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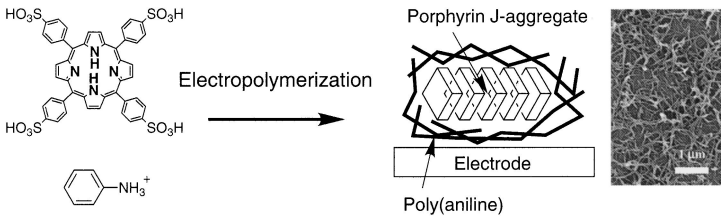
ISSN 0366-7022

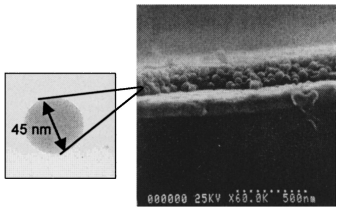
314 **New Morphology-controlled Poly(aniline) Synthesis Using Anionic Porphyrin Aggregate as a Template**

Tsukasa Hatano, Masayuki Takeuchi, Atsushi Ikeda, and Seiji Shinkai



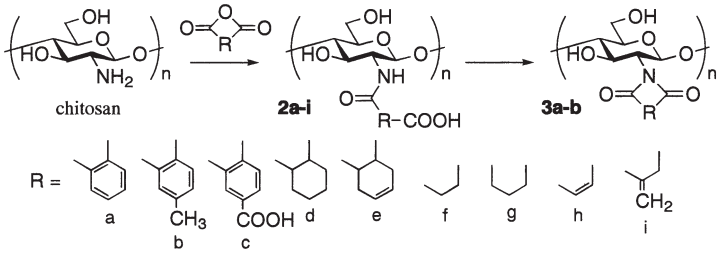
316 **Temperature Effect on Layer-by-Layer Self-assembly of Linear Polyions and Silica Multilayers**

Jingshi Shi, Feng Hua, Tianhong Cui, and Yuri M. Lvov



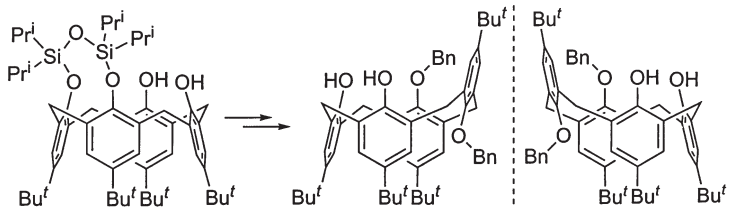
318 **Preparation and Thermal Dehydration of *N*-(Carboxy)acyl Chitosan Derivatives with High Stereoregularity**

Taku Satoh, Leonid Vladimirov, Masayoshi Johmen, and Nobuo Sakairi

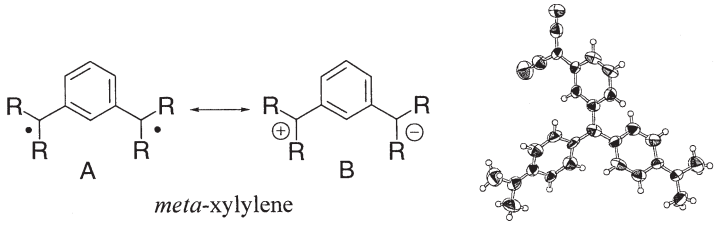


320 **Synthesis and Optical Resolution of an *anti*-*O*,*O*′-Dialkylated Calix[4]arene**

Fumitaka Narumi, Waka Yamabuki, Tetsutaro Hattori, Hiroshi Kameyama, and Sotaro Miyano

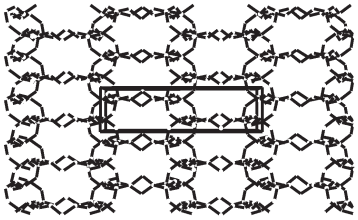


322 **7,7-Dicyano-8,8-bis[4-(*N*,*N*-dimethylamino)-phenyl]-*meta*-xylylenes: The First Stable Zwitterionic Metaxylylene Derivatives**



