

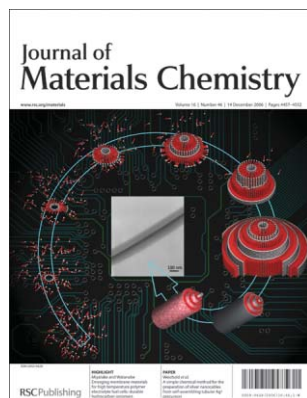
Journal of Materials Chemistry

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Cover

See Oliver Weichold, Shou-Chian Hsu and Martin Möller, pp. 4475–4479. The self assembly of silver amphiphiles leads to the formation of long, tubular aggregates, which can be used to prepare silver nanocables. Image reproduced by permission of Oliver Weichold from *J. Mater. Chem.*, 2006, **16**, 4475.

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T45

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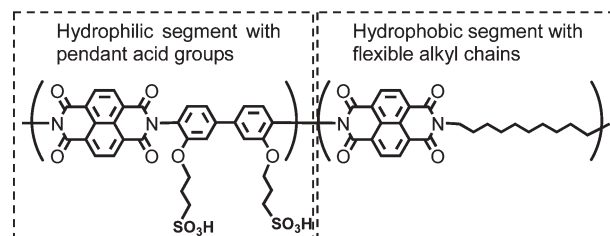
HIGHLIGHT

4465

Emerging membrane materials for high temperature polymer electrolyte fuel cells: durable hydrocarbon ionomers

Kenji Miyatake and Masahiro Watanabe*

A new series of sulfonated polyimide copolymers containing pendant sulfonic acid groups and flexible aliphatic main chains have been designed and the membrane therefrom was durable in an hydrogen/air fuel cell for 5000 h.



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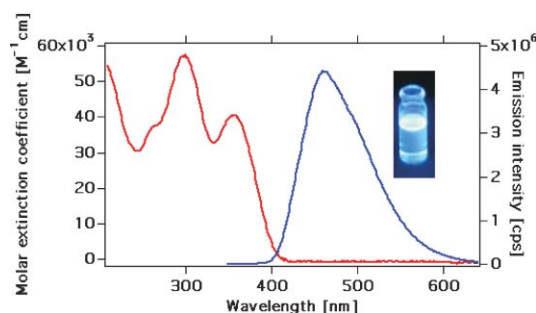
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4468

Efficient blue light-emitting diodes based on a classical “push–pull” architecture molecule 4,4'-di-(2-(2,5-dimethoxyphenyl)ethenyl)-2,2'-bipyridine

D. Berner, C. Klein, Md. K. Nazeeruddin,* Filippo De Angelis, M. Castellani, Ph. Bugnon, R. Scopelliti, L. Zuppiroli and M. Graetzel

A highly blue luminescent molecule containing donor and acceptor groups, 4,4'-di-(2-(2,5-dimethoxyphenyl)ethenyl)-2,2'-bipyridine, is used as a singlet bulk emitter in an organic light-emitting diode, exhibiting 2.1% external quantum efficiency.

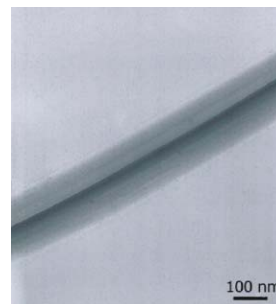


4475

A simple chemical method for the preparation of silver nanocables from self-assembling tubular Ag⁺ precursors

Oliver Weichold,* Shou-Chian Hsu and Martin Möller

Nanocables several micrometres in length containing a 30–45 nm wide silver core and an organic sheath were prepared by an easy one-pot wet-chemical procedure.

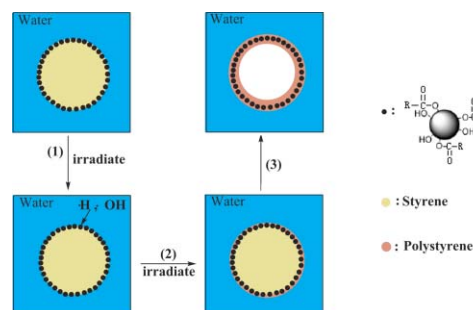


4480

A novel approach to hollow superparamagnetic magnetite/polystyrene nanocomposite microspheres *via* interfacial polymerization

Song Yang and Huarong Liu*

We report a novel and facile approach to the preparation of hollow superparamagnetic magnetite/polystyrene nanocomposite microspheres *via* interfacial polymerization which should be propitious to bio-applications.

