

SYMPOSIUM F

**Nanostructured Materials for Electrochemical Energy Systems:
Lithium Batteries, Supercapacitors and Fuel Cells**

**Symposium F1: Nanostructured Materials for Electrochemical Energy Systems:
Lithium Batteries, Supercapacitors and Fuel Cells**

Level 2, Room 203

Mon, 29-Jun-09	Tue, 30-Jun-09	Wed, 1-Jul-09	Thu, 2-Jul-09	Fri, 3-Jul-09
	(08:30 - 09:15) Plenary Lecture 2 Peter Doherty	(08:30 - 09:15) Plenary Lecture 4 John Pendry	(08:30 - 09:15) Plenary Lecture 6 Hartmut Michel	
(09:00 - 09:45) Opening Ceremony	(09:15 - 10:00) Plenary Lecture 3 Andrew Wee	(09:15 - 10:00) Plenary Lecture 5 Chad Mirkin	(09:15 - 10:00) Plenary Lecture 7 Akihisa Inoue	(09:00 - 09:45) Plenary Lecture 8 Jean-Marie Basset
(09:45 - 10:30) Plenary Lecture 1 Peter Gruenberg	(10:00 - 10:30) Coffee Break			(09:45 - 10:30) Plenary Lecture 9 Frederick Lange
(10:30 - 11:00) Coffee Break				(10:30 - 11:00) Coffee Break
(11:00 - 12:30) Session F1-S1 Cathode Materials	(10:30 - 13:00) Session F1-S4 Anode Materials	(10:30 - 13:00) Session F1-S6 Fundamentals	(10:30 - 13:00) Session F1-S9 Novel Synthesis	(11:00 - 13:00) Session F1-S12 Techniques / Miscellaneous
(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture James L. Hedrick	(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture Martyn Poliakoff	(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture Karl U. Kainer	(12:30 - 14:00) Lunch (13:00 - 14:30) Panel Discussion	(13:00 - 14:30) Closing & Poster Award Ceremony Lunch
(14:00 - 16:15) Session F1-S2 Novel Approaches in Supercapacitors / Lithium Batteries	(14:00 - 16:30) Session F1-S5 Cathode Materials: Olivine / Polyanion based Electrodes	(14:00 - 15:45) Session F1-S7 Anode Materials / Electrolytes	(14:30 - 16:15) Session F1-S10 Solid State Batteries / Electrodes	
(16:15 - 16:30) Break		(15:30 - 17:30) Session F-S8 POSTER SESSION	(16:15 - 16:30) Break	
(16:30 - 18:45) Session F1-S3 Electrolytes			(16:30 - 18:30) Session F1-S11 Synthesis and Characterization of Electrodes / Electrolytes	
	(18:00 - 20:00) Public Lectures @ UCC Peter Doherty Peter Gruenberg			
		(19:00 - 20:00) Public Lecture @ UCC Hartmut Michel	19:00 - 22:00 hrs Conference Banquet @ Suntec	

**Symposium F2: Nanostructured Materials for Electrochemical Energy Systems:
Lithium Batteries, Supercapacitors and Fuel Cells**

Level 2, Room 204 (Monday - Tuesday) / Room 205 (Wednesday)

Mon, 29-Jun-09	Tue, 30-Jun-09	Wed, 1-Jul-09	Thu, 2-Jul-09	Fri, 3-Jul-09
	(08:30 - 09:15) Plenary Lecture 2 Peter Doherty	(08:30 - 09:15) Plenary Lecture 4 John Pendry	(08:30 - 09:15) Plenary Lecture 6 Hartmut Michel	
(09:00 - 09:45) Opening Ceremony	(09:15 - 10:00) Plenary Lecture 3 Andrew Wee	(09:15 - 10:00) Plenary Lecture 5 Chad Mirkin	(09:15 - 10:00) Plenary Lecture 7 Akihisa Inoue	(09:00 - 09:45) Plenary Lecture 8 Jean-Marie Basset
(09:45 - 10:30) Plenary Lecture 1 Peter Gruenberg	(10:00 - 10:30) Coffee Break			(09:45 - 10:30) Plenary Lecture 9 Frederick Lange
(10:30 - 11:00) Coffee Break		ROOM 205 (10:30 - 13:30) Session F2-S6 Lithium Battery / Miscellaneous		(10:30 - 11:00) Coffee Break
(11:00 - 12:45) Session F2-S1 SOFC	(10:30 - 13:00) Session F2-S4 SOFC / PEMFC			
(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture James L. Hedrick	(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture Martyn Poliakoff	(12:30 - 14:00) Lunch (13:00 - 13:45) Theme Lecture Karl U. Kainer	(12:30 - 14:00) Lunch	(13:00 - 14:30) Closing & Poster Award Ceremony Lunch
(14:00 - 16:15) Session F2-S2 PEMFC/ DMFC	(14:00 - 16:15) Session F2-S5 Fuel Cells / Lithium Batteries		(13:00 - 14:30) Panel Discussion	
(16:15 - 16:30) Break		(15:30 - 17:30) Session F-S8 POSTER SESSION		
(16:30 - 17:30) Session F2-S3 SPFC / H2 production & storage				
	(18:00 - 20:00) Public Lectures @ UCC Peter Doherty Peter Gruenberg	(19:00 - 20:00) Public Lecture @ UCC Hartmut Michel	19:00 - 22:00 hrs Conference Banquet @ Suntec	

F1-S1: Cathode Materials

Monday, 29 June 2009

11:00 - 12:30

Level 2, Room 203

Chairs: Yamada and Prabaharan

11:00 F1-S1.1-2(IN) A01481-02571 pg F51
**From Li_2MnO_3 to $\text{Li}(\text{Ni},\text{Mn},\text{Co})\text{O}_2$ Oxides: An
Overview of the Structure Evolution**
Claude DELMAS, Adrien BOULINEAU,
Laurence CROGUENNEC, Francois WEILL

11:30 F1-S1.3-4(IN) A01366-02381 pg F47
**First Principles Modeling of Nano and Bulk Materials
for Li Batteries**
Gerbrand CEDER

12:00 F1-S1.5(O) A02868-04906 pg F89
**Comparative Study of Lithium Transport Kinetics in
Olivine Cathodes for Li-ion Batteries**
Nonglak MEETHONG, Yu-Hua KAO,
Yet-Ming CHIANG

12:15 F1-S1.6(O) A00211-02877 pg F16
Crystal Structure of Li_2MSiO_4 (M = Fe, Mn)
Shin-ichi NISHIMURA, Shogo HAYASE,
Ryoji KANNO, Masatomo YASHIMA,
Noriaki NAKAYAMA, Atsuo YAMADA

F2-S1: SOFC

Monday, 29 June 2009

11:00 - 13:00

Level 2, Room 204

Chairs: Jiang and Traversa

11:00 F2-S1.1-2(IN) A00385-00708 pg F19
**Towards Fuel Cell Commercialization – NRC’s
Focused R&D Program**
Dave GHOSH

11:30 F2-S1.3-4(IN) A02248-03833 pg F74
**Electrode Reaction Mechanism of LSCF and LSM
Studied by in situ Electrochemical XAS**
Yoshiharu UCHIMOTO, Yuki ORIKASA,
Koji AMEZAWA, Tatsuya KAWADA

