



Volume 87, 1 January 2013

ISSN 0013-4686

Journal of the International Society of Electrochemistry

# *Electrochimica Acta*

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

**SciVerse ScienceDirect**



PREM C. PANDEY and ASHISH K. PANDEY	1	Novel synthesis of Prussian blue nanoparticles and nanocomposite sol: Electro-analytical application in hydrogen peroxide sensing
DAN YANG, MING TIAN, WENCAI WANG, DONGDONG LI, RUNYUAN LI, HAOLIANG LIU and LIQUN ZHANG	9	Controllable dielectric and electrical performance of polymer composites with novel core/shell-structured conductive particles through biomimetic method
R. DAGHRIR, P. DROGUI and M.A. EL KHAKANI	18	Photoelectrocatalytic oxidation of chlortetracycline using Ti/TiO <sub>2</sub> photo-anode with simultaneous H <sub>2</sub> O <sub>2</sub> production
SABRINA MARCELIN, NADINE PÉBÈRE and SOPHIE RÉGNIER	32	Electrochemical characterisation of a martensitic stainless steel in a neutral chloride solution
LIN WU, FENG PEI, RONGJUN MAO, FAYUAN WU, YUE WU, JIANGFENG QIAN, YULIANG CAO, XINPING AI and HANXI YANG	41	SiC-Sb-C nanocomposites as high-capacity and cycling-stable anode for sodium-ion batteries
ZHENG GUO, YAN WEI, RAN YANG, JIN-HUAI LIU and XING-JIU HUANG	46	Hydroxylation/carbonylation carbonaceous microspheres: A route without the need for an external functionalization to a "hunter" of lead(II) for electrochemical detection
KONG-WEI CHENG, WEI-CHE LEE and MIAO-SYUAN FAN	53	Photoelectrochemical performance of Cu-Zn-In-S film grown using one-step electrodeposition
ANUP KUMAR ROY and CHIEN-TE HSIEH	63	Pulse microwave-assisted synthesis of Pt nanoparticles onto carbon nanotubes as electrocatalysts for proton exchange membrane fuel cells
ROSA REGO, A.M. FERRARIA, A.M. BOTELHO DO REGO and M. CRISTINA OLIVEIRA	73	Development of PdP nano electrocatalysts for oxygen reduction reaction
J.D. SLOPPY, Z. LU, E.C. DICKEY and D.D. MACDONALD	82	Growth mechanism of anodic tantalum pentoxide formed in phosphoric acid
AMBILY MATHEW, VENU ANAND, G. MOHAN RAO and N. MUNICHANDRAIAH	92	Effect of iodine concentration on the photovoltaic properties of dye sensitized solar cells for various I <sub>2</sub> /LiI ratios
A. GHAHREMANINEZHAD, D.G. DIXON and E. ASSELIN	97	Electrochemical and XPS analysis of chalcopyrite (CuFeS <sub>2</sub> ) dissolution in sulfuric acid solution
Y.S. ZHU, X.J. WANG, Y.Y. HOU, X.W. GAO, L.L. LIU, Y.P. WU and M. SHIMIZU	113	A new single-ion polymer electrolyte based on polyvinyl alcohol for lithium ion batteries
RONGZHI CHEN, HISASHI TANAKA, TOHRU KAWAMOTO, MIYUKI ASAI, CHIKAKO FUKUSHIMA, HAITAO NA, MASATO KURIHARA, MASAYUKI WATANABE, MAKOTO ARISAKA and TAKUYA NANKAWA	119	Selective removal of cesium ions from wastewater using copper hexacyanoferrate nanofilms in an electrochemical system
JENG-YU LIN, CHAO-CHIA HSU, HSIN-PING HO and SHE-HUANG WU	126	Sol-gel synthesis of aluminum doped lithium titanate anode material for lithium ion batteries
