1 Abouimrane, A. *et al.* Sodium insertion in carboxylate based materials and their application in 3.6 V full sodium cells. *Energy & Environmental Science* **5**, 9632-9638, doi:10.1039/c2ee22864e (2012).

2 Aini, N. A. *et al.* Preparation and Characterization of UV Irradiated SPEEK/Chitosan Membranes. *International Journal of Electrochemical Science* **7**, 8226-8325 (2012).

3 Amalraj, S. F. *et al.* Study of the electrochemical behavior of the "inactive" Li2MnO3. *Electrochim. Acta* **78**, 32-39, doi:10.1016/j.electacta.2012.05.144 (2012).

4 Amaresh, S. *et al.* Synthesis and enhanced electrochemical performance of Li2CoPO4F cathodes under high current cycling. *Phys. Chem. Chem. Phys.* **14**, 11904-11909, doi:10.1039/c2cp41624g (2012).

5 Anand, L. A Cahn-Hilliard-type theory for species diffusion coupled with large elastic-plastic deformations. *Journal of the Mechanics and Physics of Solids* **60**, 1983-2002, doi:10.1016/j.jmps.2012.08.001 (2012).

6 Arachi, Y., Nakamura, M., Maeda, H. & Kobayashi, H. Ion Distributions and the Electrochemical Properties of LiNi0.5Mn0.5O2 Prepared by Ion-Exchange for Positive Electrode. *Electrochemistry* **80**, 829-833, doi:10.5796/electrochemistry.80.829 (2012).

7 Aravindan, V., Cheah, Y. L., Ling, W. C. & Madhavi, S. Effect of LiBOB Additive on the Electrochemical Performance of LiCoPO4. *J. Electrochem. Soc.* **159**, A1435-A1439, doi:10.1149/2.024209jes (2012).

8 Aravindan, V., Ling, W. C. & Madhavi, S. LiCrTiO4: A High-Performance Insertion Anode for Lithium-Ion Batteries. *Chemphyschem* **13**, 3263-3266, doi:10.1002/cphc.201200398 (2012).

9 Aravindan, V., Reddy, M. V., Madhavi, S., Rao, G. V. S. & Chowdari, B. V. R. Electrochemical Performance of alpha-MnO2 Nanorods/Activated Carbon Hybrid Supercapacitor. *Nanoscience and Nanotechnology Letters* **4**, 724-728, doi:10.1166/nnl.2012.1377 (2012).

10 Arruda, T. M., Kumar, A., Kalinin, S. V. & Jesse, S. The partially reversible formation of Li-metal particles on a solid Li electrolyte: applications toward nanobatteries. *Nanotechnology* **23**, doi:10.1088/0957-4484/23/32/325402 (2012).

11 Asl, N. M., Keith, J., Lim, C., Zhu, L. K. & Kim, Y. Inorganic solid/organic liquid hybrid electrolyte for use in Li-ion battery. *Electrochim. Acta* **79**, 8-16, doi:10.1016/j.electacta.2012.06.038 (2012).

12 Ates, M. N., Allen, C. J., Mukerjee, S. & Abraham, K. M. Electronic Effects of Substituents on Redox Shuttles for Overcharge Protection of Li-ion Batteries. *J. Electrochem. Soc.* **159**, A1057-A1064, doi:10.1149/2.064207jes (2012).

13 Azucena, C. *et al.* New Approaches for Bottom-Up Assembly of Tobacco Mosaic Virus-Derived Nucleoprotein Tubes on Defined Patterns on Silica- and Polymer-Based Substrates. *Langmuir* **28**, 14867-14877, doi:10.1021/la302774h (2012).

14 Baby, T. T. & Sundara, R. A facile synthesis and field emission property investigation of Co3O4 nanoparticles decorated graphene. *Materials Chemistry and Physics* **135**, 623-627, doi:10.1016/j.matchemphys.2012.05.035 (2012).

15 Bai, Y. J., Gong, C., Qi, Y. X., Lun, N. & Feng, J. Excellent long-term cycling stability of La-doped Li4Ti5O12 anode material at high current rates. *Journal of Materials Chemistry* **22**, 19054-19060, doi:10.1039/c2jm34523d (2012).

16 Bai, Y. S. *et al.* The effects of FePO4-coating on high-voltage cycling stability and rate capability of Li Ni0.5Co0.2Mn0.3 O-2. *J. Alloy. Compd.* **541**, 125-131, doi:10.1016/j.jallcom.2012.06.101 (2012).

17 Baker, D. R. & Verbrugge, M. W. Intercalate Diffusion in Multiphase Electrode Materials and Application to Lithiated Graphite. *J. Electrochem. Soc.* **159**, A1341-A1350, doi:10.1149/2.002208jes (2012).

18 Balke, N. *et al.* Three-dimensional vector electrochemical strain microscopy. *J. Appl. Phys.* **112**, doi:10.1063/1.4746085 (2012).

19 Banerjee, A. *et al.* MOF derived porous carbon-Fe3O4 nanocomposite as a high performance, recyclable environmental superadsorbent. *Journal of Materials Chemistry* **22**, 19694-19699, doi:10.1039/c2jm33798c (2012).

20 Basu, T., Goswami, M. M., Middya, T. R. & Tarafdar, S. Morphology and Ion-Conductivity of Gelatin-LiCIO4 Films: Fractional Diffusion Analysis. *Journal of Physical Chemistry B* **116**, 11362-11369, doi:10.1021/jp306205h (2012).

21 Begum, Y. & Wright, A. J. Relating highly distorted Jahn-Teller MnO6 to colouration in manganese violet pigments. *Journal of Materials Chemistry* **22**, 21110-21116, doi:10.1039/c2jm33731b (2012).

