A growing number of papers on research subjects relating to photocatalysis have and will continue to be submitted and published in scientific journals. Some of these, published or still under review, include illusions and misconceptions that may, from a scientific point of view, adversely affect the writing of academic papers and hamper the development of scientific and technological research in this field. In the present article, the author would like to point out the problems that researchers in photocatalysis encounter when writing articles. In fact, one of the most serious concerns regarding the abstracts contained in most scientific papers is that they often include misleading speculation(s) which are not based on sound scientific evidence yet may be interpreted as truth. A fair number of readers, especially busy ones, may read only the titles and abstracts without serious consideration or analysis of the discussions. Reviewers and editors need to consider such problems, as might be expected, however, the reader community also needs to be instructed of such aspects in order to gain a more correct understanding of what is and is not acceptable. This article aims to present an analysis of such inherent problems in hopes of improving the quality of the research work and scientific papers in this field.

The techniques for attaching high substrate selectivity to the amperometric biosensing systems are summarized with classification of membrane techniques, electron mediation techniques, electrodes, and electrochemical techniques.
**Letter**

236  **Durinskiol B: A New Durinskiol Congener from the Symbiotic Marine Dinoflagellate Durinskia sp.**

Eric Richard Oktavianus Siwu, Osamu Ohno, Masaki Kita, and Daisuke Uemura
doi:10.1246/cl.2008.236
Electronic Supporting Information

238  **Time-modulated Release of Multiple Proteins from Enzyme-responsive Multilayered Capsules**

Yuki Itoh, Michiya Matsusaki, Toshiyuki Kida, and Mitsuru Akashi
Electronic Supporting Information

240  **Fabrication of Electroactive Layer-by-layer Films with Myoglobin and Zirconium Phosphate Nanosheets**

Xiu-shuang Yang, Xu Chen, Jiahui Zhang, and Wensheng Yang
Electronic Supporting Information

242  **Effect of pH on Hydrothermal Synthesis of γ-Al₂O₃ Nanoparticles at 673 K**

Toshiyuki Sato, Kiwamu Sue, Yuka Akiyama, Kei Shibata, Shin-ichiro Kawasaki, Satoshi Tanaka, Kazunori Saitoh, Akiko Kawai-Nakamura, Keiko Aida, and Toshihiko Hiaki

244  **A Novel Cis–Trans Isomerism Found in a Sulfur-bridged Pd²⁺Au⁻₂ Tetranuclear Complex with [Pd(amine)₂(thiolato)₂]-type Building Units**

Mai Taguchi, Yuko Sameshima, Asako Igashira-Kamiyama, Shige-hisa Akine, Tatsuya Nabeshima, and Takumi Konno
doi:10.1246/cl.2008.244
Electronic Supporting Information
246 Tuning the Hoechst Dye into Color-changing Fluorescent pH Indicator in an Acidic Range

Shinsuke Sando, Atsushi Narita, Masayoshi Hayami, and Yasuhiro Aoyama
doi:10.1246/cl.2008.246

Electronic Supporting Information

248 Novel Fluorescent Aluminum Complexes Based on \(N\)-Hydroxy-3,6-diaryl-4-phenyl-2-pyridone Ligands

Satoshi Minakata, Hiroshi Inada, Mitsuo Komatsu, Hirotake Kajii, Yutaka Ohmori, Manabu Tsamura, and Kiyoyuki Namura

Electronic Supporting Information

250 Direct Asymmetric Aminooxylation Reaction Catalyzed by Axially Chiral Amino Acids

Taichi Kano, Akihiro Yamamoto, Haruka Mii, Jun Takai, Seiji Shirakawa, and Keiji Maruoka

252 A Novel Visible-light-sensitive Efficient Photocatalyst, \(\text{Cr}^{III}\)-grafted \(\text{TiO}_2\)

Hiroshi Irie, Shuhei Miura, Ryuhei Nakamura, and Kazuhito Hashimoto
doi:10.1246/cl.2008.252

