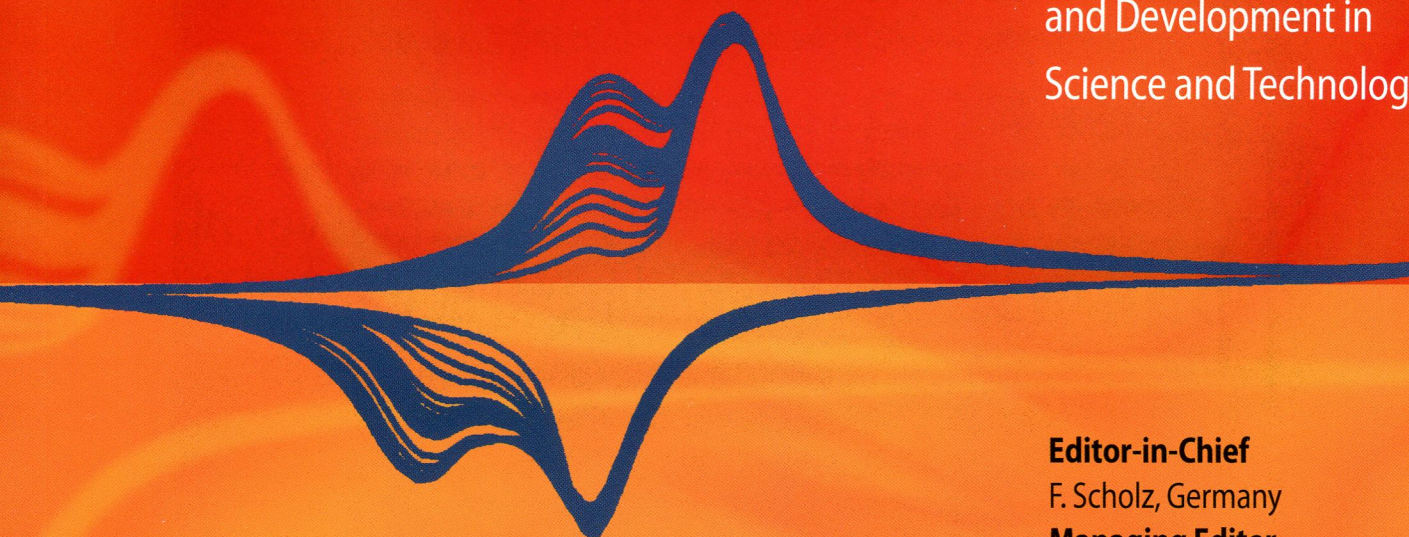


Flu
J80/s2e

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

Original Papers

Ultimate cyclic voltammetry: an analytical examination of the reversible case

K.B. Oldham 2749

Multi-scan reversible cyclic voltammetry: is the ultimate condition approached and, if so, how fast?

K.B. Oldham 2757

Polyaniline/poly(vinyl alcohol) (PAN/PVA) composite films: the synergy of film structural stiffening, redox amplification, and mobile species compositional dynamics

M.A. Mohamoud 2771

Electrochemical impedance analysis of methanol oxidation on carbon nanotube-supported Pt and Pt-Ru nanoparticles

B. Ma · J. Bai · L. Dong 2783

Electrochemical reduction of carbon dioxide with lead cathode and zinc anode in dry acetonitrile solution

W. Lv · R. Zhang · P. Gao · C. Gong · L. Lei 2789

Application of horseradish peroxidase/polyaniline/bis(2-aminoethyl) polyethylene glycol-functionalized carbon nanotube composite as a platform for hydrogen peroxide detection with high sensitivity at low potential

J.V. da Silva · D.M. Pimentel · D.E.P. Souto · R. de Cássia Silva Luz · F.S. Damos 2795

Pure copper vs. mixed copper and palladium hexacyanoferrates for glucose biosensing applications

L. Guadagnini · M. Giorgetti · D. Tonelli 2805

Sensitive voltammetric assay of etoposide using modified glassy carbon electrode with a dispersion of multi-walled carbon nanotube

B. Bozal-Palabiyik · B. Dogan-Topal · B. Uslu · A. Can · S.A. Ozkan 2815

Electrodeposition of silicon from three different ionic liquids: possible influence of the anion on the deposition process