12:00 F2-S1.5-6(IN) A02194-03759 pg F72
Effects of Low Hydrocarbons on the SOFC Anode
Sangho YOON, Yongmin KIM, Joongmyeon BAE

12:30 F2-S1.7(O) A01134-01944 pg F38
**Electrical Conductivity of $\text{Ce}_{0.8}\text{Gd}_{0.2}\text{O}_{1.9}$
Synthesized by Aqueous Gel-casting Technique**
Hong Quan HE, San Ping JIANG

12:45 F2-S1.8(O) A01356-02369 pg F46
**Phosphorus Poisoning Effects on Nickel/Yttria-
stabilized Zirconia Anode of Solid Oxide Fuel Cells**
Mingjia ZHI, Chengcheng XIANG, Nianqiang Nick WU

F1-S2: Novel Approaches in Supercapacitors / Lithium Batteries

Monday, 29 June 2009

14:00 - 16:15

Level 2, Room 203

Chairs: Abe and Imanishi

14:00 F1-S2.1-2(IN) A02037-03509 pg F66
**Enhanced Supercapacitive Behaviors of Manganese
Dioxides**
Shinichi KOMABA, Tomoya TSUCHIKAWA

14:30 F1-S2.3-4(IN) A02517-04308 pg F80
**On the Use of Nano-materials and Nano-structures in
Rechargeable Batteries and EDL (super) Capacitors**
Doron AURBACH

15:00 F1-S2.5-6(IN) A02426-04141 pg F78
**Design of Naoporous Carbon Electrode for High
Voltage Operation of Electric Double Layer Capacitor**
Soshi SHIRAISHI

15:30 F1-S2.7(O) A01301-04000 pg F43
**Vanadium Oxide (V_2O_5) Nanobelts for Supercapacitor
Applications**
Eugene KHOO, Jan MA, Pooi See LEE

15:45 F1-S2.8(O) A02507-04295 pg F79
**Carbon Nanotube Based Charge Storage and Energy
Conversion Devices**
Grace WEE, Andreas KIEBELE, Jason MA,
George GRUNER, Subodh MHAISALKAR,
Martti KAEMPGEN

16:00 F1-S2.9(O) A01600-02782 pg F57
**Studies on the 4V-cathode, LiVPO_4F for Li-ion
Batteries**
Reddy M.V., Rao G.V. SUBBA, Chowdari B.V.R

F2-S2: PEMFC/ DMFC

Monday, 29 June 2009

14:00 - 16:15

Level 2, Room 204

Chairs: Chu and Ghosh

14:00 F2-S2.1-2(IN) A01630-02825 pg F59
**Nanoscale Electrocatalysts and Mechanistic
Understanding by Electrochemical Impedance
Spectroscopy**
I-Ming HSING

14:30 F2-S2.3-4(IN) A02651-04545 pg F85
Novel Composite Membrane Based on Pore-Filling
Electrolyte for Direct Methanol Fuel Cells
Tien Hoa NGUYEN, Xin WANG

15:00 F2-S2.5-6(IN) A02774-04849 pg F88
Direct Methanol Fuel Cell (DMFC) vs In-direct
(Reforming) Methanol Fuel Cell (RMFC)
Deryn CHU

15:30 F2-S2.7(O) A02063-03548 pg F68
Achieving High Proton Conductivities in Polymer
Electrolyte Membranes for Fuel Cells Applications
Thuy D. DANG, Zongwu BAI

15:45 F2-S2.8(O) A01365-02380 pg F47
Ab Initio Prediction of Nano-scale Platinum
Dissolution in Aqueous Environments
Kristin PERSSON, Byungchan HAN, Gerbrand CEDER

16:00 F2-S2.9(O) A00861-01495 pg F33
Oleylamine-Mediated Synthesis of Monodisperse Pd-
Composite Nanoparticles for Catalytic Formic Acid
Oxidation
Vismadeb MAZUMDER, Shouheng SUN

F1-S3: Electrolytes

Monday, 29 June 2009

16:30 - 18:45

Level 2, Room 203

Chairs: Ceder and Kawamura

16:30 F1-S3.1-2(IN) A01439-02496 pg F49
Development of Sulfide Glass-ceramic Electrolytes for
All-solid-state Lithium Rechargeable Batteries
Akitoshi HAYASHI, Masahiro TATSUMISAGO

17:00 F1-S3.3-4(IN) A00068-00414 pg F12
Soft Matter as a Versatile Source for Generation of
Novel Lithium Battery Electrolytes
Aninda Jiban BHATTACHARYYA

17:30 F1-S3.5-6(IN) A01848-03205 pg F61
Micro Lithium Ion Batteries Prepared by Pulsed
Laser Deposition
Junichi KAWAMURA, Naoaki KUWATA,
Osamu KAMISHIMA, Takeshi HATTORI

18:00 F1-S3.7(IN) A00028-00357 pg F12
Advanced Si-Based Electrolyte for Lithium Ion
Battery
Zhengcheng ZHANG, Robert WEST, Khalil AMINE

18:30 F1-S3.8(O) A02140-03711 pg F71
Cross Surface Charge Percolation for High Energy
Density Lithium Storage
Qing WANG, Shaik M ZAKEERUDDIN,
Ivan EXNAR, Michael GRAETZEL

F2-S3: SPFC / H₂-production & storage

Monday, 29 June 2009

16:30 - 17:30

Level 2, Room 204

Chairs: Hsing and Wang Xin

16:30 F2-S3.1-2(IN) A01517-02695 pg F54
Probing and Mapping Gas-electrode Interactions in
SOFC Using in situ Raman Spectroscopy
Kevin BLINN, Harry ABERNATHY, Meilin LIU

17:00 F2-S3.3(O) A00640-01228 pg F25
Methanol-to-Hydrogen Decomposition and
Electrochemical Hydrogen Absorption in Carbon
Nanostructured Materials
Nail SULEIMANOV, Sergei KHANTIMEROV,
Eugene KUKOVITSKY, Robert SCHEUERMANN,
Dierk HERLACH

17:15 F2-S3.4(O) A00857-01487 pg F32
Regeneration of Spent-NaBH₄ Back to NaBH₄ by
Using High-energy Ball Milling
Hsiao-Ting YEN, Bing-Hung CHEN, Cheng-Hong LIU,
Fanghei TSAU, Chan-Li HSUEH, Jie-Ren KU

F1-S4: Anode Materials

Tuesday, 30 June 2009

10:30 - 13:00

Level 2, Room 203

Chairs: Notton and Yang

10:30 F1-S4.1-2(IN) A02587-04420 pg F83
Carbon Nanospheres for Negative Electrode of
Lithium-ion Batteries
Takeshi ABE

11:00 F1-S4.3-4(IN) A01373-02392 pg F48
Nano-Micro Composites as High Capacity Anode
Materials for Li-ion Batteries
Hong LI, Zhaoxiang WANG, Xuejie HUANG,
Liquan CHEN

11:30 F1-S4.5-6(IN) A00753-01333 pg F29
Reversible and High Capacity Nanostructured
Electrode Materials for Li-ion Batteries
Jaephil CHO

12:00 F1-S4.7(O) A00217-00706 pg F17
New Preparation Methods of Composite Electrodes
Containing Tin, Cobalt and Carbon Atoms for
Lithium Ion Batteries
Ricardo ALCÁNTARA; Francisco NACIMIENTO;
Uche NWOKEKE; Inés RODRÍGUEZ;
José Luís TIRADO

