Protonation-induced Conformational Changes of 2-(*N,N*-Dimethylamino)ethanethiol. Importance of Strong $N-H^+ \cdots S$ and $N-H \cdots S^-$ Hydrogen Bonding**

Keiichi Ohno, Shingo Matsumoto, Misako Aida, and Hiroatsu Matsuura

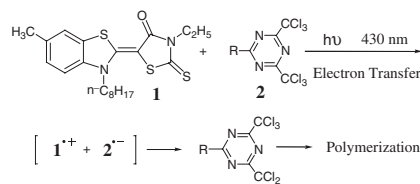


- 830 **Condensation of α -Amino Acid with Amine in the Absence of a Coupling Agent**



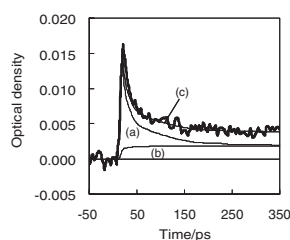
Jun-ichi Yamaguchi, Shinya Nagai, Emi Fukuoka, and Takayuki Suyama

- 832 **Mechanistic Studies of the Photo-decomposition of Substituted Bis(trichloromethyl)-1,3,5-triazine Sensitized by Merocyanine Dye**



Koichi Kawamura

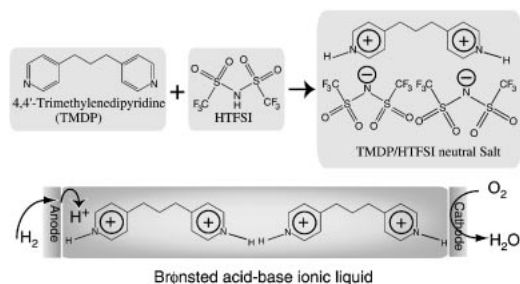
- 834 **Subpicosecond Pulse Radiolysis Study of Geminate Ion Recombination in Liquid Benzene**



Kinetic traces observed in the subpicosecond pulse radiolysis (bold line) and kinetic trace of the theoretical at 790 nm (solid line) in neat benzene. Curve (a) represents time dependent behavior of benzene dimer radical cation and (b) represents that of benzene excimer. Curve (c) is the sum of (a) and (b). Theoretical curves are convoluted by the instrumental function.

Kazumasa Okamoto, Akinori Saeiki, Takahiro Kozawa, Yoichi Yoshida, and Seiichi Tagawa

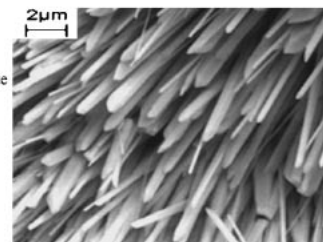
- 836 **A Novel Brønsted Acid-base System as Anhydrous Proton Conductors for Fuel Cell Electrolytes**



Md. A. B. H. Susan, Migyung Yoo, Hirofumi Nakamoto, and Masayoshi Watanabe

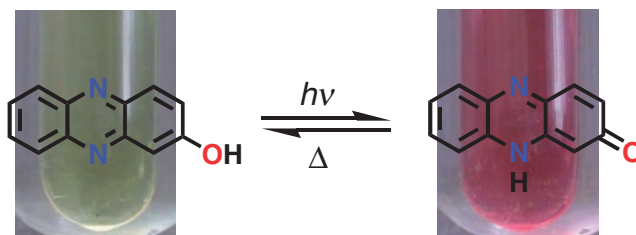
- 838 **Well-aligned ZnO Whiskers Prepared by Catalyst-assisted Flux Method**

Well-aligned ZnO whiskers was prepared on silicon substrate by a catalyst-assisted flux method using ZnS powders as starting materials at a temperature of 860 °C

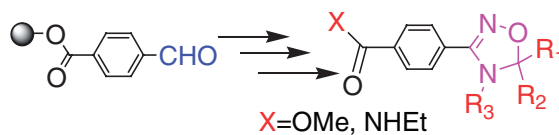


Xianghua Kong and Yadong Li

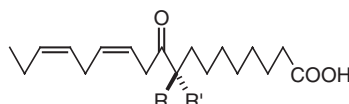
- 840 **Photochromism of Aza-aromatics with Hydroxy Group. Intermolecular Proton Transfer in Glassy Solution**