22 Belharouak, I. *et al.* Performance Degradation and Gassing of Li4Ti5O12/LiMn2O4 Lithium-Ion Cells. *J. Electrochem. Soc.* **159**, A1165-A1170, doi:10.1149/2.013208jes (2012).

23 Ben Yahia, H. *et al.* Synthesis and Characterization of the Crystal Structure and Magnetic Properties of the New Fluorophosphate LiNaCo PO4 F. *Inorg. Chem.* **51**, 8729-8738, doi:10.1021/ic300374w (2012).

24 Ben Yahia, H. *et al.* Synthesis and characterization of the crystal structure, the magnetic and the electrochemical properties of the new fluorophosphate LiNaFe PO4 F. *Dalton Transactions* **41**, 11692-11699, doi:10.1039/c2dt30739a (2012).

25 Bhaskar, A., Deepa, M., Rao, T. N. & Varadaraju, U. V. Enhanced nanoscale conduction capability of a MoO2/Graphene composite for high performance anodes in lithium ion batteries. *J. Power Sources* **216**, 169-178, doi:10.1016/j.jpowsour.2012.05.050 (2012).

26 Bhatt, M. D., Cho, M. & Cho, K. Density functional theory calculations and ab initio molecular dynamics simulations for diffusion of Li+ within liquid ethylene carbonate. *Modelling and Simulation in Materials Science and Engineering* **20**, doi:10.1088/0965-0393/20/6/065004 (2012).

27 Bhattacharya, S. & Alpas, A. T. Micromechanisms of solid electrolyte interphase formation on electrochemically cycled graphite electrodes in lithium-ion cells. *Carbon* **50**, 5359-5371, doi:10.1016/j.carbon.2012.07.009 (2012).

28 Boulineau, A. *et al.* Evolutions of Li1.2Mn0.61Ni0.18Mg0.01O2 during the Initial Charge/Discharge Cycle Studied by Advanced Electron Microscopy. *Chem. Mat.* **24**, 3558-3566, doi:10.1021/cm301140g (2012).

29 Bresser, D. *et al.* The importance of "going nano" for high power battery materials. *J. Power Sources* **219**, 217-222, doi:10.1016/j.jpowsour.2012.07.035 (2012).

30 Budi, A. *et al.* Study of the Initial Stage of Solid Electrolyte Interphase Formation upon Chemical Reaction of Lithium Metal and N-Methyl-N-Propyl-Pyrrolidinium-Bis(Fluorosulfonyl)Imide. *Journal of Physical Chemistry C* **116**, 19789-19797, doi:10.1021/jp304581g (2012).

31 Burns, J. C. *et al.* Impedance Reducing Additives and Their Effect on Cell Performance I. LiN(CF3SO2)(2). *J. Electrochem. Soc.* **159**, A1095-A1104, doi:10.1149/2.077207jes (2012).

32 Cai, J. J., Li, Z. S. & Shen, P. K. Porous SnS Nanorods/Carbon Hybrid Materials as Highly Stable and High Capacity Anode for Li-Ion Batteries. *ACS Appl. Mater. Interfaces* **4**, 4093-4098, doi:10.1021/am300873n (2012).

33 Cai, L., Liu, Z. C., An, K. & Liang, C. D. Probing Li-Ni Cation Disorder in Li1-xNi1+x-yAlyO2 Cathode Materials by Neutron Diffraction. *J. Electrochem. Soc.* **159**, A924-A928, doi:10.1149/2.005207jes (2012).

34 Cao, Y. X., Lu, Z. L. & Mi, C. H. The Microstructure and Electrochemical Characteristics of LiFePO4/Carbon-Network Composite. *Journal of Nanoscience and Nanotechnology* **12**, 6588-6591, doi:10.1166/jnn.2012.5430 (2012).

35 Chai, M. *et al.* Low-viscosity ether-functionalized pyrazolium ionic liquids as new electrolytes for lithium battery. *J. Power Sources* **216**, 323-329, doi:10.1016/j.jpowsour.2012.05.082 (2012).

36 Chakrapani, V., Rusli, F., Filler, M. A. & Kohl, P. A. A combined photovoltaic and Li ion battery device for continuous energy harvesting and storage. *J. Power Sources* **216**, 84-88, doi:10.1016/j.jpowsour.2012.05.048 (2012).

37 Chan, M. K. Y., Wolverton, C. & Greeley, J. P. First Principles Simulations of the Electrochemical Lithiation and Delithiation of Faceted Crystalline Silicon. *J. Am. Chem. Soc.* **134**, 14362-14374, doi:10.1021/ja301766z (2012).

38 Chandrasoma, A., Grant, R., Bruce, A. E. & Bruce, M. R. M. Electrochemical polymerization of aniline on carbon-aluminum electrodes for energy storage. *J. Power Sources* **219**, 285-291, doi:10.1016/j.jpowsour.2012.07.028 (2012).

39 Chang, C. C., Su, H. K., Her, L. J. & Lin, J. H. Effects of Chemical Dispersant and Wet Mechanical Milling Methods on Conductive Carbon Dispersion and Rate Capabilities of LiFePO4 Batteries. *Journal of the Chinese Chemical Society* **59**, 1233-1237, doi:10.1002/jces.201200330 (2012).

40 Chang, W. S., Yu, B. C., Park, C. M. & Sohn, H. J. Sn/In2O3/C Nanocomposite as an Anode for Li Ion Batteries and Its Reaction Mechanism. *J. Electrochem. Soc.* **159**, A1912-A1915, doi:10.1149/2.033212jes (2012).