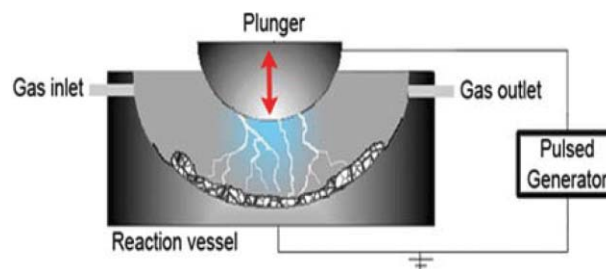


4488

Synthesis of functional oxides by a novel mechanical milling–electric discharge method

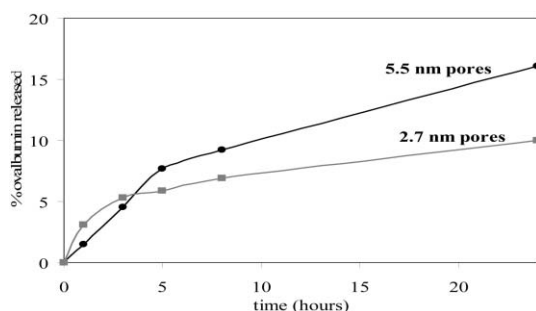
Scott A. Needham,* Andrzej Calka, Guoxiu Wang, Germanas Peleckis and Huakun Liu

Functional metal oxide powders with a controllable morphology are synthesized in a matter of minutes by an electric discharge assisted mechanical milling (EDAMM) process with assessment of the electrochemical (LiCoO₂, LiFePO₄) and magnetic (SrTi_{1-x}Co_xO₃) properties.



PAPERS

4494

**Encapsulation and controlled release of biomolecules from silica microparticles**

K. S. Finnie,* D. A. Jacques, M. J. McGann, M. G. Blackford and C. J. Barbé

Protein molecules have been successfully encapsulated in silica microparticles for controlled release applications.

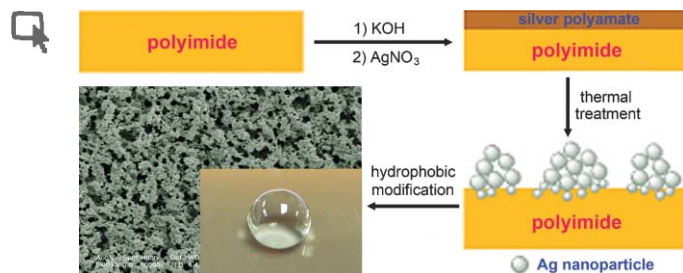
4499

**A novel air-stable n-type organic semiconductor: 4,4'-bis[(6,6'-diphenyl)-2,2-difluoro-1,3,2-dioxaborine] and its application in organic ambipolar field-effect transistors**

Yanming Sun, Dirk Rohde, Yunqi Liu,* Lijun Wan,* Ying Wang, Weiping Wu, Chongan Di, Gui Yu and Daoben Zhu*

Novel air-stable n-type organic field-effect transistors based on 4,4'-bis[(6,6'-diphenyl)-2,2-difluoro-1,3,2-dioxaborine] have been fabricated.

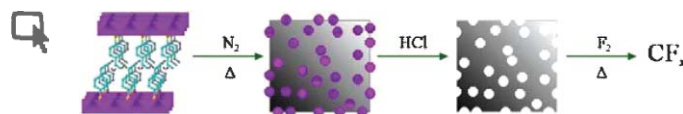
4504

**Superhydrophobic modification of polyimide films based on gold-coated porous silver nanostructures and self-assembled monolayers**

Yan Zhao, Qinghua Lu,* Dongsheng Chen and Yen Wei

A simple and effective method for the fabrication of superhydrophobic polyimide-based surfaces by generating gold-coated porous silver layers on polyimide films and hydrophobic modification of the surfaces is demonstrated.