Keiichiro Ogawa, Masatoshi Miura, Toshio Nakayama, and Jun Harada

842 **Rapid One-pot Solid-phase Synthesis of 1,2,4-Oxadiazolines**

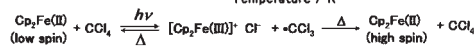
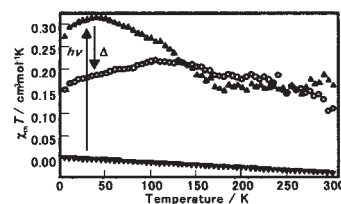
Xu-Feng Lin, Sun-Liang Cui, and Yan-Guang Wang

844 **Total Synthesis of α -Ketol Derivative of Linolenic Acid (KODA), a Flower-inducing Factor in *Lemna paucicostata***

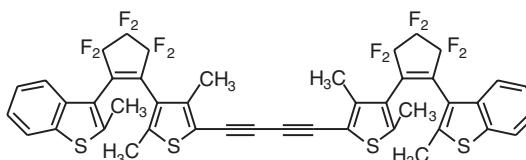
9R-KODA (**1a**) : R=OH, R'=H
9S-KODA (**1b**) : R=H, R'=OH

Both synthetic (\pm)- and 9R-KODA showed remarkable flower-inducing activity in *Pharbitis nil*.

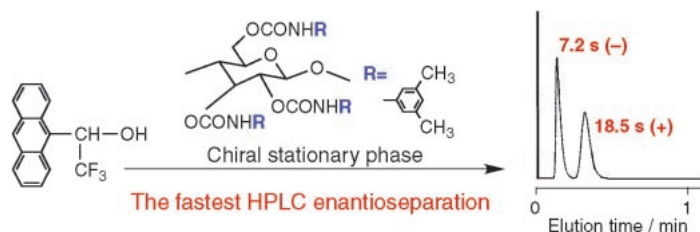
Yoshihiro Yokokawa, Kouji Kobayashi, Mineyuki Yokoyama, and Shosuke Yamamura

846 **^{57}Fe Mössbauer Study on Photoinduced Spin Transition of Ferrocene in Polymer Matrices**

Yasuaki Einaga, Masahiro Kotake, Yasuhiro Yamada, and Osamu Sato

848 **Photochromic and Fluorescent Properties of a Diarylethene Dimer**

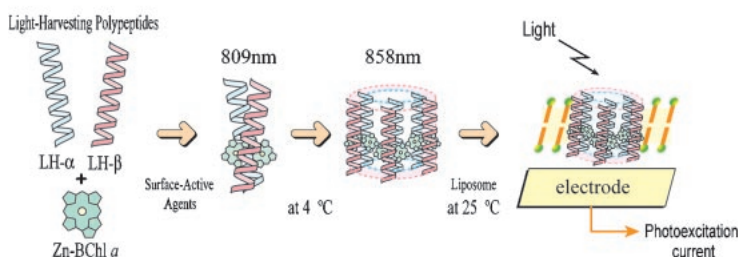
Kyoko Yagi and Masahiro Irie

850 **Very Fast Enantioseparation in High-performance Liquid Chromatography Using Cellulose Tris(3,5-dimethylphenylcarbamate) Coated on Monolithic Silica Support**

Bezhan Chankvetadze, Chiyo Yamamoto, and Yoshio Okamoto

852 **Construction and Photocurrent of Light-harvesting Polypeptides/Zinc Bacteriochlorophyll α Complex in Lipid Bilayers**

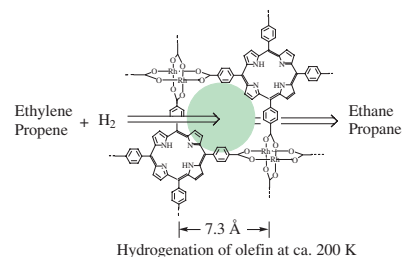
Morio Nagata, Yoshimi Yoshimura, Junichi Inagaki, Yoshiharu Suemori, Kouji Iida, Toshiaki Ohtsuka, and Mamoru Nango



854 **Microporous Rhodium(II) 4,4',4'',4'''-(21*H*,23*H*-porphine-5,10,15,20-tetrayl)tetrakisbenzoate. Synthesis, Nitrogen Adsorption Properties, and Catalytic Performance for Hydrogenation of Olefin**