41 Cheekati, S. L., Yao, Z. & Huang, H. The Impacts of Graphene Nanosheets and Manganese Valency on Lithium Storage Characteristics in Graphene/Manganese Oxide Hybrid Anode. *Journal of Nanomaterials*, doi:10.1155/2012/819350 (2012).

42 Chen, C. L., Chiu, K. F., Chen, Y. R., Lin, H. C. & Chen, C. C. Preparation and Characterization of LiMn2O4 Cathodes Surface-Modified by DC Pulsed Plasma Treatment. *Journal of the Chinese Chemical Society* **59**, 1258-1263, doi:10.1002/jccs.201200114 (2012).

43 Chen, G. Y., Hai, B., Shukla, A. K. & Duncan, H. Impact of Initial Li Content on Kinetics and Stabilities of Layered Li1+x(Ni0.33Mn0.33Co0.33)(1-x)O-2. *J. Electrochem. Soc.* **159**, A1543-A1550, doi:10.1149/2.038209jes (2012).

44 Chen, K., Huang, M. A., Shen, Y., Lin, Y. H. & Nan, C. W. Enhancing ionic conductivity of Li0.35La0.55TiO3 ceramics by introducing Li7La3Zr2O12. *Electrochim. Acta* **80**, 133-139, doi:10.1016/j.electacta.2012.06.115 (2012).

45 Chen, L. Y., Zhang, W. D., Xu, B. & Yu, Y. X. A Facile Hydrothermal Strategy for Synthesis of SnO2 Nanorods-Graphene Nanocomposites for High Performance Photocatalysis. *Journal of Nanoscience and Nanotechnology* **12**, 6921-6929, doi:10.1166/jnn.2012.6571 (2012).

46 Chen, Q. N. *et al.* Delineating local electromigration for nanoscale probing of lithium ion intercalation and extraction by electrochemical strain microscopy. *Appl. Phys. Lett.* **101**, doi:10.1063/1.4742933 (2012).

47 Chen, Q. Q. *et al.* Electrochemical performance of electrospun LiFePO4/C submicrofibers composite cathode material for lithium ion batteries. *Electrochim. Acta* **78**, 40-48, doi:10.1016/j.electacta.2012.05.143 (2012).

48 Chen, S. L. *et al.* (LiFePO4-AC)/Li4Ti5O12 hybrid supercapacitor: The effect of LiFePO4 content on its performance. *Journal of Renewable and Sustainable Energy* **4**, doi:10.1063/1.4727929 (2012).

49 Chen, S. Q., Wang, Y., Ahn, H. & Wang, G. X. Microwave hydrothermal synthesis of high performance tin-graphene nanocomposites for lithium ion batteries. *J. Power Sources* **216**, 22-27, doi:10.1016/j.jpowsour.2012.05.051 (2012).

50 Chen, S. Q., Yeoh, W. K., Liu, Q. & Wang, G. X. Chemical-free synthesis of graphene-carbon nanotube hybrid materials for reversible lithium storage in lithium-ion batteries. *Carbon* **50**, 4557-4565, doi:10.1016/j.carbon.2012.05.040 (2012).

51 Chen, S. R. *et al.* Silicon core-hollow carbon shell nanocomposites with tunable buffer voids for high capacity anodes of lithium-ion batteries. *Phys. Chem. Chem. Phys.* **14**, 12741-12745, doi:10.1039/c2cp42231j (2012).

52 Chen, X., Zhang, N. Q. & Sun, K. N. A Vapor-Phase Corrosion Strategy to Hierarchically Mesoporous Nanosheet-Assembled Gearlike Pillar Arrays for Super-Performance Lithium Storage. *Journal of Physical Chemistry C* **116**, 21224-21231, doi:10.1021/jp3065568 (2012).

53 Chen, X. C. *et al.* New easy way preparation of core/shell structured SnO2@carbon spheres and application for lithium-ion batteries. *J. Power Sources* **216**, 475-481, doi:10.1016/j.jpowsour.2012.06.023 (2012).

54 Chen, X. L. *et al.* Conductive Rigid Skeleton Supported Silicon as High-Performance Li-Ion Battery Anodes. *Nano Lett.* **12**, 4124-4130, doi:10.1021/nl301657y (2012).

55 Chen, X. Y. *et al.* MWCNT/V2O5 Core/Shell Sponge for High Areal Capacity and Power Density Li-Ion Cathodes. *ACS Nano* **6**, 7948-7955, doi:10.1021/nn302417x (2012).

56 Chen, Y. J., Ma, J. M., Yu, L., Li, Q. H. & Wang, T. H. Mesoporous SnO2 nanospheres formed via a water-evaporating process with superior electrochemical properties. *Crystengcomm* **14**, 6170-6172, doi:10.1039/c2ce25769f (2012).

57 Chen, Y. S. *et al.* Characterizations of the electrode/electrolyte interfacial properties of carbon coated Li3V2(PO4)(3) cathode material in LiPF6 based electrolyte. *Electrochim. Acta* **79**, 95-101, doi:10.1016/j.electacta.2012.06.082 (2012).

58 Chen, Y. W. & Chen, J. S. A Study of Electrochemical Performance of LiFePO4/C Composites Doped with Na and V. *International Journal of Electrochemical Science* **7**, 8128-8139 (2012).

59 Chen, Z. L., Li, J. & Zhang, Z. Y. First principles investigation of electronic structure change and energy transfer by redox in inverse spinel cathodes LiNiVO4 and LiCoVO4. *Journal of Materials Chemistry* **22**, 18968-18974, doi:10.1039/c2jm33026a (2012).

60 Cheng, C. S., Wang, F. M. & Rick, J. Aqueous Additive for Lithium Ion Batteries: Promotes Novel Solid Electrolyte Interface (SEI) Layer with Overall Cost Reduction. *International Journal of Electrochemical Science* **7**, 8676-8687 (2012).