*Symposium F - Nanostructured Materials for Electrochemical Energy Systems:
Lithium Batteries, Supercapacitors and Fuel Cells*

12:15 F1-S4.8(O) A01566-02728 pg F56
Li-Storage and Cyclability of CdFe₂O₄ as Anode for Li-Ion Batteries
Yogesh SHARMA, N. SHARMA, G. V. SUBBA RAO,
B. V. R. CHOWDARI

12:30 F1-S4.9(O) A02354-04035 pg F76
Preparation and Electrochemical Properties of Li₄Ti₅O₁₂ as an Electrode Material
Jiangfeng XU, Zhimin BAI

12:45 F1-S4.10(O) A01563-02725 pg F56
Nanocomposites, (SnO₂·½ VO_x) as Anodes for Li-ion Batteries
B DAS, M V REDDY, G V SUBBA RAO,
B V R CHOWDARI

F2-S4: SOFC / PEMFC

Tuesday, 30 June 2009
10:30 - 13:00

Level 2, Room 204
Chairs: ML Liu and Bae

10:30 F2-S4.1-2(IN) A02772-04737 pg F87
Power Generating Property of Direct CH₄ Fueled SOFC using LaGaO₃ Electrolyte
Sakai TAKAOKI, Hao ZHONG, Hiroshige MATSUMOTO, Tatsumi ISHIHARA

11:00 F2-S4.3-4(IN) A02293-03924 pg F75
Nanostructured Oxide Thin Films for Miniaturized Solid Oxide Fuel Cells (SOFCs)
Enrico TRAVERSA

11:30 F2-S4.5-6(IN) A00713-01276 pg F29
Effect of Fabrication Route on the Mechanical and Electrochemical Properties of SOFC's
Sammes NIGEL

12:00 F2-S4.7(O) A02725-04691 pg F86
Electrical Characterization of Zirconia Based sol Gel Electrospun Fibres
Adrian LOWE, Yan FENG, Li LU

12:15 F2-S4.8(O) A02252-03845 pg F74
Fabrication of Morphology Controlled Platinum Nanoparticles and their Electrochemical Applications
Ting LEI, Jinyuan CHEN

12:30 F2-S4.9(O) A02147-03699 pg F72
Synthesis and Assessment of SrTiO₃-based Perovskite as Anode Materials for Solid Oxide Fuel Cells
Wei WANG, Teng Sheng PEH, Siew Hwa CHAN,
Tian Shu ZHANG

12:45 F2-S4.10(O) A01684-03025 pg F59
Study on Graphite Nano-fiber as Catalyst Support for Proton Exchange Membrane Fuel Cell
Hongfeng XU, Lu LU

F1-S5: Cathode Materials: Olivine / Polyanion based Electrodes

Tuesday, 30 June 2009

14:00 - 16:30

Level 2, Room 203

Chairs: Chiang and Bhattacharya

14:00 F1-S5.1-2(IN) A01188-02031 pg F40
LiMnPO₄ Cathode Material for High Performance Li Ion Battery
Ivan EXNAR

14:30 F1-S5.3-4(IN) A02225-03800 pg F73
New Mechanisms of Li⁺ Insertion/Extraction into Highly Defective Li_xFeyPO₄ Powders
Christian MASQUELIER, Pierre GIBOT,
Stephane HAMELET, Montse CASAS CABANAS,
Stephane LEVASSEUR, Clare GREY, Jordi CABANA,
Dominique BONNIN, Jean-Marie TARASCON

15:00 F1-S5.5-6(IN) A00826-01440 pg F32
LiFePO₄ – Defect Chemistry, Phase Transformation to FePO₄, and Mixed Conducting Networks
Katja WEICHERT, Ruhul AMIN, Wilfried SIGLE,
Janez JAMNIK, Yong-Shen HU, Yu-Guo GUO,
Rajesh TRIPATHI, Joachim MAIER

15:30 F1-S5.7(O) A01924-03312 pg F62
Storage Performance of LiFe_{1-x}MnxPO₄ Nanoplates
Saravanan KUPPAN, Jagadese. J VITTAL,
M V V REDDY, B V R CHOWDARI, Palani BALAYA

15:45 F1-S5.8(O) A01061-02607 pg F37
Li⁺ Ion Pathways in LiFePO₄ and Related Olivines
Stefan ADAMS

16:00 F1-S5.9(O) A01498-02741 pg F53
Facile Synthesis of LiMn₂O₄/MWNTs Hybrid Nanomaterials as Cathode Materials of Li-Ion Batteries
Xian-Ming LIU, Zheng-Dong HUANG, Peng-Cheng MA, Jang-Kyo KIM

16:15 F1-S5.10(O) A02959-05064 pg F93
A Group of New Polyanion Materials Li_xM₂(MoO₄)₃ {0 ≤ x ≤ 3} [M=Co, Ni] for Lithium Batteries: Findings and Issues
K. M. BEGAM, M. S. MICHAEL,
S. R. S. PRABAHARAN

F2-S5: Fuel Cells / Lithium Batteries

Tuesday, 30 June 2009
14:00 - 16:15
Level 2, Room 204
Chairs: Takaaki and Wu

- 14:00 F2-S5.1-2(IN) A02553-04366 pg F82**
New Materials for PEM Fuel Cells
Sebastian JOSEPH, Sergio GAMBOA,
Juan Manuel SIERRA, Edgar VAENZUELA,
Joel MOREIRA
- 14:30 F2-S5.3(O) A00806-01419 pg F31**
**MWNTs Supported Nanocrystalline Metal-metal
Oxide as Methanol Tolerant Oxygen Reduction
Reaction Electrocatalyst for Proton Exchange
Membrane Fuel Cell**
R. Imran JAFRI, Sundara RAMAPRABHU
- 14:45 F2-S5.4(O) A00130-00473 pg F14**
**Nanostructured Non-noble Catalysts for Oxygen
Electrodes**
Viacheslav BARSUKOV, Volodymyr KHOMENKO,
Kostyantyn LYKHNITSKY
- 15:00 F2-S5.5(O) A01443-02513 pg F49**
**Inhibitor Effect of Sodium Benzoate on Corrosion
Behaviour of Nanocrystalline Pure Iron Metal in
Near-neutral Aqueous Solutions**
Vahid AFSHARI, Changiz DEGHANIAN
- 15:15 F2-S5.6(O) A01994-03555 pg F65**
**Electrochemical Deposition of Highly-Oriented Zinc
Oxide Nanorods Suitable for use in Dye-Sensitized
Solar Cells**
Mohammad Reza KHAJAVI,
Daniel John BLACKWOOD
- 15:30 F2-S5.7(O) A02542-04431 pg F81**
**Effect of Processing Parameters on Pore Structure
and Thickness of Anodic Alumina Membranes**
Mohammad AHMADI DARIKENARI, Mohsen SEIFI,
Hadi TABAIAN, Hossein KAZEMIAN
- 15:45 F2-S5.8(O) A00648-02280 pg F26**
**Preparation, Structural and Impedance Studies of
Nanosized LiNiVO₄ Electrode Material**
Selvasekarapandian SUBRAMANIAM,
Sakunthala AYYASAMY, Nithya HELLER,
Arun Kumar DORAI, Hema MUTHUSAMY,
Christopher Selvin P., Sanjeeviraja C.
- 16:00 F2-S5.9(O) A02601-04443 pg F84**
**Attempt to Directly Synthesize Magnesium
Borohydride from its Constituent Elements**
Chung-Kiak POH, Zaiping GUO, Xuebin YU,
Zhenguo HUANG, Hua-Kun LIU