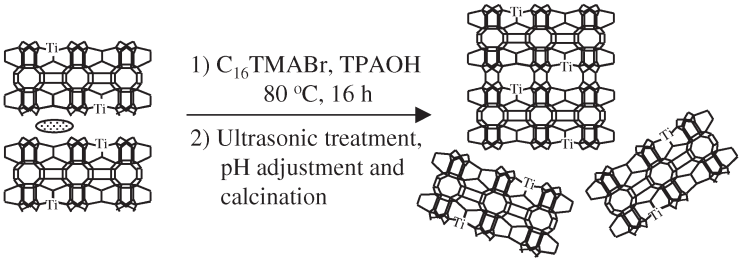
Takeshi Kawase, Tohru Iwata, and Masaji Oda

324 **An Open-framework Zincophosphate with Intersecting Channels**



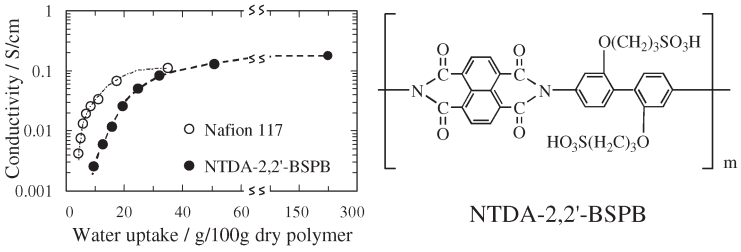
Yongnan Zhao, Jung-Ho Son, and Young-Uk Kwon

326 **Highly Active Delaminated Ti-MWW for Epoxidation of Bulky Cycloalkenes with Hydrogen Peroxide**



Duangamol Nuntasri, Peng Wu, and Takashi Tatsumi

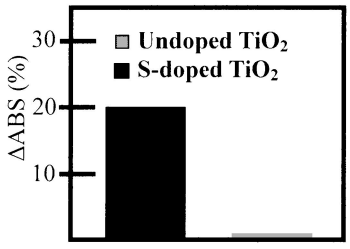
328 **Novel Sulfoalkoxylated Polyimide Membrane for Polymer Electrolyte Fuel Cells**



Yan Yin, Jianhua Fang, Hidetoshi Kita, and Ken-ichi Okamoto

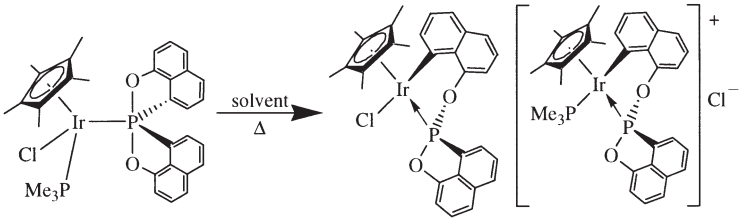
330 **Visible Light-Induced Degradation of Methylene Blue on S-doped TiO_2**

S-doped TiO_2 showed large photodegradation of methylene blue in the visible region (420-500 nm).



Tsutomu Umebayashi, Tetsuya Yamaki, Sigeru Tanaka, and Keisuke Asai

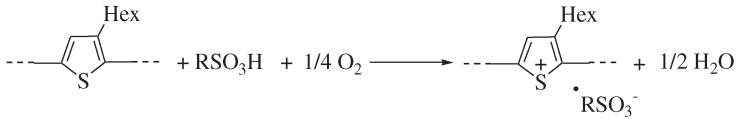
332 **Diastereoselective Formation of Metallaphosphacyclo Iridium(III) Complexes from Phosphoranido Iridium(III) Complex**



Kazumasa Kajiyama, Atsushi Nakamoto, Shunsuke Miyazawa, and Takeshi Ken Miyamoto

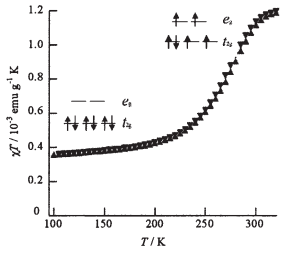
334 **p-Doping of Poly(3-hexylthiophene-2,5-diyl) with Sulfonic Acids and Oxygen Related to Self-doping of Sulfonated Polythiophenes**

p-Doping of poly(3-hexylthiophene) with sulfonic acid proceeds by oxidation with oxygen. The following equation is proposed.