A.D. CROSS, A. MOREL, M. DROZD, I. OLCOMENDY, A.F. HOLLENKAMP and S.W. DONNE	133	Active mass analysis on thin films of electrodeposited manganese dioxide for electrochemical capacitors
SERGIO B.A. BARROS, ABDUR RAHIM, AURO A. TANAKA, LELIZ T. ARENAS, RICHARD LANDERS and YOSHITAKA GUSHIKEM	140	<i>In situ</i> immobilization of nickel(II) phthalocyanine on mesoporous SiO <sub>2</sub> /C carbon ceramic matrices prepared by the sol-gel method: Use in the simultaneous voltammetric determination of ascorbic acid and dopamine
SHUBO WANG, JIANBANG GE, YUEJIAO HU, HONGMIN ZHU and SHUQIANG JIAO	148	Electrochemical reduction of iron oxide in molten sodium hydroxide based on a Ni <sub>0.94</sub> Si <sub>0.04</sub> Al <sub>0.02</sub> metallic inert anode
JIYU LI, LIANGXING JIANG, BO WANG, FANGYANG LIU, JIA YANG, DING TANG, YANQING LAI and JIE LI	153	Electrodeposition and characterization of copper bismuth selenide semiconductor thin films
G.P. PANDEY and A.C. RASTOGI	158	Synthesis and characterization of pulsed polymerized poly(3,4-ethylenedioxythiophene) electrodes for high-performance electrochemical capacitors
NIMA PARSİ BENEKHOHAL, MARIO A. GOMEZ, RAYNALD GAUVIN and GEORGE P. DEMOPOULOS	169	Enabling aqueous electrophoretic growth of adherent nanotitania mesoporous films via intrafilm cathodic deposition of hydrous zinc oxide
LIWEI SU, ZHEN ZHOU and PANWEN SHEN	180	Core-shell Fe@Fe <sub>3</sub> C/C nanocomposites as anode materials for Li ion batteries
R.V. BUCUR	186	State of the pre-adsorbed sulfur on a rough platinum electrode in voltammetric conditions: Microgravimetric measurements with electrochemical quartz crystal microbalance
SIWEI WANG, LEI ZHANG, LINGLING ZHANG, KYLE BRINKMAN and FANGLIN CHEN	194	Two-step sintering of ultrafine-grained barium cerate proton conducting ceramics
E.A. WARGO, V.P. SCHULZ, A. ÇEÇEN, S.R. KALIDINDI and E.C. KUMBUR	201	Resolving macro- and micro-porous layer interaction in polymer electrolyte fuel cells using focused ion beam and X-ray computed tomography

HYUNWOONG SEO, YUTING WANG, GIICHIRO UCHIDA, KUNIHRO KAMATAKI, NAHO ITAGAKI, KAZUNORI KOGA and MASAHARU SHIRATANI	213	The reduction of charge recombination and performance enhancement by the surface modification of Si quantum dot-sensitized solar cell
GUANG-YIN LIU, HUI-YUAN WANG, GUO-QIANG LIU, ZHI-ZHENG YANG, BO JIN and QI-CHUAN JIANG	218	Synthesis and electrochemical performance of high-rate dual-phase $\text{Li}_4\text{Ti}_5\text{O}_{12}$ - $\text{TiO}_2$ nanocrystallines for Li-ion batteries
JIEXI WANG, ZHIXING WANG, XINHAI LI, HUAJUN GUO, XIANWEN WU, XIAOPING ZHANG and WEI XIAO	224	$x\text{Li}_3\text{V}_2(\text{PO}_4)_3 \cdot \text{LiVPO}_4\text{F/C}$ composite cathode materials for lithium ion batteries
XINGLE DING, XIA LU, ZHENGWEN FU and HONG LI	230	Temperature-dependent lithium storage behavior in tetragonal boron ( $\text{B}_{50}$ ) thin film anode for Li-ion batteries
ALI SEPEHRIFARD, SIGUANG CHEN, ARTA STUBLLA, PIERRE G. POTVIN and SYLVIE MORIN	236	Effects of ligand LUMO levels, anchoring groups and spacers in Ru(II)-based terpyridine and dipyrazinylpyridine complexes on adsorption and photoconversion efficiency in DSSCs