F1-S6: Fundamentals

Wednesday, 1 July 2009
10:30 - 13:00
Level 2, Room 203
Chairs: Delmas and Doublet

- 10:30 F1-S6.1-2(IN) A02876-04918 pg F90**
**Phase Stability of Nanostructured Storage Materials
during Electrochemical Cycling**
Yet-Ming CHIANG, Ming TANG,
Nonglak MEETHONG, Yu-Hua KAO
- 11:00 F1-S6.3-4(IN) A02046-03520 pg F67**
**From Powder to Network: The Impact of Wiring and
Particle Size on Storage Performance**
Janko JAMNIK, Bostjan ERJAVEC, Robert DOMINKO,
Miran GABERSCEK
- 11:30 F1-S6.5-6(IN) A02757-04726 pg F86**
**The Impact of Surface and Interface Energy on Nano-
sized Insertion Compounds**
Marnix WAGEMAKER, Fokko MULDER,
Anton VAN DER VEN
- 12:00 F1-S6.7-8(IN) A02535-04336 pg F81**
**New Concepts of Redox Centres in Electrode
Materials for Li-Ion Batteries: A Step by Step
Theoretical Approach**
Marie-Liesse DOUBLET, Jerome BERNARDI,
Frederic LEMOIGNO
- 12:30 F1-S6.9(O) A01781-03124 pg F61**
**Updated References for the Structural, Electronic and
Vibrational Properties of TiO₂(B) Bulk Using First-
principles DFT Calculations**
Mouna BEN YAHIA, Frederic LEMOIGNO, Sebastien
FILHOL, Marie-Liesse DOUBLET, Thomas BEUVIER,
Mireille RICHARD-PLOUET, Luc BROHAN
- 12:45 F1-S6.10(O) A00119-00362 pg F13**
**Synthesis and characterization of carbon coated
LiNi_{1/3}Co_{1/3}Mn_{1/3}O₂ cathode material for Li-ion
batteries**
Nupur Nikkan SINHA, Munichandraiah NOOKALA

F2-S6: Lithium Battery / Miscellaneous

Wednesday, 1 July 2009
10:30 - 13:30
Level 2, Room 205
Chair: Balaya

- 10:30 F2-S6.1(O) A02841-04863 pg F89**
**Size Effect on Hydrogen Adsorption in Coiled Carbon
Nanotubes**
Gayathri VENKATACHARI, Devi NEELAMEGAM
RAJAN

*Symposium F - Nanostructured Materials for Electrochemical Energy Systems:
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10:45 F2-S6.2(O) A01304-02542 pg F43
Studies on Dielectric Properties in Polymer-clay Nanocomposite Electrolyte
Dillip K. PRADHAN, Naba K. KARAN, Reji THOMAS, Ram S. KATTIYAR

11:00 F2-S6.3(O) A02956-05061 pg F91
Nonaqueous Electrolyte Containing Boron Based Anion Receptors (BBAR)
L. F. LI, B. XIE, G. X. FENG, H. S. LEE, X. Q. YANG, H. LI, L. Q. CHEN, X. J. HUANG

11:15 F2-S6.4(O) A00710-01334 pg F28
Structural and Electrical Characteristics of $\text{Bi}_4\text{V}_{2(1-x)}\text{Ni}_{2x}\text{O}_{11-3x}$, $0.00 \leq x \leq 0.1$
Govind BICHILE, Vijendra CHAUDHARI, Suhas DESAI

11:30 F2-S6.5(O) A01943-03352 pg F63
Lithium Ion Solid State Electrolyte Fabrication Methods and the Effect on Microstructure and Conductivity
Paul JOHNSON, Nigel SAMMES, Nobuyuki IMANISHI, Osamu YAMAMOTO

11:45 F2-S6.6(O) A02085-03596 pg F68
Preparation and Characterization of Proton-conducting Phosphoric Acid-doped Silica Gel Electrolyte for Secondary Battery at Room Temperature
Sudhakar BANSOD, Kamal SINGH

12:00 F2-S6.7(O) A00535-01087 pg F22
Study of Nano-dispersed Polymer Electrolyte Thin Films and its Electrical and Dielectric Properties
Prem Narain GUPTA, Govind Kumar PRAJAPATI, Rupesh ROSHAN

12:15 F2-S6.8(O) A02105-03622 pg F69
Enhanced Ionic Conductivity in Poly (Methyl Methacrylate) (PMMA) /Layered Lithium Trivanadate (LiV_3O_8) Nanocomposite Gel Polymer Electrolytes
Ashok KUMAR, Madhurya DEKA

12:30 F2-S6.9(O) A00130-00472 pg F13
Nanostructured Composite Anode Materials for Lithium-ion Batteries
Viacheslav BARSUKOV, Volodymyr KHOMENKO, Oksana ZAYATS, Viktor TVERDOKHLEB

12:45 F2-S6.10(O) A01492-03613 pg F53
Effect of Dopants on the Synthesis of Polyaniline and Its Characterization
Muthusamy PARAMASIVAM

13:00 F2-S6.11(O) A00903-01584 pg F34
Tremella-like Molybdenum Dioxide Consisting of Nanosheets as an Anode Material for Lithium Ion Battery
L.C. YANG, Q.S. GAO, Y.H. ZHANG, Y. TANG, Y.P. WU

13:15 F2-S6.12(O) A02954-05060 pg F90
To Study the Effect of Dopant AgI in Transport of Silver Ions in the Superionic Glass System $x\text{AgI} - (55-x)[2\text{Ag}_2\text{O} - \text{B}_2\text{O}_3] - 5\text{TeO}_2$ where $x = 40, 45, \dots, 65$
D. K. KANCHAN, Dharmesh H. KOTHARI

F1-S7: Anode Materials / Electrolytes

Wednesday, 1 July 2009

14:00 - 16:00

Level 2, Room 203

Chairs: Wagemaker and Weichert

14:00 F1-S7.1-2(IN) A02622-04481 pg F85
Nanostructured Si Materials as Anode for Li-ion Batteries
Yong YANG

14:30 F1-S7.3-4(IN) A00217-00409 pg F17
On the Use of the Reverse Micelles Synthesis of Nanomaterials for Lithium-ion Batteries
María José ARAGÓN, Pedro LAVELA, Bernardo LEÓN, Carlos PÉREZ-VICENTE, José Luis TIRADO, Candela VIDAL-ABARC

15:00 F1-S7.5(O) A00817-01426 pg F31
Silicon Nanowires as Negative Electrode for Lithium-ion Microbatteries
Barbara LAIK, Diane UNG, Amael CAILLARD, Costel Sorin COJOCARU, Didier PRIBAT, Jean Pierre PEREIRA RAMOS

15:15 F1-S7.6(O) A00656-01180 pg F26
On the Mechanism of Li-ion Conductivity of Solid Nano-Composite Electrolytes
Grigory POTEKIN, Aleksandr STENGACH, Ivan DAVIDOV, Andrey ANISSIN

15:30 F1-S7.7(O) A02532-04345 pg F80
Dispersed Phase Polymer Composites: Mechanism of Improvement in Ionic Conductivity and Stability Properties
A. K. THAKUR

15:45 F1-S7.8(O) A01603-02855 pg F58
Ta-doped $\text{Li}_6\text{Zr}_2\text{O}_7$: A New Li-fast Ion Conductor
Prasada Rao RAYAVARAPU, Reddy M.V.V., Adams STEFAN, Subba Rao G.V., Chowdari B.V.R.