Takakazu Yamamoto

336 **Spin Crossover Complex Film, $[Fe^{II}(H\text{-}trz)_3]$-Nafion, with a Spin Transition around Room Temperature**

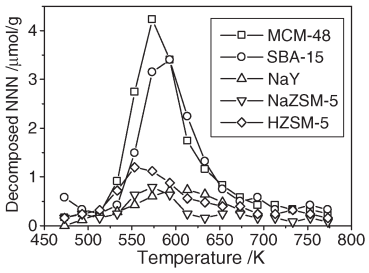


The spin transition in $[Fe^{II}(H\text{-}trz)_3]$–Nafion takes place around room temperature. The color changes from transparent to purple with decreasing temperature.

Akio Nakamoto, Yuuki Ono, Norimichi Kojima, Daiju Matsumura, and Toshihiko Yokoyama

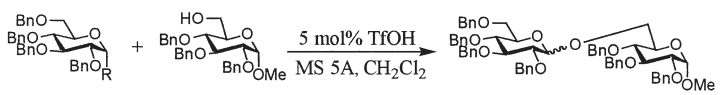
338 **Ordered Mesoporous Materials. Novel Catalyst for Degradation of *N′*-Nitrosonornicotine**

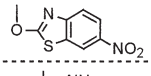
SBA-15 and MCM-48 show a much higher catalytic activity than zeolites for degradation of NNN



Jian Hua Zhu, Shi-Lu Zhou, Yang Xu, Yi Cao, and Yi-Lun Wei

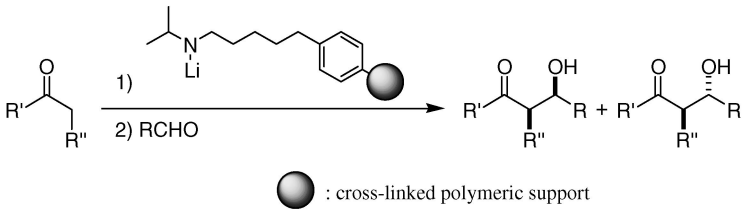
340 **Glycosyl 6-Nitro-2-benzothiazoate. A Highly Efficient Donor for β-Stereoselective Glycosylation**



Entry	Donor (R)	Temp. / °C	Yield /% (α/β)	
1		0	**97 (31/69)**	**Higher β-selectivities**
2		−78	**91 (4/96)**	
3		0	99 (56/44)	
4		−78	98 (8/92)	

Teruaki Mukaiyama, Takashi Hashihayata, and Hiroki Mandai

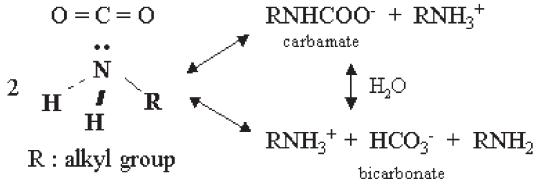
342 **Crossed Aldol Reaction Using Polymer-bound Lithium Amides**



Atsushi Seki, Youichi Takizawa, Fusae Ishiwata, and Masatoshi Asami

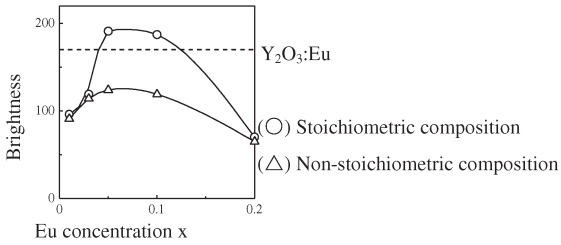
344 **Substituent Effect in Amine-CO_2 Interaction Investigated by NMR and IR Spectroscopies**

Different substituents in amine structure change donor property and CO_2-amine interaction mechanism



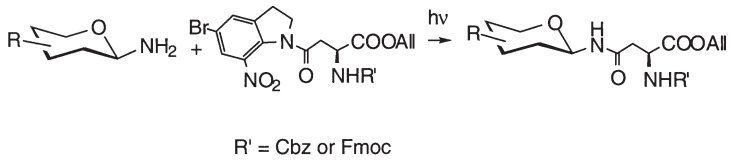
Sang Jun Yoon and Huen Lee

346 **New VUV Phosphor, $NaLnGeO_4:Eu^{3+}$ (Ln = Rare Earth)**



Kenji Toda, Yu-ichiro Imanari, Takashi Nonogawa, Kazuyoshi Uematsu, and Mineo Sato

348 **Phototransamidation as a Method for the Synthesis of *N*-Glycosyl Asparagines**