CAI-XIA LEI, HAN ZHOU, CHEN WANG and ZU-DE FENG	245	Self-assembly of ordered mesoporous $\text{TiO}_2$ thin films as photoanodes for cathodic protection of stainless steel
FEI WANG, SHAOHUI XU, SHANSHAN ZHU, HUI PENG, RONG HUANG, LIANWEI WANG, XIAOHUA XIE and PAUL K. CHU	250	Ni-coated Si microchannel plate electrodes in three-dimensional lithium-ion battery anodes
YE FENG WANG, JING HUI ZENG and YAN LI	256	Silver/titania nanocable as fast electron transport channel for dye-sensitized solar cells
YU-SHENG WANG, SHIN-YI YANG, SHIN-MING LI, HSI-WEN TIEN, SHENG-TSUNG HSIAO, WEI-HAO LIAO, CHIA-HONG LIU, KUO-HSIN CHANG, CHEN-CHI M. MA and CHI-CHANG HU	261	Three-dimensionally porous graphene-carbon nanotube composite-supported PtRu catalysts with an ultrahigh electrocatalytic activity for methanol oxidation
YASAMAN DAGHIGHI, IRENE SINN, RAOUL KOPELMAN and DONGQING LI	270	Experimental validation of induced-charge electrokinetic motion of electrically conducting particles
LIRU LI, YANG ZHANG, SHENGJUN LI, GUOQIANG LI and WEIFENG ZHANG	277	Platinum nanoparticles modified indium tin oxide anodes for enhancing the efficiency and stability of organic solar cells
JAVIER IZQUIERDO, LÍVIA NAGY, ISTVÁN BITTER, RICARDO M. SOUTO and GÉZA NAGY	283	Potentiometric scanning electrochemical microscopy for the local characterization of the electrochemical behaviour of magnesium-based materials
CHIN WEI LAI and SRIMALA SREEKANTAN	294	Incorporation of $\text{WO}_3$ species into $\text{TiO}_2$ nanotubes via wet impregnation and their water-splitting performance
XIAO-LIANG PAN, CHENG-YAN XU, DA HONG, HAI-TAO FANG and LIANG ZHEN	303	Hydrothermal synthesis of well-dispersed $\text{LiMnPO}_4$ plates for lithium ion batteries cathode
MASATOSHI YANAGIDA, YOUHEI NUMATA, KEIICHI YOSHIMATSU, MASAYUKI OCHIAI, HIROYOSHI NAITO and LIYUAN HAN	309	Structure of electron collection electrode in dye-sensitized nanocrystalline $\text{TiO}_2$
WEI SUN, XIUZHENG WANG, YUHUA WANG, XIAOMEI JU, LI XU, GUANGJIU LI and ZHENFAN SUN	317	Application of graphene- $\text{SnO}_2$ nanocomposite modified electrode for the sensitive electrochemical detection of dopamine
SIDNEY AQUINO NETO, EMILY L. SUDA, SHUAI XU, MATTHEW T. MEREDITH, ADALGISA R. DE ANDRADE and SHELLEY D. MINTEER	323	Direct electron transfer-based bioanodes for ethanol biofuel cells using PQQ-dependent alcohol and aldehyde dehydrogenases
D. MESGUICH, J.-M. BASSAT, C. AYMONIER, A. BRÜLL, L. DESSEMOND and E. DJURADO	330	Influence of crystallinity and particle size on the electrochemical properties of spray pyrolyzed $\text{Nd}_2\text{NiO}_{4+\delta}$ powders
XINGLONG JIN, XIAOYAN WANG, HONGMEI ZHANG and HONGXIA REN	336	Study on the onset of DC diaphragm glow discharge
G.F. CAI, C.D. GU, J. ZHANG, P.C. LIU, X.L. WANG, Y.H. YOU and J.P. TU	341	Ultra fast electrochromic switching of nanostructured NiO films electrodeposited from choline chloride-based ionic liquid