**F-S8: Poster Session - Lithium Batteries,
Supercapacitors and Fuel Cells**

Wednesday, 1 July 2009

15:30 - 17:30

Level 3, Gallery

Chairs: Aurbach, Jamnik, Menetrier, Masquelier

- F-S8.01(P) A00097-00310** pg F12
**Electrode of Methanol Oxidation on Platinum doped
Multiwalled Carbon Nanotubes (MWCNTs)**
Mohsin Ahmad BHAT, Kanchan M. SAMANT,
Geeta SURENDRAN, Santosh K. HARAM
- F-S8.02(P) A00161-00331** pg F14
**Fabrication of 10%Gd Doped Ceria (GDC)/NiO-GDC
Half-cell for Low or Intermediate Temperature Solid
Oxide Fuel Cells using Spray Pyrolysis**
Muralidhar CHOURASHIYA, Shyamla BHARDWAJ,
Lata JADHAV
- F-S8.03(P) A00195-00428** pg F15
**Effect of Ionic Conductivity and Light
Intensity on the Performance of a Solid State
TiO₂ Photoelectrochemical Cell**
Mohd. Yusri ABD. RAHMAN, Rika TASLIM,
Muhamad MAT SALLEH, Akrajas ALI UMAR,
Azizan AHMAD
- F-S8.04(P) A00206-00477** pg F15
**Nanostructure and Electrochemical Property
of Hydrothermally Prepared One-dimensional
Manganese Dioxide**
Chung-Hsien WU, Chung-Hsin LU
- F-S8.05(P) A00209-02367** pg F15
**Isolation of Solid Solution Phases in Size-Controlled
Li_xFePO₄ at Room Temperature**
Genki KOBAYASHI, Shin-Ichi NISHIMURA,
Min-Sik PARK, Ryoji KANNO, Masatomo YASHIMA,
Takashi IDA, Atsuo YAMADA
- F-S8.06(P) A00253-01191** pg F18
**¹H, ⁷Li and ¹⁹F Transverse Nuclear Magnetic
Relaxation Studies of the (PEO)₉LiCF₃SO₃:Al₂O₃
Nanocomposite Polymer Electrolyte**
Piyasiri EKANAYAKE, Detlef REICHERT,
Horst SCHNEIDER, Kay SAALWAECHTER
- F-S8.07(P) A00253-03852** pg F18
**A Solid Polymer Electrolyte Containing Ionic Liquid
for Photo-Electro-Chemical Solar Cells**
T. M. W. J. BANDARA, P. EKANAYAKE,
M. A. K. L. DISSANAYAKE, I. ALBINSSON,
B-E MELLANDER
- F-S8.08(P) A00334-00622** pg F19
**Ag/Pt Hexagonal Nanoplates as Electrocatalysts for
Oxygen Reduction**
Chien-Liang LEE, Chun-Ming TSENG
- F-S8.09(P) A00439-00825** pg F20
Morphological Studies on Ce_{1-x}Zr_xO₂ Solid Solutions
Kalpana MURUGESAN, Nalini BALAKRISHNAN
- F-S8.10(P) A00439-00834** pg F20
**Synthesis and Characterization of Nanoscaled SnSb
and CNT-SnSb as Anode for Lithium Battery**
Nithyadharseni PALANIYANDI,
Nalini BALAKRISHNAN
- F-S8.11(P) A00503-00923** pg F21
**A Deflagration Method to Synthesize
LiNi_{1/3}Co_{1/3}Mn_{1/3}O₂ Cathode Materials for Li-ion
Batteries**
Jiebn LI, Youlong XU
- F-S8.12(P) A00520-01125** pg F21
**Effect of High-energy Ball-milling on Electrical
Properties of Li_{1.3}Al_{0.3}Ti_{1.7}(PO₄)_{2.9}(VO₄)_{0.1} Material**
Lakshmi VIJAYAN, Gurusamy GOVINDARAJ
- F-S8.13(P) A00591-02843** pg F22
**Synthesis and the Effect of Nanosized ZrO₂ Filler
in the Ionic Conductivity of P(ECH-co-EO) Based
Polymer Electrolyte**
Selvasekarapandian SUBRAMAINAN, Nithya HELLER,
Sakunthala AYYASAMY, Arun Kumar DORAI,
Hema MUTHUSAMY, Christopher Selvin P., Prakash D.
- F-S8.14(P) A00616-02567** pg F23
**Novel Glass-Ceramic Sealants for Sodium Sulfur
Batteries**
Shufeng SONG, Zhaoyin WEN, Qunxi ZHANG, Yu LIU,
Xiaogang XU
- F-S8.15(P) A00616-02575** pg F24
**A Nonaqueous Gel-Casting Process for the
Preparation of Na-beta-Al₂O₃ Green Bodies**
Xiaogang XU, Zhaoyin WEN, Ning LI, Xiangwei WU,
Jiu LIN, Zhonghua GU
- F-S8.16(P) A00676-01217** pg F27
**Characterization of PVA Based Proton Conducting
Polymer Electrolyte Membrane**
Hema MUTHUSAMY,
Selvasekarapandian SUBRAMANIAM,
Arunkumar DORAI, Nithya HELLER,
Sakunthala AYYASAMY
- F-S8.17(P) A00705-01260** pg F27
**Investigation of Nd_{2-x}Ce_xCuO₄ (x = 0.05, 0.1, 0.2, 0.25)
Prepared by Acetate Pyrolysis Method**
Anushree KHANDALE, Shyamsunder BHOGA

*Symposium F - Nanostructured Materials for Electrochemical Energy Systems:
Lithium Batteries, Supercapacitors and Fuel Cells*