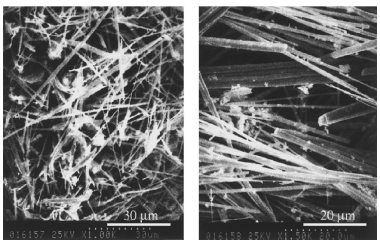


Kristóf Vízvárdi, Christian Kreutz, Alexander S. Davis, Vincent P. Lee, Benjamin J. Philmus, Ondrej Simo, and Katja Michael

350 **A Mild Solution Route to Bismuth Seleno-iodide Rod-like Crystals**

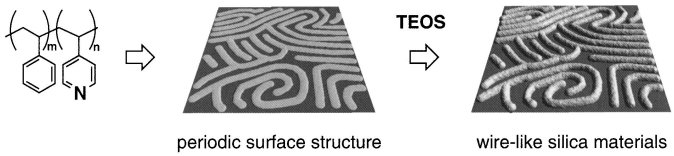
$Bi_2Se_3 + BiI_3 \rightarrow BiSeI$

$BiCl_3 + Se + NaI \rightarrow BiSeI$



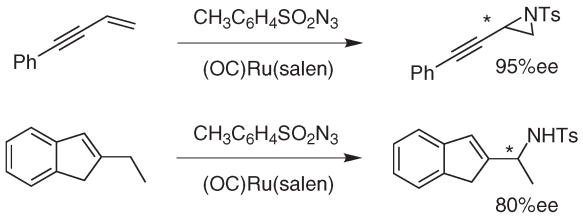
Liying Zhu, Xiuwen Zheng, Xing Yin, Xiang Liu, Yunbo Jia, and Yi Xie

352 **Thin Silica Film with a Network Structure as Prepared by Surface Sol-Gel Transcription on the Poly(styrene-*b*-4-vinylpyridine) Polymer Film**



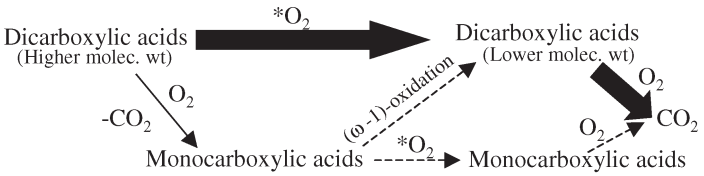
Norifumi Fujita, Hideyuki Otsuka, Atsushi Takahara, and Seiji Shinkai

354 **Enantioselective Aziridination and Amination Using *p*-Toluenesulfonyl Azide in the Presence of Ru(salen)(CO) Complex**



Kazufumi Omura, Masakazu Murakami, Tatsuya Uchida, Ryo Irie, and Tsutomu Katsuki

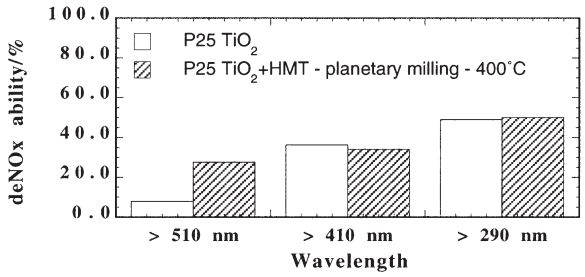
356 **Oxidation of Dicarboxylic Acids in Supercritical Water**



*Consecutive oxidation of higher to lower molecular weight carboxylic acids through α, β and γ-oxidations.
Solid line: this work, Broken line: previous

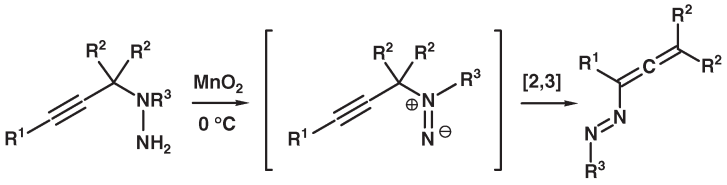
Fangming Jin, Jianxun Cao, Heiji Enomoto, and Takehiko Moriya

358 **Preparation of Visible Light-Activated Titania Photocatalyst by Mechanochemical Method**



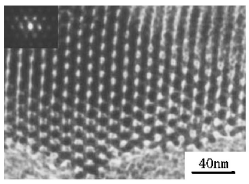
Shu Yin, Qiwu Zhang, Fumio Saito, and Tsugio Sato

