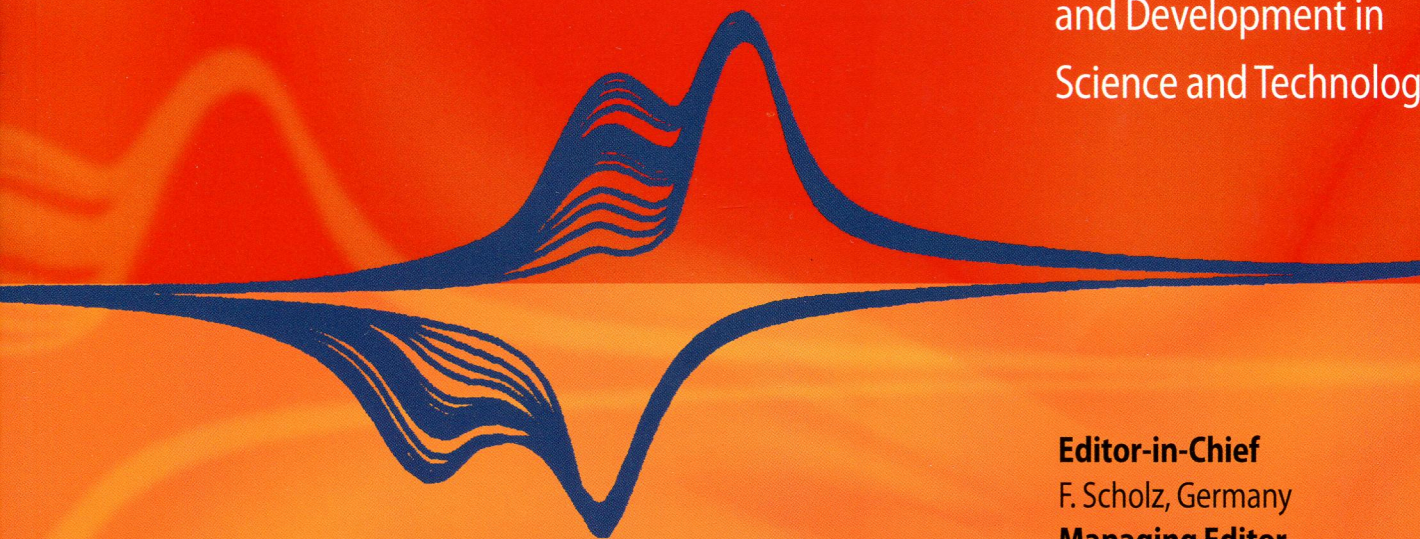


TM  
J80/s2e

# Journal of Solid State Electrochemistry

Current Research  
and Development in  
Science and Technology



**Editor-in-Chief**

F. Scholz, Germany

**Managing Editor**

M. Hermes, Germany

**Topical Editors**

D. Aurbach, Israel

P. Balaya, Singapore

A. Doménech-Carbó, Spain

I.A. Hümmelgen, Brazil

G. Inzelt, Hungary

V.V. Kharton, Portugal

D. Mandler, Israel

S.-I. Pyun, Republic of Korea

G.A. Tsirlina, Russia



Springer

## ORIGINAL PAPERS

### Study on the performance of $\text{LiMn}_2\text{O}_4$ using spent Zn–Mn batteries as manganese source

C. Shan · G. Guanghui · L. Fangfang 1495

### Nanostructured Pt supported on cocoon-derived carbon as an efficient electrocatalyst for methanol oxidation

H. Yang · H. Wang · S. Ji · Y. Ma · V. Linkov · R. Wang 1503

### Relationship between powder structure and electrochemical performance

#### of $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ cathode material

P. Liu · J. Kong · Q. Liu · X. Yang · S. Chen 1513

### Glassy carbon electrode modified with a film of poly(Toluidine Blue O) and carbon nanotubes for nitrite detection

D. Gligor · A. Walcarius 1519

### 1,10-Phenanthroline-5,6-dione and 9,10-phenanthrenequinone as redox mediators for amperometric glucose biosensors

E. Zor · Y. Oztekin · L. Mikoliunaite · J. Voronovic · A. Ramanaviciene · Z. Anusevicius · H. Bingol · A. Ramanavicius 1529

### Synthesis and electrochromic properties of polybismaleimides containing triphenylamine units

Y. Ji · H. Niu · H. Zhang · W. Wu · J. Cai · C. Wang · X. Bai · W. Wang 1537

### Porous carbon as electrode material in direct ethanol fuel cells (DEFCs) synthesized by the direct carbonization of MOF-5

I.A. Khan · A. Badshah · N. Haider · S. Ullah · D.H. Anjum · M.A. Nadeem 1545

### A rapid polyol combustion strategy towards scalable synthesis of nanostructured $\text{LiFePO}_4/\text{C}$ cathodes for Li-ion batteries

V. Mathew · J. Gim · E. Kim · M.H. Alfaruqi · J. Song · D. Ahn · W.B. Im · Y. Paik · J. Kim 1557

### Electrochemical preparation of $\alpha\text{-Ni}(\text{OH})_2$ ultrafine nanoparticles for high-performance supercapacitors

M. Aghazadeh · M. Ghaemi · B. Sabour · S. Dalvand 1569

### Al and/or Ni-doped nanomanganese dioxide with anisotropic expansion and their electrochemical characterisation in primary Li– $\text{MnO}_2$ batteries