- F-S8.18(P) A00771-01358** pg F29
Feasibility Study of Sago Waste based Activated Carbon as an Electrode Material for Electric Double Layer Capacitor
Haji ARIPIN, Lina LESTARI, Darwin ISMAIL
- F-S8.19(P) A00796-01599** pg F30
Thermoelectric Properties of Bismuth-Telluride (Bi₂Te₃) Based Alloy Bulk Thermoelectric Generator
Kasin KASEMSUWAN,
Chanchana THANACHAYANONT,
Tossawat SEETAWAN
- F-S8.20(P) A00797-01394** pg F30
Enhanced Electrochemical Performance of Ni(OH)₂/CNT Composite for Supercapacitor
Li YANG
- F-S8.21(P) A00798-01393** pg F30
Metallic and Transition Metal Oxide Nanoparticles Decorated Carbon Nanotubes for Energy Storage Devices
Grace WEE, Wai Fatt MAK, Martti KAEMPGEN,
Madhavi SRINIVASAN, George GRUNER,
Subodh MHAISALKAR
- F-S8.22(P) A00856-01484** pg F32
Investigation on the Effect of Addition of Phthalate-based Plasticizers on PVDF-AgCF3SO3 Gel Polymer Electrolytes
Austin Suthanthiraraj SAMUEL, Joseph Paul BABOO,
Joice Sheeba DEVADOSS, Kumar RAJU
- F-S8.24(P) A00901-01984** pg F34
The Electrochemical Behavior of LiFePO₄/C Cathode Materials Doped with Antimony
George Ting-Kuo FEY, Po-Yu PENG, Kai-Pin HUANG
- F-S8.25(P) A00950-01667** pg F35
Studies on Grain Boundary Effects in Spray Deposited BICOVOX0.1 Films on Platinum Coated Stainless Steel Substrate
Rajeev JOSHI, Ratikant MISHRA, Carb BETTY,
Sawant SHILPA, Shivaji PAWAR
- F-S8.26(P) A01006-01789** pg F36
Lithium Ion Conductivity at Interfaces of Multi-component Systems
Dominik SAMUELIS, Lijun FU, Xiangxin GUO,
Chilin LI, Jiyong SHIN, Joachim MAIER
- F-S8.27(P) A01018-01773** pg F37
Electrochemical Performance of Sm – Doped LiFePO₄ Cathode Material for Li – Ion Batteries
Austin Suthanthiraraj SAMUEL, Kumar RAJU,
Joseph Paul BABOO
- F-S8.28(P) A01035-01806** pg F37
Conductivity and Spectral Studies on Polyvinyl Alcohol – Silver Triflate Polymer Electrolyte
Austin Suthanthiraraj SAMUAL,
Kumara Vadivel MANOHARAN
- F-S8.29(P) A01135-01967** pg F38
Effects of Ca Doping on the Electrochemical Properties of LiFePO₄ Cathode Material
Cyun-Jhe YAN, George Ting-Kuo FEY, Yi-Chuan LIN
- F-S8.30(P) A01139-01960** pg F38
Ionic Conduction in a New PEO–AgCF3SO3–ZrO₂ Based Nanocomposite Polymer Electrolyte System
Austin Suthanthiraraj SAMUEL,
Joice Sheeba DEVADOSS
- F-S8.31(P) A01153-01977** pg F39
Effect of Vanadate Substitution on Chemical Stability & Bonding Geometry of FeO₆ and PO₄ in LiFePO₄
Sundarayya YANAMANDRA,
Sunandana CHANNAPPAYYA SHAMANNA
- F-S8.32(P) A01158-02133** pg F39
Speed of Response of Polypyrrole/Dodecyl Benzene Sulfonate Actuators in Aqueous Alkali Electrolytes
Mohamed JAFEEN, Mohamed CAREEM,
Steen SKAARUP
- F-S8.33(P) A01162-01991** pg F39
Effects of Various Aromatic Compounds on the Performance of LiFePO₄/C Composite Cathode by a Solid State Method
George Ting-Kuo FEY, Guan-Wen WANG
- F-S8.34(P) A01234-02115** pg F41
Study of the Anomalous Conductivity Behaviour of AgI-Vycor®7930 Anocomposites
Pascal G. YOT, Michel RIBES, Annie PRADEL
- F-S8.35(P) A01313-02297** pg F43
Effect of Preparative Method on the Properties of Ba_{0.5}Sr_{0.5}Co_{0.6}Fe_{0.4}O_{3-Δ}: The Oxygen Permeable Membranes
Bhagyashree NAGRARE, Shyamsunder BHOGA
- F-S8.36(P) A01313-02301** pg F44
Synthesis of Ce_{1-x}Cu_xO_{3-δ} as Anode Material for Sofc Application through Glycien-nitrate Combustion Route
Shabana SHAIKH, Shyamsunder BHOGA
- F-S8.37(P) A01318-02305** pg F45
Conductivity and Stability of Particle Networks in Composite Lithium Based Electrolytes
Anna JAROSIK, Nitin KASKHEDIKAR, Uwe TRAUB,
Armin BUNDE, Joachim MAIER

*Symposium F - Nanostructured Materials for Electrochemical Energy Systems:
Lithium Batteries, Supercapacitors and Fuel Cells*

- F-S8.38(P) A01373-03521** pg F48
MnO Anode for Lithium Ion Batteries
Kaifu ZHONG, Xin XIA, Xiqian YU, Bin ZHANG,
Hong LI, Zhaoxiang WANG, Liquan CHEN,
Xuejie HUANG
- F-S8.39(P) A01393-02426** pg F48
Molten Salt Synthesis of $\text{La}_{0.8}\text{Sr}_{0.2}\text{MnO}_3$ Powders for SOFC Cathode Electrode
Sin-il GU, Sang-ok YOON, Hyo-soon SHIN,
Dong-hun YEO, Youn-woo HONG, Jong-hee KIM,
Sahn NAHM
- F-S8.40(P) A01393-02438** pg F49
Synthesis of CIGS(CuInGaSe_2) Nano Particle for Thick Film Process CIGS Solar Cell
Sin-il GU, Seung-hyuk HONG, Hyo-soon SHIN,
Dong-hun YEO, Youn-woo HONG, Jong-hee KIM,
Sahn NAHM
- F-S8.41(P) A01455-04596** pg F50
Electrochemically Co-deposition of Manganese Oxide /Polypyrrole Composite Films as Supercapacitor Electrodes
Xiao FANG, Xu YOULONG
- F-S8.42(P) A01461-02536** pg F50
Improved Capacity of Combustion Synthesized LiCoO_2 Cathode by Changing Grinding Time
Chandramohan RATHINAM, Valanarasu SANTIYAGU
- F-S8.43(P) A01480-02569** pg F50
Olivine Nanofibrous Cathodes for Lithium Ion Batteries
Yan Ling CHEAH, Grace WEE,
Andreas Markus KIEBELE, Subodh MHAISALKAR,
Madhavi SRINIVASAN
- F-S8.44(P) A01485-02576** pg F51
Mechanochemical Synthesis of Na-beta- Al_2O_3
Jiu LIN, Zhaoyin WEN, Yu LIU, Xiuyan WANG,
Shufeng SONG
- F-S8.45(P) A01492-02595** pg F52
The Inhibitive Effect of ZnO and Polyaniline on Corrosion of 57S Aluminium in 2M NaOH Solutions
Arumugam ELANGO, Muthusamy PARAMASIVAM,
Periasamy V.M
- F-S8.46(P) A01560-02714** pg F55
FTIR Studies of Al and Mg Doped $\text{LiCo}_{1-x}\text{M}_x\text{PO}_4$ (M= Al) Cathode Material for Li Ion Rechargeable Batteries
Poovizhi NAKKEERAN, Selladurai SUBRAMANIAN
- F-S8.47(P) A01562-02723** pg F55
Synthesis and Characterization of Intercalated $\text{LiMn}_{2-x-y}\text{Al}_x\text{VyO}_4$ Cathode Material for Lithium Ion Batteries
Arun Karthikeyan J, Selladurai SUBRAMANIAN
- F-S8.48(P) A01603-02788** pg F58
AC Conductivity Studies and Relaxation Behaviour in $y\text{LiX}-(1-y)(0.6\text{Li}_2\text{O}-(0.4\text{P}_2\text{O}_5)$ Glasses
Tho THIEU DUC, Prasada Rao RAYAVARAPU,
Adams STEFAN
- F-S8.50(P) A01623-02814** pg F59
Electrochemical Properties of Nb₂O₅ Nanofibers
Anh LE VIET, M. V. REDDY, Jose RAJAN,
B. V. R. CHOWDARI, Seeram RAMAKRISHNA
- F-S8.51(P) A01698-02956** pg F60
Effect of Cathode Material on Cell Parameters of P (MMA-CO-4VPNO+KBrO₃) Polymer Electrolyte System
Raja VUKKA, Sharma A. K., Narasimha Rao V. V. R.
- F-S8.52(P) A01880-03241** pg F62
Ball Milled MgH_2 + 5%wt. M (M= Fe & FeF₃) Nanocomposites for Improving Hydrogen Storage
Nanda Wipula Bandara BALASOORIYA,
Christiane POINSIGNON
- F-S8.53(P) A01924-03610** pg F63
Electrochemical Characterization of Mesoporous Anatase TiO₂ for Lithium Storage: Effect of Template Chain Length and Surface Area
Saravanan KUPPAN,
Krishnamoorthy ANANTHANARAYANAN,
Jagadese. J VITTAL, Palani BALAYA
- F-S8.54(P) A01965-03393** pg F64
Nanostructured MnO_2 Synthesized via Hydrothermal Method in Magnetic Field for Li-ion Rechargeable Batteries with Enhanced Cycleability
Chao ZHONG, Jiazhao WANG, Shulei CHOU,
Zhenzhen ZHU, Ying LI, Huakun LIU, Shixue DOU
- F-S8.55(P) A01969-03400** pg F64
Optimization of Preparation Parameters and Resistivity of LiFePO_4 Thin Films by Pulsed Laser Deposition
Zhihua LI, Duanming ZHANG, Zhicheng ZHONG
- F-S8.56(P) A01977-03415** pg F65
Enhanced Performance as a Lithium Ion Battery Cathode of Electrodeposited V_2O_5 Thin Film by e-beam Irradiation
Kyoung-Hwa KIM, Gil-Pyo KIM, Sung-Hyeon BAECK,
Byung Cheol LEE, Min Wan KIM, Ki Ho YANG