360 **Synthesis and Reactions of the First Allenyl Azo Compounds**



Klaus Banert, Manfred Hagedorn, and Jana Schlott

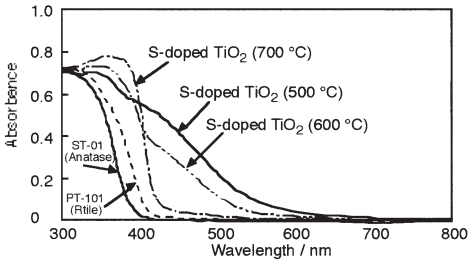
362 **Synthesis of Highly Ordered Mesoporous Silicon Oxynitride with High Nitrogen Content**



Mesoporous silicon oxynitride materials, which were highly ordered and had high nitrogen content (24.3 wt%), were prepared.

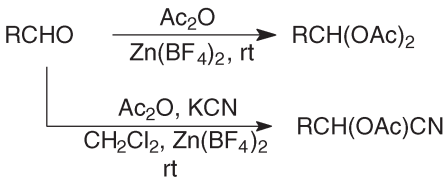
Keshu Wan, Qian Liu, and Cunman Zhang

364 **Photocatalytic Activity of S-doped TiO_2 Photocatalyst under Visible Light**



Teruhisa Ohno, Takahiro Mitsui, and Michio Matsumura

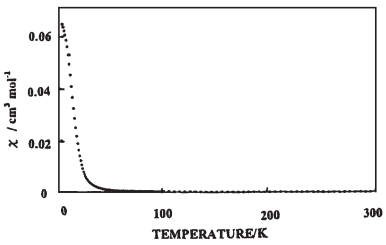
366 **Zinc Tetrafluoroborate-Catalyzed Efficient Conversion of Aldehydes to Geminal Diacetates and Cyanoacetates**



Brindaban C. Ranu, Jyotirmoy Dutta, and Arijit Das

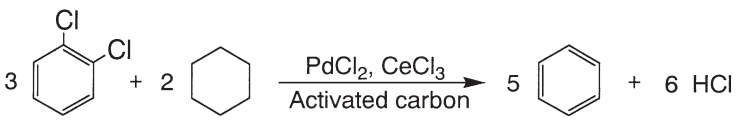
368 **Anomalous Temperature Dependence of the Magnetic Susceptibility of a Ni(II) Cyclam Complex with Iodide**

Magnetic susceptibility of a Ni(II) cyclam complex with iodide exhibited paramagnetism of a high spin state below ca. 50 K, which implies an unusual spin crossover phenomenon.



Jun Yamauchi, Hideyuki Tsuji, Naoko Sakai, and Yoshiko Kawamura

370 **Dechlorination of *o*-Dichlorobenzene with Various Hydrogen Donors**

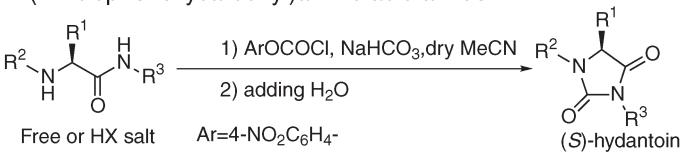


Kensei Yasuda and Kiyonori Shinoda

372 **A Facile Method for Preparation of Optically Active Hydantoin**

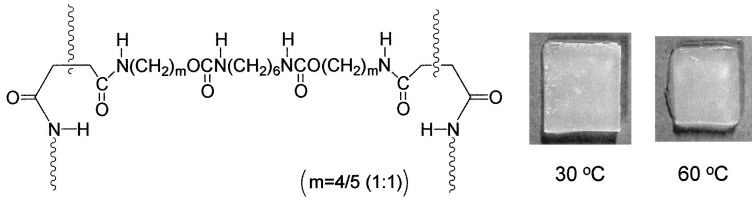
Jun-ichi Yamaguchi, Masakazu Harada, Takahito Kondo, Takeshi Noda, and Takayuki Suyama

Optically active (*S*)-hydantoin was obtained by reaction of amino acid amide with 4-nitrophenyl chloroformate *via* formation of *N*-(4-nitrophenoxycarbonyl)amino acid amide.