61 Cherkashinin, G. *et al.* The stability of the SEI layer, surface composition and the oxidation state of transition metals at the electrolyte-cathode interface impacted by the electrochemical cycling: X-ray photoelectron spectroscopy investigation. *Phys. Chem. Chem. Phys.* **14**, 12321-12331, doi:10.1039/c2cp41134b (2012).

62 Chiku, M., Tsujiwaki, W., Higuchi, E. & Inoue, H. Microelectrode Studies on Kinetics of Charge Transfer at an Interface of Li Metal and Li2S-P2S5 Solid Electrolytes. *Electrochemistry* **80**, 740-742, doi:10.5796/electrochemistry.80.740 (2012).

63 Chirkov, Y. G., Rostokin, V. I. & Skundin, A. M. Computer simulation of positive electrode operation in lithium-ion battery: Optimization of active mass composition. *Russian Journal of Electrochemistry* **48**, 895-904, doi:10.1134/s1023193512040052 (2012).

64 Cho, E. *et al.* Corrosion/passivation of aluminum current collector in bis(fluorosulfonyl) imide-based ionic liquid for lithium-ion batteries. *Electrochem. Commun.* **22**, 1-3, doi:10.1016/j.elecom.2012.05.018 (2012).

65 Cho, G. B. *et al.* Influences of Ti Film Thickness on Electrochemical Properties of Si/Ti/Cu Film Electrodes. *Journal of Nanoscience and Nanotechnology* **12**, 5962-5966, doi:10.1166/jnn.2012.6240 (2012).

66 Cho, S. W. & Ryu, K. S. Sulfur anion doping and surface modification with LiNiPO4 of a LiNi0.5Mn0.3Co0.2O2 cathode. *Materials Chemistry and Physics* **135**, 533-540, doi:10.1016/j.matchemphys.2012.05.021 (2012).

67 Cho, W. *et al.* Electrochemical characteristics of nano-sized MoO2/C composite anode materials for lithium-ion batteries. *Journal of Applied Electrochemistry* **42**, 909-915, doi:10.1007/s10800-012-0470-9 (2012).

68 Chockla, A. M. *et al.* Influences of Gold, Binder and Electrolyte on Silicon Nanowire Performance in Li-Ion Batteries. *Journal of Physical Chemistry C* **116**, 18079-18086, doi:10.1021/jp305371v (2012).

69 Chockla, A. M., Klavetter, K. C., Mullins, C. B. & Korgel, B. A. Tin-Seeded Silicon Nanowires for High Capacity Li-Ion Batteries. *Chem. Mat.* **24**, 3738-3745, doi:10.1021/cm301968b (2012).

70 Chockla, A. M., Klavetter, K. C., Mullins, C. B. & Korgel, B. A. Solution-Grown Germanium Nanowire Anodes for Lithium-Ion Batteries. *ACS Appl. Mater. Interfaces* **4**, 4658-4664, doi:10.1021/am3010253 (2012).

71 Choi, B. G. *et al.* 3D heterostructured architectures of Co3O4 nanoparticles deposited on porous graphene surfaces for high performance of lithium ion batteries. *Nanoscale* **4**, 5924-5930, doi:10.1039/c2nr31438j (2012).

72 Choi, N. S. *et al.* Degradation of spinel lithium manganese oxides by low oxidation durability of LiPF6-based electrolyte at 60 degrees C. *Solid State Ion.* **219**, 41-48, doi:10.1016/j.ssi.2012.05.012 (2012).

73 Chu, D. B. *et al.* Tin-Based Alloy Anode Materials for Lithium Ion Batteries. *Progress in Chemistry* **24**, 1466-1476 (2012).

74 Chun, J. *et al.* Tubular-Shape Evolution of Microporous Organic Networks. *Chem. Mat.* **24**, 3458-3463, doi:10.1021/cm301786g (2012).

75 Chun, S. J., Choi, E. S., Lee, E. H., Kim, J. H. & Lee, S. Y. Eco-friendly cellulose nanofiber paper-derived separator membranes featuring tunable nanoporous network channels for lithium-ion batteries. *Journal of Materials Chemistry* **22**, 16618-16626, doi:10.1039/c2jm32415f (2012).

76 Churikov, A. V. & Romanova, V. O. An electrochemical study on the substituted spinel LiMn1.95Cr0.05O4. *Ionics* **18**, 837-844, doi:10.1007/s11581-012-0741-9 (2012).

77 Ciucci, F. & Lai, W. Electrochemical impedance spectroscopy of phase transition materials. *Electrochim. Acta* **81**, 205-216, doi:10.1016/j.electacta.2012.07.009 (2012).

78 Come, J. *et al.* A Non-Aqueous Asymmetric Cell with a Ti2C-Based Two-Dimensional Negative Electrode. *J. Electrochem. Soc.* **159**, A1368-A1373, doi:10.1149/2.003208jes (2012).

79 Compton, O. C., Egan, M., Kanakaraj, R., Higgins, T. B. & Nguyen, S. T. Conductivity through Polymer Electrolytes and Its Implications in Lithium-Ion Batteries: Real-World Application of Periodic Trends. *Journal of Chemical Education* **89**, 1442-1446, doi:10.1021/ed200478d (2012).

80 Cong, H. P., Ren, X. C. & Yu, S. H. Controlled Synthesis of PtRu/Graphene Nanocatalysts with Enhanced Methanol Oxidation Activity for Fuel Cells. *Chemcatchem* **4**, 1555-1559, doi:10.1002/cctc.201200403 (2012).