G. Pulletikurthi · A. Lahiri · T. Carstens · N. Borisenko · S. Zein El Abedin · F. Endres 2823

Determination of proton transference number of $\text{Ba}(\text{Zr}_{0.84}\text{Y}_{0.15}\text{Cu}_{0.01})\text{O}_{3-\delta}$ via electrochemical concentration cell test

S.M. Choi · J.-H. Lee · H.I. Ji · K.J. Yoon · J.-W. Son · B.-K. Kim · H.J. Je · H.-W. Lee · J.-H. Lee 2833

Vinyl-functionalized imidazolium ionic liquids as new electrolyte additives for high-voltage Li-ion batteries

Z. Wang · Y. Cai · Z. Wang · S. Chen · X. Lu · S. Zhang 2839

Synthesis of high-purity LiMn_2O_4 with enhanced electrical properties from electrolytic manganese dioxide treated by sulfuric acid-assisted hydrothermal method

D. Guo · Z. Chang · B. Li · H. Tang · X.-Z. Yuan · H. Wang 2849

Electrochemical reduction of graphene oxide and its electrochemical capacitive performance

H. Tong · J. Zhu · J. Chen · Y. Han · S. Yang · B. Ding · X. Zhang 2857

Solvent autoxidation, electrolyte decomposition, and performance deterioration of the aprotic Li-O₂ battery

D. Zhu · L. Zhang · M. Song · X. Wang · J. Mei · L.W.M. Lau · Y. Chen 2865

Cobalt-modified nickel-zinc catalyst for electrooxidation of methanol in alkaline medium

E. Altunbaş Şahin · G. Kardaş 2871

Hydrothermal synthesis of simonkolleite microplatelets on nickel foam-graphene for electrochemical supercapacitors

S. Khamlich · A. Bello · M. Fabiane · B.D. Ngom · N. Manyala 2879

Encapsulation of tyrosinase within liposome bioreactors for developing an amperometric phenolic compounds biosensor

H. Guan · X. Liu · W. Wang 2887

Rotating disk electrode with an additional device for renewing the electrode surface and the adjacent solution layer

L.M. Vaysband · Y.I. Tur'yan 2895

AFM investigations on the influence of CO₂ exposure on Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-δ}

K. Schmale · J. Barthel · M. Bernemann · M. Grünebaum · S. Koops · M. Schmidt · J. Mayer · H.-D. Wiemhöfer 2897

Influence of highly efficient PbS counter electrode on photovoltaic performance of CdSe quantum dots-sensitized solar cells

J.B. Zhang · F.Y. Zhao · G.S. Tang · Y. Lin 2909

Development of nano-catalyzed membrane for PEM fuel cell applications

S.S. Pethaiah · G.P. Kalaignan · G. Sasikumar · M. Ulaganathan · V. Swaminathan 2917

Mathematical modeling of overpotentials of direct glucose alkaline fuel cell and experimental validation

D. Basu · S. Basu 2927

Effect of water and fluoride content on morphology and barrier layer properties of TiO₂ nanotubes grown in ethylene glycol-based electrolytes

P. Acevedo-Peña · L. Lartundo-Rojas · I. González 2939

Activated carbon/graphene composites with high-rate performance as electrode materials for electrochemical capacitors

L. Jiang · J. Yan · Y. Zhou · L. Hao · R. Xue · L. Jiang · B. Yi 2949

Synthesis and electrochemical performance of TiO₂-sulfur composite cathode materials for lithium-sulfur batteries

Q. Li · Z. Zhang · K. Zhang · L. Xu · J. Fang · Y. Lai · J. Li 2959

Book Review

György Inzelt, Andrzej Lewenstam, and Fritz Scholz (eds.), *Handbook of Reference Electrodes*

A. Doménech-Carbó 2967

Abstracted/Indexed in *Science Citation Index Expanded (SciSearch)*, *Journal Citation Reports/Science Edition*, *SCOPUS*, *INSPEC*, *Chemical Abstracts Service (CAS)*, *Google Scholar*, *EBSCO*, *Academic OneFile*, *CEABA-VtB*, *Chemistry Citation Index*, *ChemWeb*, *Current Abstracts*, *Current Contents/Physical, Chemical and Earth Sciences*, *EI-Compendex*, *Gale*, *Materials Science Citation Index*, *OCLC*, *SCImago*, *Summon by Serial Solutions*, *VINITI - Russian Academy of Science*.

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