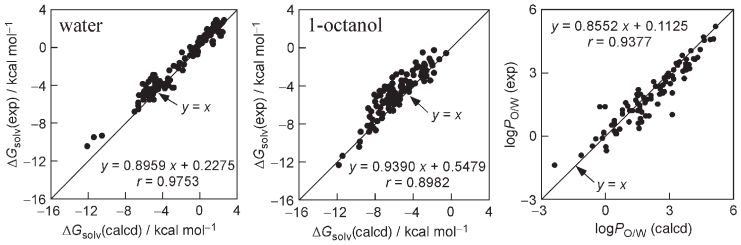
374 **Thermoresponsive Hydrogels Based on Biodegradable Poly(amino acid)s**

Yoichi Tachibana, Motoichi Kurisawa, Hiroshi Uyama, Toyoji Kakuchi, and Shiro Kobayashi



376 **Poisson–Boltzmann Continuum Solvation Models for Nonaqueous Solvents I. 1-Octanol**

Insook Park, Yun Hee Jang, Sungu Hwang, and Doo Soo Chung



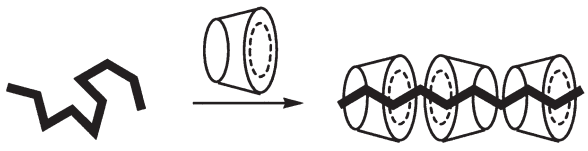
378 **Hydroformylation of 1-Hexene over Rhodium Supported on Active Carbon Catalyst**

Baitao Li, Xiaohong Li, Kenji Asami, and Kaoru Fujimoto

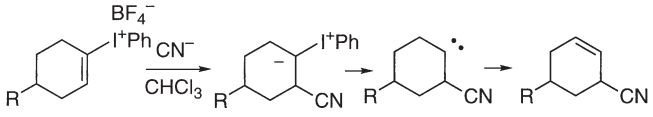
A novel low pressure process of solid catalyzed hydroformylation was developed over low loading rhodium supported on active carbon catalyst. At lower reaction pressure of 3.0 MPa, the presence of non-polar solvent promoted the formation of C7-aldehyde.

380 **Regulation of Main-Chain Conformation of Permethyldecasilane by Complexation with γ-Cyclodextrin**

Kenkichi Sakamoto, Takehiko Naruoka, and Mitsuo Kira



382 **Michael Addition of Cyanide to Cyclohex-1-enyliodonium Salts**



Morifumi Fujita, Wan Hyeok Kim, and Tadashi Okuyama

384 **Water in Supercritical CO_2 Microemulsion Formation by Fluorinated Surfactants**

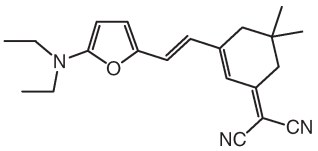
The ability for microemulsion formation of fluorinated surfactants containing perfluoropolyether moieties for the CO_2-philic tail group and carboxylic acid ammonium or poly (ethylene glycol) methyl ether for the hydrophilic groups was examined.

$F(CF_2(CF_3)CF_2O)_nCF(CF_3)COO^-NH_4^+$

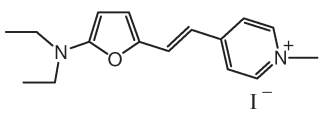
$F(CF_2(CF_3)CF_2O)_3CF(CF_3)COO(CH_2CH_2O)_nCH_3$

Takabumi Nagai, Kazuhisa Fujii, Katsuto Otake, and Masahiko Abe

386 **Synthesis, Crystal Structure, and Nonlinear Optical Property of Two New Chromophores Containing Furan Ring as a Conjugation Bridge**



1a

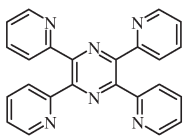


1b

Wei Zhang, Jianli Hua, Pin Shao, Peng Ren, Jingui Qin, Yu Zhang, Zuhong Lu, Huaimin Hu, and Deqing Zhang

388 **Efficient Electron Injection Characteristics of Tetra-2-pyridinylpyrazine (TPP) in Organic Light Emitting Diodes**

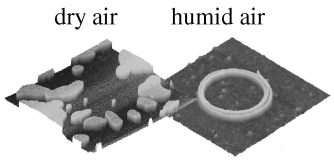
Tetra-2-pyridinylpyrazine (TPP) and TPP: cesium (1:1 molar ratio) composite layers have excellent electron injection and transport characteristics in organic light emitting diodes. High luminescence efficiency with low driving voltage was observed in various cathode configurations.