J. Zeng · S. Wang · J. Yu · H. Cheng · H. Tan · Q. Liu · J. Wu 1585

### Electrochemical oxidation behavior of 8-azaguanine at graphene-Nafion composite film-modified glassy carbon electrode

Y. Wu · S. Zhai · K. Lu · L. Gao 1593

### Performance of dye-sensitized solar cells based on various sensitizers applied on $\text{TiO}_2\text{-Nb}_2\text{O}_5$ core/shell photoanode structure

R. Elangovan · N.G. Joby · P. Venkatachalam 1601

### A novel palladium nanoparticles-polyproline-modified graphite electrode and its application for determination of curcumin

E. Arslan · S. Çakır 1611

### The reduction of graphene oxide by elemental copper and its application in the fabrication of graphene supercapacitor

W. Li · Y.J. Yang 1621

### $\text{Ag}_2\text{S}$ quantum dot-sensitized $\text{WO}_3$ photoelectrodes for solar cells

A. Tubtimtae · K.-Y. Cheng · M.-W. Lee 1627

### Evaluation of corrosion behaviour of selected metallic samples by electrochemical noise measurements

M. Jez · M. Mitoraj · E. Godlewska · M. Jakubowska · B. Bas 1635

### Segmental mobility and relaxation processes of $\text{Fe}_2\text{O}_3$ nanoparticle-loaded fast ionic transport nanocomposite gel polymer electrolyte

R. Kumar · S.A. Suthanthiraraj 1647

### Effect of pulse current on the electrodeposition of copper from choline chloride-ethylene glycol

S. Xing · C. Zanella · F. Deflorian 1657

### Effect of pore size/distribution in $\text{TiO}_2$ films on agarose gel electrolyte-based dye-sensitized solar cells

H.-L. Hsu · C.-F. Tien · J. Leu 1665

**Influence of the pore structure parameters of mesoporous anatase microspheres on their performance in lithium-ion batteries**  
Z. Lin · M. Zheng · B. Zhao · G. Wang · L. Pu · Y. Shi 1673

**Electrochemical study of the thermodynamic properties of matildite ( $\beta$ -AgBiS<sub>2</sub>) in different temperature and compositional ranges**  
F. Tesfaye · P. Taskinen 1683

**The effect of emitter geometry on lateral field emission diodes fabricated by AFM-based electrochemical nanolithography**  
J. Rouhi · M.R. Mahmood · S. Mahmud · R. Dalvand 1695

**An EQCM study on the influence of saccharin on the corrosion properties of nanostructured cobalt and cobalt-iron alloy coatings**  
N.R. Nik Masdek · A.M. Alfantazi 1701

**Synthesis of polyaniline/Au composite nanotubes and their high performance in the detection of NADH**  
X. Feng · Y. Zhang · Z. Yan · Y. Ma · Q. Shen · X. Liu · Q. Fan · L. Wang · W. Huang 1717

**Electrocatalysis of oxygen reduction on glassy carbon electrodes modified with anthraquinone moieties**  
M. Mooste · E. Kibena · A. Sarapuu · U. Mäeorg · G. Maia · K. Tammeveski 1725

**Polyethylene glycol-functionalized polyoctahedral silsesquioxanes as H<sup>+</sup>-conducting electrolytes**  
C. Sun · J.E. Ritchie 1735

**Photoelectrochemical property of the BiOBr-BiOI/ZnO heterostructures with tunable bandgap**  
Y.-X. Yu · W.-X. Ouyang · W.-D. Zhang 1743

**Effects of phenolic resin on the electrochemical performance of Li<sub>3</sub>V<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub>/C cathode materials**  
L. Li · S. Han · C. Fan · K. Zhang · J. Chen · X. Zhang 1751

**Study on decrystallization of cathode material and decomposition of electrolyte in LiNi<sub>1/3</sub>Co<sub>1/3</sub>Mn<sub>1/3</sub>O<sub>2</sub>-based cells**  
Z. Wang · Y. Zhang · B. Chen · C. Lu 1757

**Electrochemical synthesis and characterization of solid-phase microextraction fibers using conductive polymers: application in extraction of benzaldehyde from aqueous solution**  
V. Masoumi · A. Mohammadi · M. Amini · M.R. Khoshayand · R. Dinarvand 1763

**Electrodeposition of ZnO on carbon nanofiber buckypaper**  
X. Wang · X. Chen · D. Luo · Y. Zhang · Y. Liu · L. Sun · Z. Liu 1773

**Abstracted/Indexed** in *Science Citation Index Expanded (SciSearch)*, *Journal Citation Reports/Science Edition*, *SCOPUS*, *INSPEC*, *Chemical Abstracts Service (CAS)*, *Google Scholar*, *EBSCO*, *Academic OneFile*, *Academic Search*, *CEABA-VtB*, *ChemWeb*, *CSA Environmental Sciences*, *Current Contents/Physical, Chemical and Earth Sciences*, *El-Compendex*, *Gale*, *OCLC*, *Referativnyi Zhurnal*, *SCLImago*, *Summon by Serial Solutions*.

**Instructions for Authors** for *J Solid State Electrochem* are available at <http://www.springer.com/10008>.