W. QAFSAOUI, M.W. KENDIG, H. PERROT and H. TAKENOUTI	348	Coupling of electrochemical techniques to study copper corrosion inhibition in $0.5 \text{ mol L}^{-1}$ NaCl by 1-pyrrolidine dithiocarbamate
SHAYNA BROCATO, ALEXEY SEROV and PLAMEN ATANASSOV	361	pH dependence of catalytic activity for ORR of the non-PGM catalyst derived from heat-treated Fe-phenanthroline
JAROSLAV FILIP, JANA ŠEFCOVIČOVÁ, PETER GEMEINER and JAN TKAC	366	Electrochemistry of bilirubin oxidase and its use in preparation of a low cost enzymatic biofuel cell based on a renewable composite binder chitosan
ZHAO-HUI GAO, HAO ZHANG, GAO-PING CAO, MIN-FANG HAN and YU-SHENG YANG	375	Spherical porous VN and $\text{NiO}_x$ as electrode materials for asymmetric supercapacitor
MILAD REZAEI, SEYED HADI TABAIAN and DAVOUD FATMEHSARI HAGHSHEENAS	381	Electrochemical nucleation of palladium on graphene: A kinetic study with an emphasis on hydrogen co-reduction



J.J. DING, Y.N. ZHOU, Q. SUN, X.Q. YU, X.Q. YANG and Z.W. FU	388	Electrochemical properties of P2-phase $\text{Na}_{0.74}\text{CoO}_2$ compounds as cathode material for rechargeable sodium-ion batteries
XIAOXIA BAI, XIUJIE HU, SHUYUN ZHOU, JUN YAN, CHENGHUA SUN, PING CHEN and LAIFENG LI	394	In situ polymerization and characterization of grafted poly (3,4-ethylenedioxythiophene)/multiwalled carbon nanotubes composite with high electrochemical performances
CHAO PENG, XING-BIN YAN, RU-TAO WANG, JUN-WEI LANG, YU-JING OU and QUN-JI XUE	401	Promising activated carbons derived from waste tea-leaves and their application in high performance supercapacitors electrodes
MAHITO ATOBE, NOBUHITO YOSHIDA, KEN SAKAMOTO, KAZUYOSHI SUGINO and TOSHIO FUCHIGAMI	409	Preparation of highly aligned arrays of conducting polymer nanowires using templated electropolymerization in supercritical fluids
A. MOLINA, E. LABORDA, F. MARTÍNEZ-ORTIZ, E. TORRALBA and R.G. COMPTON	416	Characterization of follow-up chemical reactions by reverse pulse voltammetry. An analytical solution for spherical electrodes and microelectrodes
BURAK COSAR, KEREM CAGATAY ICLI, HALIL İBRAHİM YAVUZ and MACİT ÖZENBAS	425	Photovoltaic performance of bifacial dye sensitized solar cell using chemically healed binary ionic liquid electrolyte solidified with $\text{SiO}_2$ nanoparticles
MEI-YUN DUAN, REN LIANG, NA TIAN, YONG-JUN LI and EDWARD S. YEUNG	432	Self-assembly of Au-Pt core-shell nanoparticles for effective enhancement of methanol electrooxidation
P. DATA, M. LAPKOWSKI, R. MOTYKA and J. SUWINSKI	438	Influence of alkyl chain on electrochemical and spectroscopic properties of polyselenophenes
HANA LEE, WONJOO LEE, JIN YOUNG KIM, MIN JAE KO, KYUNGKON KIM, KYUNGWON SEO, DOH-KWON LEE and HONGGON KIM	450	Highly dense and crystalline $\text{CuInSe}_2$ thin films prepared by single bath electrochemical deposition
RAMCHANDRA S. KALUBARME, HARSHARAJ S. JADHAV and CHAN-JIN PARK	457	Electrochemical characteristics of two-dimensional nano-structured $\text{MnO}_2$ for symmetric supercapacitor