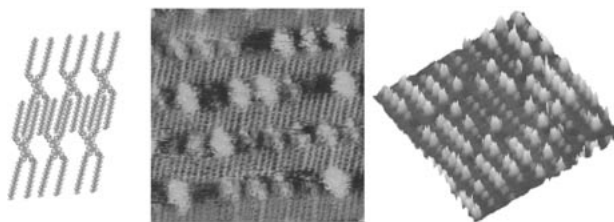
Tomohiko Sato, Wasuke Mori, Chika Nozaki Kato, Tetsushi Ohmura, Tsubasa Sato, Kayoko Yokoyama, Satoshi Takamizawa, and Shuichi Naito

A novel dinuclear rhodium(II) coordination polymer with porphyrin-containing carboxylate [$\text{Rh}_2(\text{H}_2\text{TCPP})$] exhibited high nitrogen adsorption property and high catalytic activities for hydrogenation of ethylene and propene at ca. 200 K.



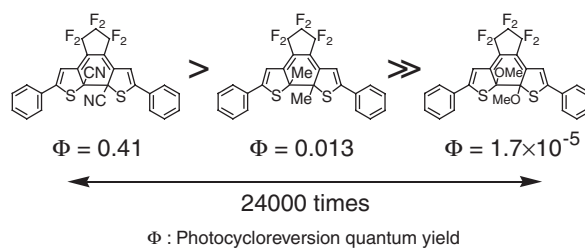
856 **Stacking Phenomenon of Self-assembled Monolayers and Bilayers of Thioalkyl-substituted Tetrathiafulvalene**

Jun Lu, Qing-dao Zeng, Chen Wang, Li-jun Wan, and Chun-li Bai



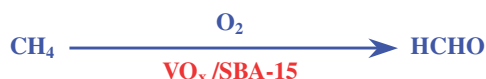
858 **Efficient Photocycloreversion Reaction of Diarylethenes by Introduction of Cyano Substituents to the Reactive Carbons**

Kentaro Morimitsu, Seiya Kobatake, Shinichiro Nakamura, and Masahiro Irie



860 **Excellent Catalytic Performances of SBA-15-supported Vanadium Oxide for Partial Oxidation of Methane to Formaldehyde**

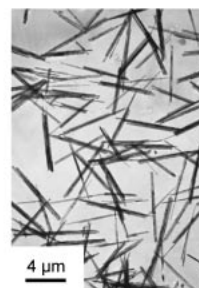
Baomin Lin, Xiaoxing Wang, Qian Guo, Wei Yang, Qinghong Zhang, and Ye Wang



Monomeric vanadyl species highly dispersed in the mesoporous channels of SBA-15 exhibit a space-time yield of formaldehyde as high as $93 \text{ mol kg}_{\text{cat}}^{-1} \text{ h}^{-1}$ with a formaldehyde selectivity of 94%, significantly higher than those reported so far.

862 **Large-scale Synthesis of Luminescent $\text{Y}_2\text{O}_3:\text{Eu}$ Nanobelts**

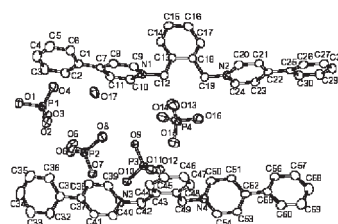
A two-step method was developed for the large-scale synthesis of the luminescent $\text{Y}_2\text{O}_3:\text{Eu}$ nanobelts, and the as-prepared products have uniform appearance and special luminescent performance.



Yu He, Ye Tian, and Yongfa Zhu

864 **1,2-Bis[(4-phenylpyridinio)methyl]benzene Dication. Its Unprecedented Selective Complexation with H_2PO_4^-**

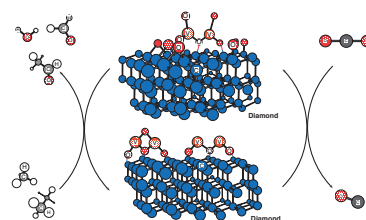
1,2-Bis[(4-phenylpyridinio)methyl]benzene dichloride selectively produced the strong complex with H_2PO_4^- .