Electronic Supporting Information

254 A Simple Modification Method of Multiwalled Carbon Nanotube with Polyhydroxyamide

Chengjun Zhou, Qixin Zhuang, Jun Qian, Xinxin Li, and Zhewen Han

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http://www.csj.jp/journals/chem-lett/
First Observation of the Matrix-isolated FTIR Spectrum of Vaporized Ionic Liquid: An Example of EmimTFSI, 1-Ethyl-3-methylimidazolium Bis(trifluoromethanesulfonfonylimide)

Nobuyuki Akai, Akio Kawai, and Kazuhiko Shibuya
doi:10.1246/cl.2008.256

Charge Delocalization over Stacked π-Electron Systems

Tamaki Nakano and Tohru Yade
doi:10.1246/cl.2008.258
Electronic Supporting Information

Dye Redissolution after Precipitation with a Water-miscible Ionic Liquid

Maroof Ali, Gary A. Baker, and Siddharth Pandey
Electronic Supporting Information

Synthesis and Properties of 3,8-Bis[4-(9H-carbazol-9-yl)phenyl]-1,10-phenanthroline for Phosphorescent OLEDs

Ziyi Ge, Teruaki Hayakawa, Shinji Ando, Mitsuru Ueda, Toshiyuki Akiike, Hidetoshi Miyamoto, Toru Kajita, and Masaaki Kakimoto
doi:10.1246/cl.2008.262

Photophysical and Photocatalytic Properties of β-Sulfonatoporphycenes

Tatsushi Baba, Hisashi Shimakoshi, Ayataka Endo, Chihaya Adachi, and Yoshio Hisaeda
doi:10.1246/cl.2008.264
In Vitro Gene Delivery by pDNA/Chitosan Complexes Coated with Anionic PEG Derivatives that Have a Sugar Side Chain

Mayu Hashimoto, Yoshiyuki Koyama, and Toshinori Sato
doi:10.1246/cl.2008.266

An Efficient and Green Method for the Synthesis of Oxindole Derivatives in Water

G. Srihari and M. Marthanda Murthy
doi:10.1246/cl.2008.268
Electronic Supporting Information

Platinum(II)-catalyzed Annulation of 5-Methyl-5-hexen-1-ols with Aldehydes

Katsukiyo Miura, Makoto Horiike, Gen Inoue, Junji Ichikawa, and Akira Hosomi
doi:10.1246/cl.2008.270

Controlled Homeotropic and Homogeneous Orientations for Nanoscale Phase-separated Domain of Light-emitting Amphiphilic Block Copolymer Bearing a 2,5-Diarylthiazole Moiety

Atsunori Mori, Junichi Shikuma, Motoi Kinoshita, Tomiki Ikeda, Masahiro Misaki, Yasukiyo Ueda, Motonori Komura, Sadayuki Asaoka, and Tomokazu Iyoda
Electronic Supporting Information

A Strategy of Visible Anion Recognition by Simple Polycyclic Aromatic Acid

Xiaohong Hou, Taishi Wada, Sayaka Gion, and Kazuya Kobiro
Electronic Supporting Information
Preparation of Titania Nanotube Thin Films by Langmuir–Blodgett Technique

Masashi Takahashi, Yuichi Okada, and Koichi Kobayashi

Electronic Supporting Information

Phosphine-dependent Stereoselective Nucleophilic Reaction to Bicyclic Bis-μ-dichloro-η3-allylpalladium Complexes

Ryohei Ogawa, Takayuki Nakajima, and Isao Shimizu
doi:10.1246/cl.2008.278

Electronic Supporting Information

Micro-Raman Thermometer for CO₂ Fluids: Temperature and Density Dependence on Raman Spectra of CO₂ Fluids

Masashi Arakawa, Junji Yamamoto, and Hiroyuki Kagi
doi:10.1246/cl.2008.280

Temperature Dependence of Refractive Index of Films of Well-defined Linear and Star-shaped Polystyrenes

Hiroto Kudo, Hideyuki Aoki, and Tadatomi Nishikubo

Electronic Supporting Information

2,6-Dialkylbenzo[1,2-b:4,5-b’]dithiophenes (C₅-BDTs) as Soluble Organic Semiconductors for Solution-processed Organic Field-effect Transistors

Tomoya Kashiki, Eigo Miyazaki, and Kazuo Takimiya

Electronic Supporting Information
Stereoselective Insertion of Rhodium Carbene to Water under Control with Intramolecular Participation of Hydroxy Group

Takashi Sugimura and Takao Nagai

Electronic Supporting Information

Fluoride Complexation of Element 104, Rutherfordium (Rf), Investigated by Cation-exchange Chromatography

Based on one atom-at-a-time chemistry, successive fluoride complexation of Rf is clarified. It is also found that the fluoride complexation of Rf is significantly weaker than that of the homologues Zr and Hf, but it is stronger than the complexation of the tetravalent pseudo-homologue Th.