LIXIA LIAO, XINQUN CHENG, YULIN MA, PENGJIAN ZUO, WEI FANG, GEPING YIN and YUNZHI GAO	466	Fluoroethylene carbonate as electrolyte additive to improve low temperature performance of $\text{LiFePO}_4$ electrode
GRIETUS MULDER, NOSHIN OMAR, STIJN PAUWELS, MARCEL MEEUS, FILIP LEEMANS, BAVO VERBRUGGE, WOUTER DE NIJS, PETER VAN DEN BOSSCHE, DAAN SIX and JOERI VAN MIERLO	473	Comparison of commercial battery cells in relation to material properties
RAVI K. ARUN, WASIHUN BEKELE and ANIMANGSU GHATAK	489	Self oscillating potential generated in patterned micro-fluidic fuel cell
WENHUA ZHANG, DAN QIAO, JIAXIN PAN, YULIANG CAO, HANXI YANG and XINPING AI	497	A $\text{Li}^+$ -conductive microporous carbon-sulfur composite for Li-S batteries
LUBOMÍR ŠVORC, JOZEF SOCHR, JANA SVÍTKOVÁ, MIROSLAV RIEVAJ and DUŠAN BUSTIN	503	Rapid and sensitive electrochemical determination of codeine in pharmaceutical formulations and human urine using a boron-doped diamond film electrode
XINHUA XU, FENG WANG, ZHILIN LI, JINGJUN LIU, JING JI and JIANFENG CHEN	511	Effect of sulfosalicylic acid ( $\text{C}_7\text{H}_6\text{O}_6\text{S}$ ) on the electrodeposition of pure ZnS nanocrystal thin films from acidic solutions
ZUZANA VLČKOVÁ ŽIVCOVÁ, OTAKAR FRANK, VÁCLAV PETRÁK, HANA TARÁBKOVÁ, JIŘÍ VACÍK, MILOŠ NESLÁDEK and LADISLAV KAVAN	518	Electrochemistry and in situ Raman spectroelectrochemistry of low and high quality boron doped diamond layers in aqueous electrolyte solution
B. MUTHURAMAN, GEOFFREY WILL, HONGXIA WANG, PAUL MOONIE and JOHN BELL	526	Increased charge transfer of Poly (ethylene oxide) based electrolyte by addition of small molecule and its application in dye-sensitized solar cells
FRANCESCO CIUCCI	532	Revisiting parameter identification in electrochemical impedance spectroscopy: Weighted least squares and optimal experimental design
MIAO ZHANG, SHAOHUA GUO, LU ZHENG, GAINI ZHANG, ZHENPING HAO, LIPING KANG and ZONG-HUAI LIU	546	Preparation of $\text{NiMn}_2\text{O}_4$ with large specific surface area from an epoxide-driven sol-gel process and its capacitance
MÜRSEL ARICI, DUYGU ARICAN, AHMET LÜTFİ UÇUR, ALI ERDOĞMUŞ and ATIF KOCA	554	Electrochemical and spectroelectrochemical characterization of newly synthesized manganese, cobalt, iron and copper phthalocyanines
M. WEILAND, P. BOILLAT, P. OBERHOLZER, A. KAESTNER, E.H. LEHMANN, T.J. SCHMIDT, G.G. SCHERER and H. REICHL	567	High resolution neutron imaging for pulsed and constant load operation of passive self-breathing polymer electrolyte fuel cells
KAN-HAO XUE and GREGORY L. PLETT	575	A convective transport theory for high rate discharge in lithium ion cells
JAN LANGMAIER, STANISLAV ZÁLIŠ, ZDENĚK SAMEC, VIKTOR BOVTUN and MARTIN KEMPA	591	Origin of the correlation between the standard Gibbs energies of ion transfer from water to a hydrophobic ionic liquid and to a molecular solvent
HUI-JUAN ZHANG, XIANXIA YUAN, ZHENHAO WANG, JUNHE YANG and ZI-FENG MA	599	Pyrolyzed iron-triethylenetetramine on carbon as catalyst for oxygen reduction reaction