4510

**Origin of the highly enhanced porosity of styryl LDH hybrid-type carbon replicas and study of a subsequent fluorination at low-temperature**

Fabrice Leroux* and Marc Dubois

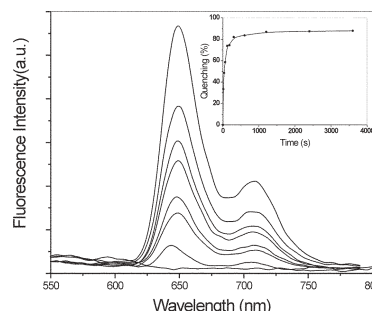
The opening of the porosity for carbon replicas is rationalized by means of several characterizations; the reactivity against pure fluorine gas at low temperature and against Li for the formed CF_x compounds is studied

4521

Metalloporphyrins as sensing elements for the rapid detection of trace TNT vapor

Shengyang Tao, Guangtao Li* and Hesun Zhu

Metalloporphyrin-doped mesostructured silica films were successfully fabricated using surfactants as structure-directing agents. These new mesostructured nanocomposites exhibit remarkable sensitivity to trace vapors of nitro-containing aromatics, and are potentially useful as chemosensory materials for rapidly detecting explosives.

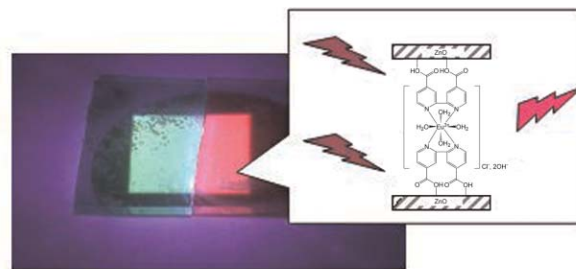


4529

Hybrid layers of ZnO/lanthanide complexes with high visible luminescences

T. Pauporté* and T. Yoshida

The electrochemical preparation of conducting and highly luminescent hybrid ZnO/lanthanide complex films is described. The emitted colour can be red or green depending on the lanthanide used. A chemical treatment is proposed to stabilize the red emitting film.

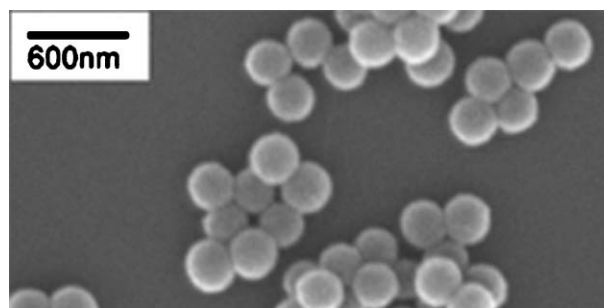


4535

Preparation of narrow or mono-disperse crosslinked poly((meth)acrylic acid)/iron oxide magnetic microspheres

Junsheng Huang, Shourong Wan, Miao Guo and Husheng Yan*

Superparamagnetic monodisperse microspheres with hydrophilic surfaces, carboxyl functional groups and high saturation magnetization were prepared by deposition of iron oxide inside crosslinked poly((meth)acrylic acid) microspheres prepared by precipitation polymerization.

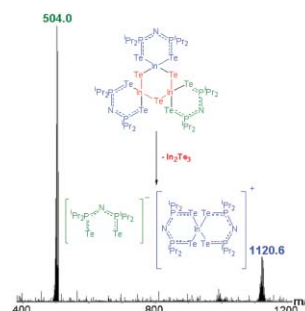


4542

Aerosol-assisted chemical vapour deposition of indium telluride thin films from $\{\text{In}(\mu\text{-Te})[\text{N}(\text{iPr}_2\text{PTE})_2]_3\}$

Shivram S. Garje, May C. Copsey, Mohammad Afzaal, Paul O'Brien* and Tristram Chivers

Aerosol-assisted chemical vapour deposition (AACVD) studies of $\{\text{M}(\mu\text{-Te})[\text{N}(\text{iPr}_2\text{PTE})_2]_3\}$ ($\text{M} = \text{In}, \text{Ga}$) on glass and Si(100) substrates between 325–475 °C are reported and discussed.



ADDITION AND CORRECTION

4548

Shivram S. Garje, May C. Copsey, Mohammad Afzaal,
Paul O'Brien and Tristram Chivers

**Aerosol-assisted chemical vapour deposition of indium
telluride thin films from $\{\text{In}(\mu\text{-Te})[\text{N}(\text{}^1\text{Pr}_2\text{PTe})_2]\}_3$**

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