Yasuo Ishii, Atsushi Toyoshima, Kazuaki Tsukada, Masato Asai, Hayato Toume, Ichiro Nishinaka, Yuichiro Nagane, Sunao Miyashita, Tomotaka Mori, Hideo Suganuma, Hiromitsu Haba, Masami Sakamaki, Shin-ichi Goto, Hisaaki Kudo, Kazuhiko Akiyama, Yasuji Oura, Hiromichi Nakahara, Yuki Tashiro, Atsushi Shinhara, Matthias Schädel, Willy Brüchle, Valeria Pershina, and Jens V. Kratz

Electronic Supporting Information

Rhodium-catalyzed Addition of Organo[2-(hydroxymethyl)phenyl]dimethylsilanes to Arenesulfonylimines

Yoshiaki Nakao, Masahide Takeda, Jinshiu Chen, Tamejiro Hiyama, Yoshitaka Ichikawa, Ryo Shintani, and Tamio Hayashi
doi:10.1246/cl.2008.290

Electronic Supporting Information

LIESST Effect and Cooperativity of a 2-D Hofmann-type Compound

Koji Nakao, Shinya Hayami, Motoko Akita, and Katsuya Inoue

Electronic Supporting Information

Solution-processible Fluorinated Carbazole Derivative for Phosphorescent Organic Light-emitting Diodes

A fluorinated carbazole derivative, 9,9’-[2,2’-bis(trifluoromethyl)biphenyl-4,4’-diyl]bis-(9H-carbazole) (6FCBP) was synthesized, which exhibits better solubility compared to the well-known 4,4’-bis(carbazol-9-yl)biphenyl (CBP). 6FCBP was employed to fabricate OLEDs by spin-coating and vacuum deposition with excellent performance.

Ziyi Ge, Teruaki Hayakawa, Shinji Ando, Mitsuru Ueda, Toshiyuki Akiike, Hidetoshi Miyamoto, Toru Kajita, and Masaaki Kakimoto
doi:10.1246/cl.2008.294
Fabrication of WO₃ Nanoflakes by a Dealloying-based Approach

Zhifu Liu, Toshinari Yamazaki, Yanbai Shen, Dan Meng, Toshio Kikuta, and Noriyuki Nakatani

Activation and Dehydrogenative Silylation of the C–H Bonds of Phosphine-coordinated Ruthenium in Lu/Ru Heteromultimetallic Hydride Complexes

Takanori Shima and Zhaomin Hou

Aspartic Acid-derived Wear-preventing and Friction-reducing Agents for Ionic Liquids

Ichiro Minami, Naoko Watanabe, Hidetaka Nanao, Sigeyuki Mori, Kenta Fukumoto, and Hiroyuki Ohno
doi:10.1246/cl.2008.300

Sulfur-assisted Fabrication of Silicon Nitride Nanorods in Autoclaves at 250 °C

Lishan Yang, Chunli Guo, Liancheng Wang, Zhongchao Bai, Li Fu, Xiaojian Ma, Liqiang Xu, and Yitai Qian

X-ray Microanalysis of Biological Samples by High-resolution Energy Dispersive Microcalorimeter Spectrometer Using a Low-voltage Scanning Electron Microscope

Izumi Nakai, Yukari Baba, Keiichi Tanaka, Satoshi Nakayama, Minako Hanashima, Akiko Hokura, and Yoshikazu Homma

Electronic Supporting Information
306 Benzene-thermal Route to InP and InAs Nanocrystals Using Triphenylphosphine and Triphenylarsine as Pnicogen Sources

Nanocrystalline InP and InAs were synthesized by the reaction of newborn indium with triphenylphosphine and triphenylarsine via benzene-thermal route at 350–380 °C for 8–12 h.