ROBSON S. ROCHA, RAFAEL M. REIS, MARCOS R.V. LANZA and RODNEI BERTAZZOLI	606	Electrosynthesis of methanol from methane: The role of $\text{V}_2\text{O}_5$ in the reaction selectivity for methanol of a $\text{TiO}_2/\text{RuO}_2/\text{V}_2\text{O}_5$ gas diffusion electrode

H. VOGT	611	On the various types of uncontrolled potential increase in electrochemical reactors—The anode effect
F. JAOUEN, V. GOELLNER, M. LEFÈVRE, J. HERRANZ, E. PROIETTI and J.P. DODELET	619	Oxygen reduction activities compared in rotating-disk electrode and proton exchange membrane fuel cells for highly active Fe—N—C catalysts
LIANG FENG, JIANGUANG JIA, YANYAN FANG, XIAOWEN ZHOU and YUAN LIN	629	TiO <sub>2</sub> flowers and spheres for ionic liquid electrolytes based dye-sensitized solar cells
XIONG ZHANG, XIANZHONG SUN, HAITAO ZHANG, DACHENG ZHANG and YANWEI MA	637	Microwave-assisted reflux rapid synthesis of MnO <sub>2</sub> nanostructures and their application in supercapacitors
BO ZHANG, WENYUAN WU, XUE BIAN and GANFENG TU	645	Investigations on rate constants of the charging/discharging processes for metal hydride electrodes
PINGFAN DU, LIXIN SONG, JIE XIONG, NI LI, LIJUN WANG, ZHENQIANG XI, NAIYAN WANG, LINHUI GAO and HONGLIANG ZHU	651	Dye-sensitized solar cells based on anatase TiO <sub>2</sub> /multi-walled carbon nanotubes composite nanofibers photoanode
A. NOVOSELOVA and V. SMOLENSKI	657	Electrochemical behavior of neodymium compounds in molten chlorides
XIANG-YANG ZHOU, JING-JING TANG, JUAN YANG, JING XIE and LU-LU MA	663	Silicon@carbon hollow core-shell heterostructures novel anode materials for lithium ion batteries
JOSÉ SOLLA-GULLÓN, ANTONIO ALDAZ and JEAN CLAVILIER	669	Ultra-low platinum coverage at gold electrodes and its effect on the hydrogen reaction in acidic solutions
P. CÓRDOBA-TORRES, T.J. MESQUITA and R.P. NOGUEIRA	676	Influence of geometry-induced current and potential distributions on the characterization of constant-phase element behavior
YU CHEN, GUOFENG XU, JIANLING LI, YAKUN ZHANG, ZHONG CHEN and FEIYU KANG	686	High capacity 0.5Li <sub>2</sub> MnO <sub>3</sub> ·0.5LiNi <sub>0.33</sub> Co <sub>0.33</sub> Mn <sub>0.33</sub> O <sub>2</sub> cathode material via a fast co-precipitation method
SYLVAIN AMAND, MARCO MUSIANI, MARK E. ORAZEM, NADINE PÉBÈRE, BERNARD TRIBOLLET and VINCENT VIVIER	693	Constant-phase-element behavior caused by inhomogeneous water uptake in anti-corrosion coatings
TIMOTHY KHOO, ANTHONY SOMERS, ANGEL A.J. TORRIERO, DOUGLAS R. MACFARLANE, PATRICK C. HOWLETT and MARIA FORSYTH	701	Discharge behaviour and interfacial properties of a magnesium battery incorporating trihexyl(tetradecyl)phosphonium based ionic liquid electrolytes
MERILIN VIKKISK, IVAR KRUISENBERG, URMAS JOOST, EUGENE SHULGA and KAIDO TAMMEVESKI	709	Electrocatalysis of oxygen reduction on nitrogen-containing multi-walled carbon nanotube modified glassy carbon electrodes