Hideyuki Gono and Seizo Tamagaki

866 **Novel Selective Oxidation of Light Alkanes Using Carbon Dioxide. Oxidized Diamond as a Novel Catalytic Medium**

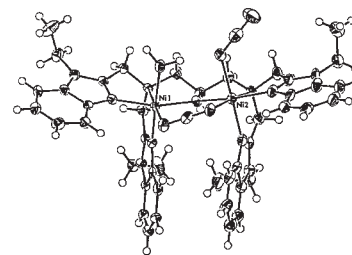
A novel selective oxidation of light alkanes using CO_2 as an oxidant over oxidized diamond-supported catalysts was developed. The oxidation capability of CO_2 to the selective oxidation of light alkanes to oxygenates were proposed.



Kiyoharu Nakagawa, Kimito Okumura, Takahiro Shimamura, Na-oki Ikenaga, Toshimitsu Suzuki, Tetsuhiko Kobayashi, Mikka Nishitani-Gamo, and Toshihiro Ando

868 **A Strongly Antiferromagnetically Coupled Dinuclear Nickel(II) Center Bridged by One Azido and One Alkoxo**

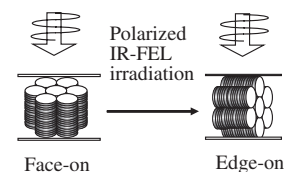
A strongly antiferromagnetically coupled dinuclear nickel(II) complex bridged by an azido and an alkoxo was synthesized.



Mie Fujii, Shoko Goto, Yasuo Nakao, Motoo Shiro, Tomohiko Sato, and Wasuke Mori

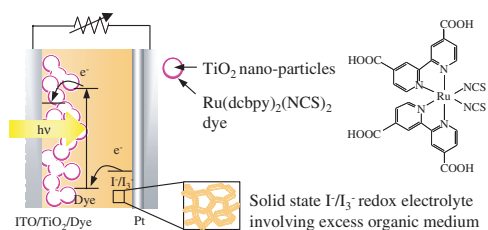
870 **Anisotropic Alignment Change of Columnar Liquid Crystal by Polarized Infrared Irradiation**

Infrared photoinduced alignment change of liquid crystal domains was investigated and a uniform and anisotropic change of domains was observed. The relation between the polarizing direction of the incident infrared light and the azimuthal direction of the columnar axis is parallel.



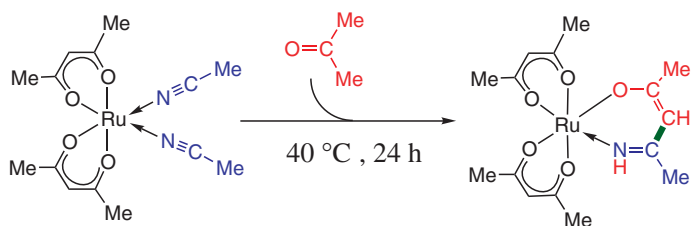
Hirosato Monobe, Kenji Kiyohara, Naohiro Terawasa, Manabu Heya, Kunia Awazu, and Yo Shimizu

872 **Dye-sensitized Solar Cell with Polysaccharide Solid Electrolyte**



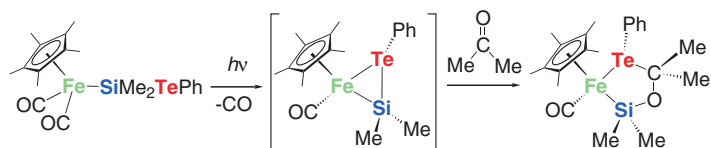
Masao Kaneko and Takayuki Hoshi

874 **Reaction of Acetone on Coordinated Nitrile in β -Diketonato Ruthenium Complex, $[\text{Ru}(\text{acac})_2(\text{CH}_3\text{CN})_2]$ with the formation of β -Ketiminato**



Takeshi Hashimoto, Shuhei Hara, Yumi Shiraishi, Karuppanan Natarajan, and Kunio Shimizu

876 **Photochemistry of a Tellurosilyl(carbonyl)-iron(II) Complex. Generation of a Novel Te-Si-Fe Three-membered Cyclic Intermediate**



Hiroshi Okada, Masaaki Okazaki, Hiromi Tobita, and Hiroshi Ogino