Junli Wang and Qing Yang
Electronic Supporting Information

308 Four New Eremophilane Derivatives from Ligularia sagitta

Ping-Lin Li, Zhan-Xin Zhang, and Zhong-Jian Jia
Electronic Supporting Information

310 Highly Active Nanostructured Co₃O₄ Catalyst with Tunable Selectivity for Liquid Phase Air Oxidation of p-Cresol

Nanostructured spinel-type Co₃O₄ catalyst prepared by a simple protocol without using a template or a capping agent showed higher activity and tunable selectivity for air oxidation of p-cresol under mild conditions.


312 Molecular Recognizable Cucurbituril/Silica Hybrids

Junpei Miyake and Yoshiki Chujo
doi:10.1246/cl.2008.312

314 A Lithium Battery Electrolyte Based on a Room-temperature Phosphonium Ionic Liquid

A low-viscous phosphonium ionic liquid, triethyl(2-methoxyethyl)phosphonium bis(trifluoromethylsulfonyl)imide, used as an electrolyte to give excellent charge-discharge properties to the lithium battery cell is reported.

Katsuhiko Tsunashima, Fumihiro Yonekawa, and Masashi Sugiya
Attachment of Disilanylene–Oligothienylene Polymers on TiO₂ Surface by Photochemical Cleavage of the Si–Si Bonds

Joji Ohshita, Junya Matsukawa, Moeko Hara, Atsutaka Kunai, Shotaro Kajiwara, Yousuke Ooyama, Yutaka Harima, and Masaya Kakimoto
doi:10.1246/cl.2008.316

NO Decomposition on Ruddlesden–Popper-Type Oxide, Sr₃Fe₂O₇, Doped with Ba and Zr

Tatsumi Ishihara, Yusuke Shinmyo, Kazuya Goto, Noriko Nishiyama, Hideharu Iwakuni, and Hiroshige Matsumoto

Efficient Synthesis of 1-Tetralones from 4-Arylbutyric Acids by Combined Use of Solid Acid Catalysts and Microwave Irradiation

Kazuaki Hiroki, Makiko Hatori, Hiroshi Yamashita, and Jun-ichi Sugiyama
doi:10.1246/cl.2008.320

Analysis on Excitation of Molecules with Iₙ Symmetry: Frozen Orbital Analysis and General Rules

Takeshi Baba, Yutaka Imamura, Munehiko Okamoto, and Hiromi Nakai

Poly(ethylene glycol)-mediated Steric Stabilization of Complexes Formed between Negatively Charged Liposomes and Folate-conjugated Poly(amidoamine) Dendrimers in Water

Ryo Ohori, Katsumi Uchida, Asami Saito, and Hirofumi Yajima

Electronic Supporting Information
326 Entanglement Effect on Film Retention of Poly(methyl methacrylate) in Methanol

Yoshihisa Fujii, Hironori Atarashi, Toshihiko Nagamura, and Keiji Tanaka

328 A $\gamma$-Keggin-type Dimeric Silicotungstate Sandwiching an Adamantanoid Tetranuclear Ruthenium–Oxygen Cluster Core

Syuhei Yamaguchi, Kazuhiro Uehara, Keigo Kamata, Kazuya Yamaguchi, and Noritaka Mizuno
doi:10.1246/cl.2008.328
Electronic Supporting Information

330 Photocatalytic Activity of Au/TiO$_2$ Particles Stimulated with Visible Light: Gas-phase Reactions of Formaldehyde, Acetaldehyde, and Phenol

Mariko Takayanagi, Yoko Imai, and Kazuo Tajima

332 Dynamics of Polymer Chains in Porous Thin Films Prepared by Layer-by-layer Assembly of Isotactic Poly(methyl methacrylate) and Syndiotactic Poly(methacrylic acid)

Daisuke Kamei, Hiroharu Ajiro, Chizuru Hongo, and Mitsuru Akashi
doi:10.1246/cl.2008.332
Electronic Supporting Information