JULIANA CANCINO, CLAUDIA A. RAZZINO, VALTENCIR ZUCOLOTTI and SERGIO A.S. MACHADO	717	<i>The use of mixed self-assembled monolayers as a strategy to improve the efficiency of carbamate detection in environmental monitoring</i>
HU QU, BIZHOU LIN, LIWEN HE, XIAORONG FAN, YI ZHOU, YILIN CHEN and BIFEN GAO	724	Electrochemical and photoelectrocatalytic properties of TaWO <sub>6</sub> nanosheet film
A. SANTASALO-AARNIO, S. TUOMI, K. JALKANEN, K. KONTTURI and T. KALLIO	730	The correlation of electrochemical and fuel cell results for alcohol oxidation in acidic and alkaline media
TUOMAS VAINIKKA, DAVID LLOYD, LASSE MURTOMÄKI, JOSÉ A. MANZANARES and KYÖSTI KONTTURI	739	Electrochemical study of copper chloride complexes in the RTIL 1-butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide
WELESAMEL GEREMEDHIN, MAEREG AMARE and SHIMELIS ADMASSE	749	Electrochemically pretreated glassy carbon electrode for electrochemical detection of fenitrothion in tap water and human urine
FEI WANG, YANJU WU, KUI LU and BAOXIAN YE	756	A simple but highly sensitive and selective calixarene-based voltammetric sensor for serotonin
YI-PING LIANG, CHIA-CHEN LI, WEN-JING CHEN and JYH-TSUNG LEE	763	Hydrothermal synthesis of lithium iron phosphate using pyrrole as an efficient reducing agent
ALEXANDER V. RUDNEV, KOJI YOSHIDA and THOMAS WANDLOWSKI	770	Electrochemical characterization of self-assembled ferrocene-terminated alkanethiol monolayers on low-index gold single crystal electrodes
MORTEN WETJEN, GUK-TAE KIM, MARIO JOOST, MARTIN WINTER and STEFANO PASSERINI	779	Temperature dependence of electrochemical properties of cross-linked poly(ethylene oxide)-lithium bis(trifluoromethanesulfonyl)imide- <i>N</i> -butyl- <i>N</i> -methylpyrrolidinium bis(trifluoromethanesulfonyl)imide solid polymer electrolytes for lithium batteries
IMREN HATAY PATIR	788	Fluorinated-cobalt phthalocyanine catalyzed oxygen reduction at liquid/liquid interfaces
YUEXIANG LI, YING XIANG, SHAOQIN PENG, XUEWEN WANG and LANG ZHOU	794	Modification of Zr-doped titania nanotube arrays by urea pyrolysis for enhanced visible-light photoelectrochemical H <sub>2</sub> generation
LI LI, KUOK HAU SENG, ZHIXIN CHEN, HUAKUN LIU, IVAN P. NEVIRKOVETS and ZAIPING GUO	801	Synthesis of Mn <sub>3</sub> O <sub>4</sub> -anchored graphene sheet nanocomposites via a facile, fast microwave hydrothermal method and their supercapacitive behavior

O. GALANGAU, I. FABRE-FRANCKE, S. MUNTEANU, C. DUMAS-VERDES, G. CLAVIER, R. MÉALLET-RENAULT, R.B. PANSU, F. HARTL and F. MIOMANDRE	809	Electrochromic and electrofluorochromic properties of a new boron dipyrromethene-ferrocene conjugate
MOHAMMAD HOSSEIN MASHHADIZADEH and ESMAEL AFSHAR	816	Electrochemical investigation of clozapine at TiO <sub>2</sub> nanoparticles modified carbon paste electrode and simultaneous adsorptive voltammetric determination of two antipsychotic drugs
B.T. LU, J.L. LUO and Y.C. LU	824	Effects of pH on lead-induced passivity degradation of nuclear steam generator tubing alloy in high temperature crevice chemistries