*Symposium F - Nanostructured Materials for Electrochemical Energy Systems:
Lithium Batteries, Supercapacitors and Fuel Cells*

- F-S8.57(P) A02001-03453** pg F66
Carbon Nanotube Based MnO₂ Nanorod Battery
Andreas KIEBELE, Madhavi SRINIVASAN,
Subodh MHAISALKAR
- F-S8.58(P) A02051-04045** pg F67
**Electrochemical Characterizations of Lithium
Secondary Batteries at High Temperatures Using
Nanostructured Lithium Titanate Spinel (Li₄Ti₅O₁₂)**
Florent FISCHER, David GERMOND, Cecile TESSIER
- F-S8.59(P) A02091-04499** pg F68
**Electrochemical Deposition of Polyaniline into
Nanostructured Titanium Dioxide Matrices**
Hamed MIRABOLGHASEMI,
Daniel John BLACKWOOD
- F-S8.60(P) A02095-04509** pg F69
**Optical Amplification of Eu³⁺ Emission via Energy
Transfer at Molecular Printboards for the Efficiency
Enhancement of the Solar Cell**
ShuHan HSU, Deniz YILMAZ, David N. REINHOUDT,
Aldrik H. VELDEERS, Jurriaan HUSKENS
- F-S8.61(P) A02124-03655** pg F70
**Effect of Calcination Temperature on the Morphology
and Electrochemical Properties of Co₃O₄ for Lithium-
ion Battery**
Yan LIU, Xiao-Gang ZHANG
- F-S8.62(P) A02133-03673** pg F70
**Preparation of Si(0)/Poly(aniline-2-sulfonic acid)
Composite Anode for Lithium Ion Battery**
Dong-Hyuk JU, Suk-Hwan PARK, Hong-Ryun JUNG,
Wan-Jin LEE
- F-S8.63(P) A02136-03678** pg F71
**Combustion Synthesis of Ultra-fine Nickel Oxide
Powder and Its Characterization**
Atul BALLAL, Sagar SONAK,
Radhakrishnan JAYARAJ, Rasika PANDIT,
Alok BANSAL, P. GOPALAN, S. MALHOTRA
- F-S8.64(P) A02201-03773** pg F73
**Low Temperature Deposition of SnO₂ on C-Paper as
an Anode for DMFC**
Shafeeqe Ahmed ANSARI, Ahmad UMAR,
Ali AL-HAJRY
- F-S8.65(P) A02271-03878** pg F75
**Effect of Acetic acid on Electrospinning of PAN
Polymer Solution**
Seok-Hwan PARK, Dong-Hyuk JU, Wan-Jin LEE
- F-S8.66(P) A02334-04001** pg F75
**Influence of Plasticizer on the PVAc :PEG Blend
Polymer Electrolyte for Li-Ion Battery**
Christopher Selvin P., Neelaveni A., Sanjeeviraja C.
- F-S8.67(P) A02357-04048** pg F76
**Hydrogen Storage Behaviors of Nickel-dispersed
Mesoporous MCM-41**
Seul-Yi LEE, Soo-Jin PARK
- F-S8.68(P) A02361-04106** pg F77
CdSe Quantum Dot Sensitized TiO₂ Photoelectrodes
Prabakar KANDASAMY, Son MINKYU, Kim HEEJE
- F-S8.69(P) A02363-04041** pg F77
**Preparation and Electrocatalytic Activities of PtRu
Nanoparticles Deposited on Graphite Nanofibers**
Jeong-Min PARK, Soo-Jin PARK
- F-S8.70(P) A02365-04076** pg F77
**Effect of PVC Content on Ion Conductivity and
Mechanical Properties of PEO-based Polymer
Electrolytes**
A-Reum HAN, Seok KIM, Soo-Jin PARK
- F-S8.71(P) A02429-04166** pg F78
**Ru/LSCM Catalysts for Propane Reforming in IT-
SOFCs**
Simona BARISON, Marino BATTAGLIARIN,
Monica FABRIZIO, Cecilia MORTALÒ,
PierLuigi ANTONUCCI, Vincenza MODAFFERI,
Rosalba GERBASI
- F-S8.72(P) A02444-04168** pg F78
**Preparation and Hydrogen Storage of Platinum/
Nickel Nanocomplex-Decorated Graphite Nanofibers**
Byung-Joo KIM, Soo-Jin PARK
- F-S8.73(P) A02574-04397** pg F82
**The Catalytic Performance of Ni-based on Al₂O₃
Support for Steam Reforming of Biogas**
Chartsak CHETTAPONGSAPHAN,
Nitinai PUNBUSAYAKUL, Navadol LALSIRIPOJANA,
Sumittra CHAROJROCHKUL
- F-S8.74(P) A02585-04417** pg F82
**Ion Dynamics in Intercalated Polymer Nanocomposite
Based on Pan**
Achchhe Lal SHARMA, Awalendra K. THAKUR
- F-S8.75(P) A02588-04424** pg F84
**Studies on Intrinsic Oxygen Deficiency on Structural
and Electrical Properties of SrMnO_{3-d}**
Namita PANDEY, Awalendra K. THAKUR
- F-S8.76(P) A02766-04731** pg F86
**Transport Properties in an Ion Conducting Polymer
Nano-Composite**
Namrata SHUKLA, Awalendra K. THAKUR