Takahito Oyamada, Chiharu Maeda, Hiroyuki Sasabe, and Chihaya Adachi

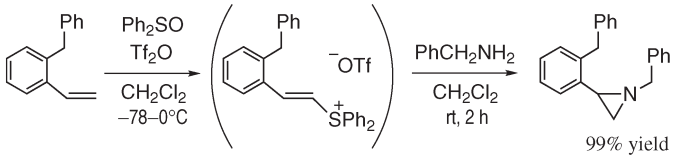
390 **Controlled Evaporation as an Easy Method of Constructing Novel Nano Objects from Amphiphilic Diblock Molecules**

Speeding up or slowing down evaporation of cast films 100-fold allows diblock molecules containing Oligo (phenylene vinylene) dimer as the rod segment and Poly (ethylene oxide) as the coil segment to form two different self-assembled nano objects on mica: "islands" and "ribbons," respectively.



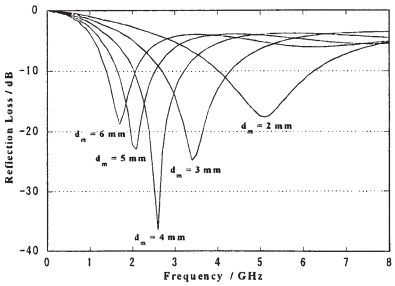
Lidong Qin, Hongbo Li, Lixin Wu, Dengli Qiu, Xi Zhang, and Jiacong Shen

392 **A Convenient Method for the Synthesis of 2-Arylaziridines from Styrene Derivatives via 2-Arylethenyl(diphenyl)sulfonium Salts**



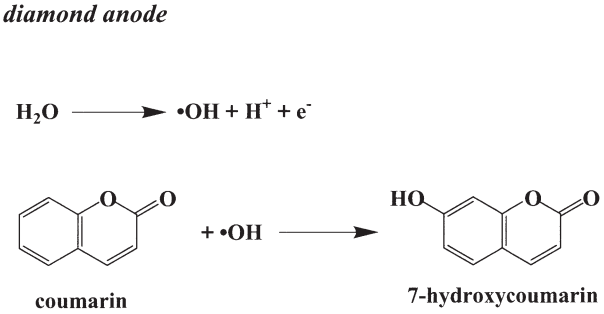
Jun-ichi Matsuo, Hiroyuki Yamanaka, Asahi Kawana, and Teruaki Mukaiyama

394 **GHz Range Absorption Properties of α-Fe/Y_2O_3 Nanocomposites Prepared by Melt-spun Technique**



Jiu Rong Liu, Masahiro Itoh, and Ken-ichi Machida

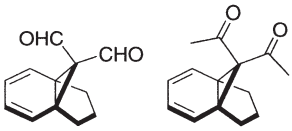
396 **Detection of Hydroxyl Radicals Formed on an Anodically Polarized Diamond Electrode Surface in Aqueous Media**



Masaharu Komatsu, Tata Narasinga Rao, and Akira Fujishima

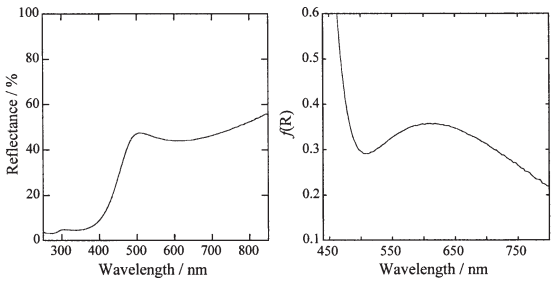
398 **Synthesis and Facile Rearrangement of 10,10-Dicarbonyl-substituted [4.3.1]Propellane Derivatives**

While an attempt to prepare 10,10-diformyl[4.3.1]propella-1,4-diene was not successful owing to its facial skeletal rearrangement, the corresponding diacetyl derivative was isolated, which would serve as a useful precursor of carbene sources.