81 Conry, T. E., Mehta, A., Cabana, J. & Doeff, M. M. Structural Underpinnings of the Enhanced Cycling Stability upon Al-Substitution in LiNi0.45Mn0.45Co0.1-yAlyO2 Positive Electrode Materials for Li-ion Batteries. *Chem. Mat.* **24**, 3307-3317, doi:10.1021/cm3011937 (2012).

82 Conry, T. E., Mehta, A., Cabana, J. & Doeff, M. M. XAFS Investigations of LiNi0.45Mn0.45Co0.1-yAlyO2 Positive Electrode Materials. *J. Electrochem. Soc.* **159**, A1562-A1571, doi:10.1149/2.048209jes (2012).

83 Cui, P., Liang, Y. & Sun, Y. L. Preparation and Electrochemical Properties of MoO3/SiO2 Composite Cathode Material for Lithium-Ion Batteries. *Chinese Journal of Inorganic Chemistry* **28**, 1861-1866 (2012).

84 Cui, Y. L., Yuan, Z., Bao, W. J., Zhuang, Q. C. & Sun, Z. Investigation of lithium ion kinetics through LiMn2O4 electrode in aqueous Li2SO4 electrolyte. *Journal of Applied Electrochemistry* **42**, 883-891, doi:10.1007/s10800-012-0464-7 (2012).

85 Dai, Y. *et al.* Fabrication of self-binding noble metal/flexible graphene composite paper. *Carbon* **50**, 4648-4654, doi:10.1016/j.carbon.2012.05.053 (2012).

86 Damen, L., De Giorgio, F., Monaco, S., Veronesi, F. & Mastragostino, M. Synthesis and characterization of carbon-coated LiMnPO4 and LiMn1-xFexPO4 (x=0.2, 0.3) materials for lithium-ion batteries. *J. Power Sources* **218**, 250-253, doi:10.1016/j.jpowsour.2012.06.090 (2012).

87 Daowd, M., Omar, N., Van Den Bossche, P. & Van Mierlo, J. A Comparative Study of Battery Models Parameter Estimation. *International Review of Electrical Engineering-Iree* **7**, 4915-4924 (2012).

88 Das, B., Reddy, M. V., Rao, G. V. S. & Chowdari, B. V. R. Synthesis and Li-storage behavior of CrN nanoparticles. *Rsc Advances* **2**, 9022-9028, doi:10.1039/c2ra21136j (2012).

89 Das, S. K. *et al.* High energy lithium-oxygen batteries - transport barriers and thermodynamics. *Energy & Environmental Science* **5**, 8927-8931, doi:10.1039/c2ee22470d (2012).

90 Das, S. S., Srivastava, P. K. & Singh, N. B. Fast ion conducting phosphate glasses and glass ceramic composites: Promising materials for solid state batteries. *Journal of Non-Crystalline Solids* **358**, 2841-2846, doi:10.1016/j.jnoncrysol.2012.05.031 (2012).

91 Delacourt, C. & Safari, M. Life Simulation of a Graphite/LiFePO4 Cell under Cycling and Storage. *J. Electrochem. Soc.* **159**, A1283-A1291, doi:10.1149/2.049208jes (2012).

92 Demeaux, J., Caillon-Caravanier, M., Galiano, H., Lemordant, D. & Claude-Montigny, B. LiNi0.4Mn1.6O4/Electrolyte and Carbon Black/Electrolyte High Voltage Interfaces: To Evidence the Chemical and Electronic Contributions of the Solvent on the Cathode-Electrolyte Interface Formation. *J. Electrochem. Soc.* **159**, A1880-A1890, doi:10.1149/2.052211jes (2012).

93 Deng, H. G. *et al.* LiFePO4/C Nanocomposites Synthesized from Fe2O3 by a Hydrothermal Reaction-calcination Process and Their Electrochemical Performance. *Journal of Inorganic Materials* **27**, 997-1002, doi:10.3724/sp.j.1077.2012.12143 (2012).

94 Deng, H. G., Jin, S. L., Zhan, L., Qiao, W. M. & Ling, L. C. Nest-like LiFePO4/C architectures for high performance lithium ion batteries. *Electrochim. Acta* **78**, 633-637, doi:10.1016/j.electacta.2012.06.059 (2012).

95 Deng, H. G. *et al.* Synthesis of cage-like LiFePO4/C microspheres for high performance lithium ion batteries. *J. Power Sources* **220**, 342-347, doi:10.1016/j.jpowsour.2012.07.060 (2012).

96 Diao, Y., Xie, K., Xiong, S. Z. & Hong, X. B. Insights into Li-S Battery Cathode Capacity Fading Mechanisms: Irreversible Oxidation of Active Mass during Cycling. *J. Electrochem. Soc.* **159**, A1816-A1821, doi:10.1149/2.020211jes (2012).

97 Ding, C. X., Bai, Y. C., Wei, C. & Chen, C. H. Nanosized Spinel Li4Ti5O12 Anode Material Prepared by Gel-polymer Method using Furfuryl Alcohol as Polymerizable Solvent. *Chinese Journal of Chemical Physics* **25**, 457-462, doi:10.1088/1674-0068/25/04/457-462 (2012).

98 Ding, J., Kong, Y., Li, P. & Yang, J. R. Polyimide/Poly(ethylene terephthalate) Composite Membrane by Electrospinning for Nonwoven Separator for Lithium-Ion Battery. *J. Electrochem. Soc.* **159**, A1474-A1480, doi:10.1149/2.041209jes (2012).

99 Ding, J., Li, G. C. & Peng, H. R. A low-temperature solution route to hollow NH4VO3 microspheres with controllable shells. *Journal of Experimental Nanoscience* **7**, 485-490, doi:10.1080/17458080.2010.524665 (2012).