F-S8.77(P) A02767-04911 pg F87
**Structural and Electrochemical Properties of
Nanocrystalline LiCoPO₄ having Olivine Structure**
Awalendra K. THAKUR

F-S8.78(P) A02779-04749 pg F88
**Reality Check on Using NaAlH₄ as a Hydrogen
Storage Material**
Pramoch RANGSUNVIGIT, Yindee SUTTISAWAT,
Boonyarach KITTYANAN, Santi KULPRATHIPANJA

F-S8.79(P) A03027-05158 pg F94
**Li Intercalation/Deintercalation in V₂O₅ Nanowires
Supported by Ni Microtubes Arrays**
Mansour Al Hoshan, William H. Smyrl

F1-S9: Novel Synthesis

Thursday, 2 July 2009
10:30 - 13:00
Level 2, Room 203
Chairs: Doeff and Cho

10:30 F1-S9.1-2(IN) A00896-01563 pg F33
Nano Electrode Materials for Lithium Ion Batteries
L. C. YANG, L. J. FU, N. H. ZHAO, Y. SHI, Y. P. WU

11:00 F1-S9.3-4(IN) A01265-02197 pg F42
**Synthesis of Uniformly Sized LiMnPO₄ Nanoparticles
in Nonaqueous Solution and their Electrochemical
Properties**
Takayuki DOI, Shota YATOMI, Shigeto OKADA, Jun-
ichi YAMAKI

11:30 F1-S9.5-6(IN) A01685-02914 pg F60
**Nanostructured Anodes and Cathodes for Lithium-
Ion Batteries**
Yu-Guo GUO

12:00 F1-S9.7-8(IN) A01362-02376 pg F46
**Micro and Nanostructured Materials for Lithium
Battery Applications**
Daniel ABRAHAM, Martin BETTGE, Steve BURDIN,
Scott MACLAREN, Ivan PETROV, Ernie SAMMANN

12:30 F1-S9.9(O) A00902-01583 pg F34
**A Novel Approach for Mass Synthesis of V₂O₅
Nanorods**
Alexey GLUSHENKOV, Ying CHEN,
Vladimir STUKACHEV, Gennady KUVSHINOV,
Mohd Faiz HASSAN, Hua Kun LIU

12:45 F1-S9.10(O) A00257-01066 pg F19
**Enhancement of Electrochemical Properties by
Doping of PEG into the MoO₃ Nanobelts for Lithium
Battery Application**
Madhu Mohan VARISHETTY, Bin HU, Chen WEN

F1-S10: Solid State Batteries / Electrodes

Thursday, 2 July 2009
14:30 - 16:15
Level 2, Room 203
Chairs: Doi and Abraham

14:30 F1-S10.1-2(IN) A02957-05062 pg F92
**Nanometal Oxides for Electrochemical Li-Ion
Capacitors and Batteries: Effects of Porosity and
Particle Size**
S. R. S. PRABAHARAN, B. RAMBABU

15:00 F1-S10.3-4(IN) A02467-04362 pg F79
**Development of Solid-State Lithium Ion Battery Using
Polymer Electrolyte**
Nobuyuki IMANISHI, Yasuo TAKEDA
15:30 F1-S10.5-6(IN) A01316-02303 pg F44
**All-solid-state Batteries Seen from a Multi-
dimensional Perspective**
Peter NOTTEN

16:00 F1-S10.7(O) A01234-02551 pg F41
**Composites Solid Electrolytes for All Solid State
Batteries**
Berangere RAGUENET, Pascal G. YOT, Annie PRADEL

F1-S11: Synthesis and Characterization of Electrodes / Electrolytes

Thursday, 2 July 2009
16:30 - 18:30
Level 2, Room 203
Chairs: Tirada and Guo

16:30 F1-S11.1-2(IN) A01591-02770 pg F57
**Nanostructured Electrode Materials Made by
Combustion Synthesis**
Marca DOEFF, James WILCOX, Jiajun CHEN,
Anthony CHERN, Albert AUMENTADO

17:00 F1-S11.3-4(IN) A01908-03291 pg F62
**Synthesis of Li₄Ti₅O₁₂ by Spray-Dry Method and its
Electrochemical Property as the Anode Material for
Li-ion batteries**
Naoaki KUMAGAI, Daisuke YOSHIKAWA,
Yoshihiro KADOMA, Koichi UI

17:30 F1-S11.5(O) A02725-04689 pg F85
**Doped Cobaltite Nanofibres for Energy Conversion
Applications**
Adrian LOWE, Khairunnadim Ahmad SEKAK,
Tai Hou (Lennie) TENG, Jose RAJAN

17:45 F1-S11.6(O) A01541-02690 pg F54
**Mobile Ion Transport Pathways In xLiBr – (1-x)
(0.6Li₂O-0.4P₂O₅) Glasses**
Tho THIEU DUC, Prasada Rao RAYAVARAPU,
Adams STEFAN

*Symposium F - Nanostructured Materials for Electrochemical Energy Systems:
Lithium Batteries, Supercapacitors and Fuel Cells*

18:00 F1-S11.7(O) A01560-02720 pg F55
**Characterisation of $\text{LiCo}_{1-x}\text{Mg}_x\text{PO}_4$ Olivine Cathode
Material for Li Ion Batteries by Sol-gel Route**
Selladurai SUBRAMANIAN, Poovizhi NAKKEERAN

18:15 F1-S11.8(O) A00432-00816 pg F19
**Impedance Spectroscopy Studies on Plasticized
Polymer Electrolyte System [PEO- LiCF_3SO_3 -DBP]**
Siti Mariah MOHD YASIN, Mohd Rafie JOHAN

F1-S12: Techniques / Miscellaneous

Friday, 3 July 2009
11:00 - 12:45
Level 2, Room 203
Chairs: Exnar and Li

11:00 F1-S12.1-2(IN) A00955-01676 pg F36
**What Does NMR Tell Us about Lithiation Processes in
Nanosized Materials?**
Michel MENETRIER

11:30 F1-S12.3-4(IN) A01485-02578 pg F52
**Synthesis and Characterization of Carbon-
Composited $\text{Li}[\text{Ni}_{1/3}\text{Co}_{1/3}\text{Mn}_{1/3}]\text{O}_2$**
Bin LIN, Zhaoyin WEN, Xiuyan WANG, Xiangwei WU,
Yu LIU

12:00 F1-S12.5(O) A02958-05063 pg F92
**Neutron Scattering Study of Diffusion and Disorder in
Cu-Se Superionic Conductor**
S. A. DANILKIN, C. LING, R. MACQUART,
M. RUSSINA, Z. IZAOLA, T. SAKUMA

12:15 F1-S12.6(O) A00648-02275 pg F25
**Preparation and Characterization of Nanosized
 $\text{Li}_{1.2}\text{V}_3\text{O}_8$ Electrode Material by AC Impedance
Spectroscopy**
Sakunthala AYYASAMY,
Selvasekarapandian SUBRAMANIAM,
Nithya HELLER, Arun Kumar DORAI,
Hema MUTHUSAMY, Christopher Selvin P.,
Sanjeeviraja C.

12:30 F1-S12.7(O) A01266-02191 pg F42
**Polyaniline Modified Glassy Carbon Electrodes for
Heavy Metal Tracing**
Zhaomeng WANG, Erjia LIU