334 Synthesis and Photolysis of Biphenylenetetracarboxylic Dianhydride in Low-temperature Neon Matrixes

Tadatake Sato, Aiko Narazaki, Yoshizo Kawaguchi, and Hiroyuki Niino
Electronic Supporting Information
A Facile Non-hydrothermal Fabrication of Uniform $\alpha$-MoO$_3$ Nanowires in High Yield

Banghua Qi, Xiaomin Ni, Dongguo Li, and Huagui Zheng


Electronic Supporting Information

Uniform $\alpha$-MoO$_3$ nanowires with the diameter of 60–100 nm and the length of 10–40 µm were fabricated in high yield through a facile non-hydrothermal method, which involved acidifying an ethylenediamine solution of molybdenum acid and the subsequent calcinating treatment.

Powderization of Wool Keratin by Alkali Hydrolysis in Higher Alcohol/Water Binary Systems

Takako Hikima and Yoshimune Nonomura

Successive Fusion of Vesicles Aggregated by DNA Duplex Formation in the Presence of Triton X-100

Naoto Maru, Koh-ichiroh Shohda, and Tadashi Sugawara

Electronic Supporting Information

Asymmetric 1,3-Dipolar Cycloaddition Reaction of Azomethine Imines to Allyl Alcohol

Tomomitsu Kato, Shuhei Fujinami, Yutaka Ukaji, and Katsuhiko Inomata

Electronic Supporting Information

High Hole Mobilities in the Amorphous Films of 2,7-Di(9-carbazolyl)-9-(2-ethylhexyl)carbazole

Ausra Tomkeviciene, Juozas V. Grazulevicius, and Vygintas Jankauskas
doi:10.1246/cl.2008.344
Two Novel Asymmetric Eremophilane Dimers from the Roots of Ligularia virgaurea

Zhan-Xin Zhang, Chun-Ming Wang, Dong-Qing Fei, and Zhong-Jian Jia
doi:10.1246/cl.2008.346

Virgaurol A (1) and B (2), two novel dimeric eremophilanes in whose structures the two asymmetric sesquiterpene units are connected by a C–C bond directly, have been isolated from the roots of Ligularia virgaurea. Their structures were determined by comprehensive spectral analysis. Compound 1 was evaluated for its in vitro cytotoxic activity against human leukemia (HL-60), human hepatoma (SMMC-7721), and human cervical carcinoma (HeLa) cells.

First Example of Cu(OTf)$_2$-catalyzed Synthesis of Quinoxalines from $\alpha$-Diazoketones and Aryl 1,2-Diamines

J. S. Yadav, B. V. Subba Reddy, Y. Gopala Rao, and A. V. Narsaiah
doi:10.1246/cl.2008.348

The synthesis and characterization of poly(ethylene oxide)-b-poly(4-butytriphenylamine)-b-poly(ethylene oxide) triblock copolymers with different block ratio are described. The molecular structure of triblock copolymers is characterized by $^1$H and $^{13}$C NMR and GPC. The optical properties of block copolymers were investigated by UV–vis absorption, and photoluminescence (PL) spectroscopy. From atomic force microscopy (AFM) observation of the annealed thin films of block copolymers, microphase-separated poly(ethylene oxide)-b-poly(4-butytriphenylamine)-b-poly(ethylene oxide) triblock copolymers parated morphology was observed.

Morphological Transformation of Ultrathin Gold Nanosheets to Rounded Nanotapes in the Photomediated Reduction Process

Tomohiro Shiraki, Masa-aki Morikawa, and Nobuo Kimizuka

The synthesis and fluorescence properties of naphthyridine-tethered oligodeoxyribonucleotides were reported. We successfully discriminated the cytosine-related single nucleotide alterations in DNA simply by adding the fluorescent probe.
Unexpected Phase Behaviors of Poly-(fumarate)s Carrying Tolane-based Mesogenic Side Chains

Tsuyoshi Michinobu, Hiroshi Noguchi, Nozomu Fujii, Masatoshi Tokita, Junji Watanabe, and Kiyotaka Shigehara