100 Ding, X. L., Sun, Q., Lu, F. & Fu, Z. W. Nanocomposite SnO2-Se thin film as anode material for lithium-ion batteries. *J. Power Sources* **216**, 117-123, doi:10.1016/j.jpowsour.2012.05.022 (2012).

101 Do, N. S. T., Schaetzl, D. M., Dey, B., Seabaugh, A. C. & Fullerton-Shirey, S. K. Influence of Fe2O3 Nanofiller Shape on the Conductivity and Thermal Properties of Solid Polymer Electrolytes: Nanorods versus Nanospheres. *Journal of Physical Chemistry C* **116**, 21216-21223, doi:10.1021/jp3059454 (2012).

102 Domi, Y. *et al.* Electrochemical AFM Observation of the HOPG Edge Plane in Ethylene Carbonate-Based Electrolytes Containing Film-Forming Additives. *J. Electrochem. Soc.* **159**, A1292-A1297, doi:10.1149/2.059208jes (2012).

103 Dong, S. M. *et al.* 1D Coaxial Platinum/Titanium Nitride Nanotube Arrays with Enhanced Electrocatalytic Activity for the Oxygen Reduction Reaction: Towards Li-Air Batteries. *Chemsuschem* **5**, 1712-1715, doi:10.1002/cssc.201200286 (2012).

104 Dong, Y. Z. *et al.* The Prepared and Electrochemical Property of Mg Doped LiMnPO4 Nanoplates as Cathode Materials for Lithium-Ion Batteries. *J. Electrochem. Soc.* **159**, A995-A998, doi:10.1149/2.037207jes (2012).

105 Du, L. Z., Ren, H. B. & Peng, Z. H. Synthesis and characterization of the nanosized Li Ni1/3Co1/3Mn1/3 O-2. *Materials Chemistry and Physics* **135**, 264-267, doi:10.1016/j.matchemphys.2012.05.017 (2012).

106 Du, M., Xu, C. H., Sun, J. & Gao, L. One step synthesis of Fe2O3/nitrogen-doped graphene composite as anode materials for lithium ion batteries. *Electrochim. Acta* **80**, 302-307, doi:10.1016/j.electacta.2012.07.029 (2012).

107 Du, Z. J. *et al.* Facile synthesis of SnO2 nanocrystals coated conducting polymer nanowires for enhanced lithium storage. *J. Power Sources* **219**, 199-203, doi:10.1016/j.jpowsour.2012.07.052 (2012).

108 Dubarry, M., Truchot, C. & Liaw, B. Y. Synthesize battery degradation modes via a diagnostic and prognostic model. *J. Power Sources* **219**, 204-216, doi:10.1016/j.jpowsour.2012.07.016 (2012).

109 Dylla, A. G., Xiao, P. H., Henkelman, G. & Stevenson, K. J. Morphological Dependence of Lithium Insertion in Nanocrystalline TiO2(B) Nanoparticles and Nanosheets. *J. Phys. Chem. Lett.* **3**, 2015-2019, doi:10.1021/jz300766a (2012).

110 Eddahech, A., Briat, O., Bertrand, N., Deletage, J. Y. & Vinassa, J. M. Behavior and state-of-health monitoring of Li-ion batteries using impedence spectroscopy and recurrent neural networks. *International Journal of Electrical Power & Energy Systems* **42**, 487-494, doi:10.1016/j.ijepes.2012.04.050 (2012).

111 Egashira, M., Tanaka, T., Yoshimoto, N. & Morita, M. Influence of Ionic Liquid Species in Non-Aqueous Electrolyte on Sodium Insertion into Hard Carbon. *Electrochemistry* **80**, 755-758, doi:10.5796/electrochemistry.80.755 (2012).

112 Elazari, R. *et al.* Li Ion Cells Comprising Lithiated Columnar Silicon Film Anodes, TiS2 Cathodes and Fluoroethyene Carbonate (FEC) as a Critically Important Component. *J. Electrochem. Soc.* **159**, A1440-A1445, doi:10.1149/2.029209jes (2012).

113 Epur, R., Ramanathan, M., Beck, F. R., Manivannan, A. & Kumta, P. N. Electrodeposition of amorphous silicon anode for lithium ion batteries. *Materials Science and Engineering B-Advanced Functional Solid-State Materials* **177**, 1151-1156, doi:10.1016/j.mseb.2012.04.027 (2012).

114 Evers, S., Yim, T. & Nazar, L. F. Understanding the Nature of Absorption/Adsorption in Nanoporous Polysulfide Sorbents for the Li-S Battery. *Journal of Physical Chemistry C* **116**, 19653-19658, doi:10.1021/jp304380j (2012).

115 Fan, Y. *et al.* Novel silicon-nickel cone arrays for high performance LIB anodes. *Journal of Materials Chemistry* **22**, 20870-20873, doi:10.1039/c2jm34337a (2012).

116 Fang, X. P. *et al.* Lithium storage in commercial MoS2 in different potential ranges. *Electrochim. Acta* **81**, 155-160, doi:10.1016/j.electacta.2012.07.020 (2012).

117 Faria, R., Moura, P., Delgado, J. & de Ailmeida, A. T. A sustainability assessment of electric vehicles as a personal mobility system. *Energy Conversion and Management* **61**, 19-30, doi:10.1016/j.enconman.2012.02.023 (2012).

118 Fedorkova, A. *et al.* Electrochemical and XPS study of LiFePO4 cathode nanocomposite with PPy/PEG conductive network. *Solid State Sci.* **14**, 1238-1243, doi:10.1016/j.solidstatesciences.2012.06.010 (2012).