YAFEN LUO, HUANZHI LI, TINGTING CHEN, CUNWANG GE, YAWEN TANG, YU CHEN and TIANHONG LU	839	Effect of Pd ions in electrolyte on electrocatalytic performance of carbon supported Pd catalyst for oxidation of formic acid
FATHY M. HASSAN, ZHONGWEI CHEN, AIPING YU, ZHU CHEN and XINGCHENG XIAO	844	Sn/SnO <sub>2</sub> embedded in mesoporous carbon nanocomposites as negative electrode for lithium ion batteries
PATRICIA M. PAES DE SOUSA, RAQUEL GRAZINA, ANDRÉ D.S. BARBOSA, BALTAZAR DE CASTRO, JOSÉ J.G. MOURA, LUÍS CUNHA-SILVA and SALETE S. BALULA	853	Insights into the electrochemical behaviour of composite materials: Monovacant polyoxometalates @ porous metal-organic framework
CHANGCHUN JIN, ZHUO ZHANG, ZHIDONG CHEN and QUN CHEN	860	Effect of Ag modification on catalytic activity of Pd electrode for allyl alcohol oxidation in alkaline solution
XIANJUN LIU, DEYU WANG and SIQI SHI	865	Exploration on the possibility of Ni foam as current collector in rechargeable lithium-air batteries
S.K. SHARMA, MIN-SIK KIM, D.Y. KIM and JONG-SUNG YU	872	Al nanorod thin films as anode electrode for Li ion rechargeable batteries
HUIJUN YAN, JUN WANG, SONGNAN LI, WANLU YANG, ZAN GAO, QI LIU, RUI GAO, ZHANSHUANG LI, MILIN ZHANG and LIANHE LIU	880	L-Lysine assisted synthesis of $\beta$ -Ni(OH) <sub>2</sub> hierarchical hollow microspheres and their enhanced electrochemical capacitance performance
CHEN LIAO, XIAO-GUANG SUN and SHENG DAI	889	Crosslinked gel polymer electrolytes based on polyethylene glycol methacrylate and ionic liquid for lithium ion battery applications
D. ILANGESWARAN and P. MANISANKAR	895	Electrochemical synthesis, characterization and electrochromic behavior of poly(4-aminodiphenylamine-co-4,4'-diaminodiphenyl sulfone)
SEOK HEE LEE, SEUNG HYUN JEE, KANG SOO LEE, SANG CHEOL NAM and YOUNG SOO YOON	905	Enhanced cycling performance in heat-treated tin-based composite oxide anode for lithium-ion batteries
A. KARANTONIS, E. BOURBOS and D. KARAOULANIS	912	Experiments on electrical resonance and antiresonance of the electrochemical interface under potentiostatic control
CLAUDIO MELE, MASSIMO CATALANO, ANTONIETTA TAURINO and BENEDETTO BOZZINI	918	Electrochemical fabrication of nanoporous gold-supported manganese oxide nanowires based on electrodeposition from eutectic urea/choline chloride ionic liquid
PANKAJ KUMAR and HARISH KUMAR SHARMA	925	Development of all solid state chromium(III) selective sensor by using newly synthesized triazole derivative as an ionophore in PVC matrix
K. DAROWICKI, A. ZIELIŃSKI, J. RYL and P. SLEPSKI	930	Impedance of cation-coupled electron transfer reaction: Theoretical description of one pathway process
HAI-LONG YAO, GUAN-JUN YANG, SHAN LI, XUE-LONG HE, SHENG-QIANG FAN, CHENG-XIN LI and CHANG-JIU LI	940	Synergistic effects of high temperature and impact compaction on the nano-TiO <sub>2</sub> film for the significant improvement of photovoltaic performance of flexible dye-sensitized solar cells
	I	Recent SI
	II	Future SI