Electronic Supporting Information

Microfluidic Fabrication-induced Luminescence of C₆₀ Rods

Kyosuke Shinohara, Satoshi Someya, Hiroaki Abe, Tohru Suemoto, and Koji Okamoto

doi:10.1246/cl.2008.358

Polymer Incarcerated Gold Catalyzed Aerobic Oxidation of Hydroquinones and Their Derivatives

Hiroyuki Miyamura, Mika Shiramizu, Ryosuke Matsubara, and Shu Kobayashi

doi:10.1246/cl.2008.360

Biological Degradation of Taxol by Action of Cultured Cells on 7-Acetyltaxol-2'-yl Glucoside

Kei Shimoda, Katsuhiko Mikuni, Kiyoshi Nakajima, Hatsuyuki Hamada, and Hiroki Hamada


Novel Reproducible Fabrication of MgTiO₃ Nanoparticles by Electrodeposition

Nobuaki Hashimoto, Satomi Hatakeyama, Norihito Doki, Masaaki Yokota, Kenji Shimizu

366 Uniform One-hole Particles Used as Versatile Micro-encapsulation

Cai Xia Bi, Wei Wei, Jian Yang, Fang Ling Gong, Zhi Guo Su, and Guang Hui Ma

Electronically Supporting Information

Uniformly sized particles with controllable holes in their surface were obtained. After loading the functional materials with small size, the holes could be closed. This system would be suitable for versatile micro-encapsulation.

368 Electrolytic Properties of Ethyl Fluoroethyl Carbonate and Its Application to Lithium Battery

Naoko Tsukimori, Noritoshi Nanbu, Masahiro Takehara, Makoto Ue, and Yukio Sasaki
doi:10.1246/cl.2008.368

The use of ethyl fluoroethyl carbonate (EFEC) as a novel cosolvent improves the performance of a Li/LiCoO2 coin cell.

370 Fabrication and Luminescent Characteristics of Y2O3:Eu3+ Nanotubes by Hydrothermal Treatment

Tetsuro Jin, Erika Jin, Mamoru Sano, Bo Chi, and Tetsuo Yazawa

Y2O3:Eu3+ nanotube phosphores were prepared using polyethylene glycol via a hydrothermal treatment and a subsequent heat treatment.

372 Extraction of Rare Earth Elements from Nd–Fe–B Magnet Scraps by NH4Cl

Masahiro Itoh, Koji Miura, and Ken-ichi Machida

Chlorination by NH4Cl

NdcI3

Washing by H2O

α-Fe, Fe0B

H2O

NdCl3aq

Recovery rate of rare earth component: ~90 %

374 Electroluminescence Quenching Caused by a Spin-crossover Transition

Masaki Matsuda, Hikaru Isozaki, and Hiroyuki Tajima

A film of a spin-crossover complex [Fe(dpp)2](BF4)2 (dpp = 2,6-di(pyrazol-1-yl)pyridine) was embedded into the light-emitting layer of an organic electroluminescent (EL) device with chlorophyll a. The temperature dependence of the EL spectra shows the quenching of the emission below 260 K, which is the spin-transition temperature of [Fe(dpp)2](BF4)2.
376 Preparation of Cathode Active Material for Rechargeable Magnesium Battery by Atmospheric Pressure Microwave Discharge Using Carbon Felt Pieces

Hideki Kurihara, Tatuhiko Yajima, and Susumu Suzuki
doi:10.1246/cl.2008.376

XRD patterns (A) and cyclic voltammograms (B) of magnesium manganese oxide prepared by atmospheric pressure microwave discharge using carbon felt pieces.

MnO prepared at the A type reactor (a) and B type reactor (b).

378 Facile Templating Methods to Remarkable Architectures of Nanoporous Carbon Spheres

Yuri Yamada, Tadashi Nakamura, and Kazuhisa Yano

Electronic Supporting Information

A colloidal crystal fabricated from monodispersed mesoporous silica spheres has been employed as a sacrificial template to prepare nanoporous carbon architectures. By changing the filtration process slightly, the 3D-packed nanoporous carbon colloidal crystal and the novel "ball in cup" carbon hierarchical structure were successfully obtained.

3D-packed carbon colloidal crystal

"ball in cup" carbon hierarchical structure