119 Feng, J. K. *et al.* ELECTROCHEMICAL PROPERTY OF LiMn2O4 IN OVER-DISCHARGED CONDITIONS. *Functional Materials Letters* **5**, doi:10.1142/s1793604712500282 (2012).

120 Feng, X. Y., Shen, C., Ding, N. & Chen, C. H. Lithium chromium oxide modified spinel LiCrTiO4 with improved electrochemical properties. *Journal of Materials Chemistry* **22**, 20861-20865, doi:10.1039/c2jm32673f (2012).

121 Fey, G. T. K., Lin, Y. C. & Kao, H. M. Characterization and electrochemical properties of high tap-density LiFePO4/C cathode materials by a combination of carbothermal reduction and molten salt methods. *Electrochim. Acta* **80**, 41-49, doi:10.1016/j.electacta.2012.06.125 (2012).

122 Fisher, P., Jostins, J., Hilmansen, S. & Kendall, K. Electronic integration of fuel cell and battery system in novel hybrid vehicle. *J. Power Sources* **220**, 114-121, doi:10.1016/j.jpowsour.2012.07.071 (2012).

123 Fister, T. T. *et al.* Real-Time Observations of Interfacial Lithiation in a Metal Silicide Thin Film. *Journal of Physical Chemistry C* **116**, 22341-22345, doi:10.1021/jp305465j (2012).

124 Fongy, C. *et al.* Toward the Aqueous Processing of Li4Ti5O12: A Comparative Study with LiFePO4. *J. Electrochem. Soc.* **159**, A1083-A1090, doi:10.1149/2.075207jes (2012).

125 Fourty, N., van den Bossche, A. & Val, T. An advanced study of energy consumption in an IEEE 802.15.4 based network: Everything but the truth on 802.15.4 node lifetime. *Computer Communications* **35**, 1759-1767, doi:10.1016/j.comcom.2012.05.008 (2012).

126 Fu, Y. S. *et al.* Copper Ferrite-Graphene Hybrid: A Multifunctional Heteroarchitecture for Photocatalysis and Energy Storage. *Industrial & Engineering Chemistry Research* **51**, 11700-11709, doi:10.1021/ie301347j (2012).

127 Fu, Y. Z., Su, Y. S. & Manthiram, A. Sulfur-Polypyrrole Composite Cathodes for Lithium-Sulfur Batteries. *J. Electrochem. Soc.* **159**, A1420-A1424, doi:10.1149/2.027209jes (2012).

128 Fu, Z. H., Wei, Z., Lin, X. J., Huang, T. & Yu, A. S. Polyaniline membranes as waterproof barriers for lithium air batteries. *Electrochim. Acta* **78**, 195-199, doi:10.1016/j.electacta.2012.05.153 (2012).

129 Galinski, M. & Acznik, I. Study of a graphene-like anode material in N-methyl-N-propylpyrrolidinium bis(trifluoromethanesulfonyl)imide ionic liquid for Li-ion batteries. *J. Power Sources* **216**, 5-10, doi:10.1016/j.jpowsour.2012.05.039 (2012).

130 Gallant, B. M. *et al.* Chemical and Morphological Changes of Li-O-2 Battery Electrodes upon Cycling. *Journal of Physical Chemistry C* **116**, 20800-20805, doi:10.1021/jp308093b (2012).

131 Ganapathy, S. & Wagemaker, M. Nanosize Storage Properties in Spinel Li4Ti5O12 Explained by Anisotropic Surface Lithium Insertion. *ACS Nano* **6**, 8702-8712, doi:10.1021/nn302278m (2012).

132 Gao, S. Q., Yang, X., Yu, W., Liu, Z. L. & Zhang, H. Q. Ultrasound-assisted ionic liquid/ionic liquid-dispersive liquid-liquid microextraction for the determination of sulfonamides in infant formula milk powder using high-performance liquid chromatography. *Talanta* **99**, 875-882, doi:10.1016/j.talanta.2012.07.050 (2012).

133 Gao, X. W., Wang, J. Z., Chou, S. L. & Liu, H. K. Synthesis and electrochemical performance of LiV3O8/polyaniline as cathode material for the lithium battery. *J. Power Sources* **220**, 47-53, doi:10.1016/j.jpowsour.2012.07.114 (2012).

134 Gao, Y. *et al.* Preparation of high-capacity air electrode for lithium-air batteries. *International Journal of Hydrogen Energy* **37**, 12725-12730, doi:10.1016/j.ijhydene.2012.03.127 (2012).

135 Gao, Y. F. & Zhou, M. Strong dependency of lithium diffusion on mechanical constraints in high-capacity Li-ion battery electrodes. *Acta Mechanica Sinica* **28**, 1068-1077, doi:10.1007/s10409-012-0141-4 (2012).

136 Garrido, L. *et al.* Influence of the Water Content on the Diffusion Coefficients of Li+ and Water across Naphthalenic Based Copolyimide Cation-Exchange Membranes. *Journal of Physical Chemistry B* **116**, 11754-11766, doi:10.1021/jp3065322 (2012).

137 Ghanty, C., Basu, R. N. & Majumder, S. B. Performance of Wet Chemical Synthesized xLi(2)MnO(3)-(1-x)Li(Mn0.375Ni0.375Co0.25)O-2 (0.0 <= x <= 1.0) Integrated Cathode for Lithium Rechargeable Battery. *J. Electrochem. Soc.* **159**, A1125-A1134, doi:10.1149/2.081207jes (2012).

138 Gharabaghi, M., Irannajad, M., Azadmehr, A. R. & Ejtemaei, M. PROCESS OPTIMIZATION OF NICKEL EXTRACTION FROM HAZARDOUS WASTE. *Archives of Environmental Protection* **38**, 29-40, doi:10.2478/v10265-012-0020-z (2012).