Yoshito Tobe, Takuji Kusumoto, Shiho Minakata, Rui Umeda, Motohiro Sonoda, and Koichiro Naemura

400 **Synthesis of an Environmentally Friendly and Nontoxic New Pigment Based on Rare Earth Phosphate**

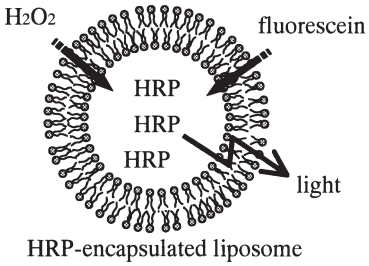


Nobuhito Imanaka, Toshiyuki Masui, and Masaharu Itaya

402 **Direct Detection of Horseradish Peroxidase as a Marker Molecule Encapsulated in Liposomes via Use of Fluorescein Chemiluminescence**

Tamio Kamidate, Yoshiki Ishida, Hirofumi Tani, and Akihiko Ishida

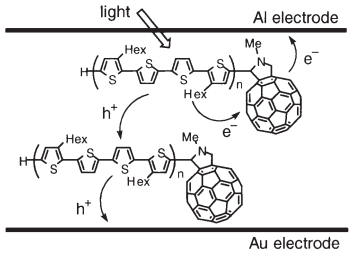
Light emission from fluorescein chemiluminescence with H_2O_2 catalyzed by horseradish peroxidase (HRP) trapped in liposome is remarkably intense, which can be used to detect the enzyme directly.



404 **Oligothiophene/fullerene Dyads as Active Photovoltaic Materials**

Nobukazu Negishi, Kohei Yamada, Kazuo Takimiya, Yoshio Aso, Tetsuo Otsubo, and Yutaka Harima

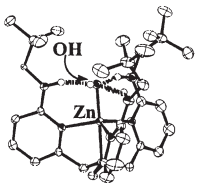
The oligothiophene/fullerene dyads are incorporated in photovoltaic cells, which demonstrate marked performance.



406 **Preparation and Characterization of Hydroxo-zinc(II) Complex Surrounded with Hydrogen Bonding and Hydrophobic Interaction Groups. A Structural/Functional Model of Carbonic Anhydrases**

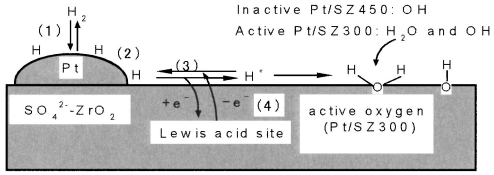
Syuhei Yamaguchi, Isao Tokairin, Yoko Wakita, Yasuhiro Funahashi, Koichiro Jitsukawa, and Hideki Masuda

A novel Zn(II)–OH complex surrounded with noncovalent interaction groups, which has been prepared and characterized as a structural/functional model of carbonic anhydrases, has exhibited a reversible binding of CO_2.



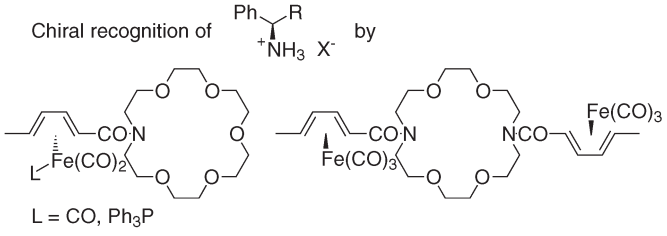
408 **IR Observation of Hydrogen Adsorption on Active and Inactive $Pt/SO_4^{2-}–ZrO_2$**

Ping Wang, Shuwu Yang, Junko N. Kondo, Kazunari Domen, Takashi Yamada, and Hideshi Hattori

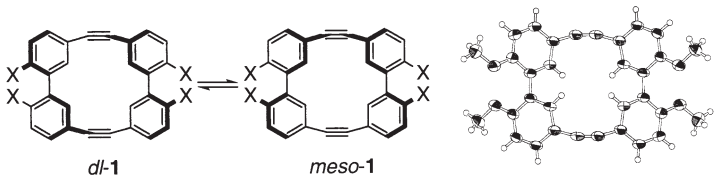


410 **Chiral Recognition with Crown Ethers Having Planar Chiral (η^4-Diene)tricarbonyliron Moieties**

Hiroshi Yamaguchi, Saburo Nakanishi, Nobuhiro Kihara, and Toshikazu Takata



412 **[2.0.2.0]Metacyclophane-1,15-diynes. A Potential Fragment of Double-Helical Conjugated Systems**



dl-**1** *meso*-**1**

Keiichiro Utsumi, Takeshi Kawase, and Masaji Oda