139 Giuliano, M. R., Prasad, A. K. & Advani, S. G. Experimental study of an air-cooled thermal management system for high capacity lithium-titanate batteries. *J. Power Sources* **216**, 345-352, doi:10.1016/j.jpowsour.2012.05.074 (2012).

140 Gnanamuthu, R. M., Mohan, S. & Lee, C. W. Development of high energy capacities of nanoscaled Sn-Cu alloy thin film electrode materials for Li-ion batteries. *Materials Letters* **84**, 101-103, doi:10.1016/j.matlet.2012.06.049 (2012).

141 Golmon, S., Maute, K. & Dunn, M. L. Multiscale design optimization of lithium ion batteries using adjoint sensitivity analysis. *International Journal for Numerical Methods in Engineering* **92**, 475-494, doi:10.1002/nme.4347 (2012).

142 Gonzalez, J. R. *et al.* Long-Length Titania Nanotubes Obtained by High-Voltage Anodization and High-Intensity Ultrasonication for Superior Capacity Electrode. *Journal of Physical Chemistry C* **116**, 20182-20190, doi:10.1021/jp3050115 (2012).

143 Gu, J. S. *et al.* Template-Free Preparation of Crystalline Ge Nanowire Film Electrodes via an Electrochemical Liquid-Liquid-Solid Process in Water at Ambient Pressure and Temperature for Energy Storage. *Nano Lett.* **12**, 4617-4623, doi:10.1021/nl301912f (2012).

144 Gu, M. *et al.* Conflicting Roles of Nickel in Controlling Cathode Performance in Lithium Ion Batteries. *Nano Lett.* **12**, 5186-5191, doi:10.1021/nl302249v (2012).

145 Gu, M. *et al.* In Situ TEM Study of Lithiation Behavior of Silicon Nanoparticles Attached to and Embedded in a Carbon Matrix. *ACS Nano* **6**, 8439-8447, doi:10.1021/nn303312m (2012).

146 Guan, C. *et al.* Hollow core-shell nanostructure supercapacitor electrodes: gap matters. *Energy & Environmental Science* **5**, 9085-9090, doi:10.1039/c2ee22815g (2012).

147 Guo, C. F., Wang, D. L., Wang, Q. M., Wang, B. & Liu, T. F. A SiO/graphene Nanocomposite as a High Stability Anode Material for Lithium-Ion Batteries. *International Journal of Electrochemical Science* **7**, 8745-8752 (2012).

148 Guo, C. X. *et al.* RGD-Peptide Functionalized Graphene Biomimetic Live-Cell Sensor for Real-Time Detection of Nitric Oxide Molecules. *ACS Nano* **6**, 6944-6951, doi:10.1021/nn301974u (2012).

149 Guo, H., Mao, R., Yang, X. J., Wang, S. X. & Chen, J. Hollow nanotubular SnO2 with improved lithium storage. *J. Power Sources* **219**, 280-284, doi:10.1016/j.jpowsour.2012.07.063 (2012).

150 Guo, L., Yoon, W. Y. & Kim, B. K. Fabrication and characterization of a silicon-carbon nanocomposite material by pyrolysis for lithium secondary batteries. *Electronic Materials Letters* **8**, 405-409, doi:10.1007/s13391-012-2066-2 (2012).

151 Guo, X. F., Wang, C. Y. & Chen, M. M. A novel non-organic hydrothermal/hydrolysis method for preparation of well-dispersed Li4Ti5O12. *Materials Letters* **83**, 39-41, doi:10.1016/j.matlet.2012.05.120 (2012).

152 Gupta, A., Mullins, C. B. & Goodenough, J. B. Electrochemical probings of Li1+xVS2. *Electrochim. Acta* **78**, 430-433, doi:10.1016/j.electacta.2012.06.020 (2012).

153 Guyot, E., Seghir, S., Diliberto, S., Lecuire, J. M. & Boulanger, C. Lithium recovery by electrochemical transfer junction based on intercalation host matrix. *Electrochem. Commun.* **23**, 29-32, doi:10.1016/j.elecom.2012.06.031 (2012).

154 Ha, D. H., Islam, M. A. & Robinson, R. D. Binder-Free and Carbon-Free Nanoparticle Batteries: A Method for Nanoparticle Electrodes without Polymeric Binders or Carbon Black. *Nano Lett.* **12**, 5122-5130, doi:10.1021/nl3019559 (2012).

155 Hamid, N. A. *et al.* High-capacity cathodes for lithium-ion batteries from nanostructured LiFePO4 synthesized by highly-flexible and scalable flame spray pyrolysis. *J. Power Sources* **216**, 76-83, doi:10.1016/j.jpowsour.2012.05.047 (2012).

156 Han, C. H. *et al.* Substrate-Assisted Self-Organization of Radial beta-AgVO3 Nanowire Clusters for High Rate Rechargeable Lithium Batteries. *Nano Lett.* **12**, 4668-4673, doi:10.1021/nl301993v (2012).

157 Han, H. *et al.* Dominant Factors Governing the Rate Capability of a TiO2 Nanotube Anode for High Power Lithium Ion Batteries. *ACS Nano* **6**, 8308-8315, doi:10.1021/nn303002u (2012).

158 Han, S. C. *et al.* Gadolinium-Doped LiMn2O4 Cathodes in Li Ion Batteries: Understanding the Stabilized Structure and Enhanced Electrochemical Kinetics. *J. Electrochem. Soc.* **159**, A1867-A1873, doi:10.1149/2.009212jes (2012).

159 Han, Z. J. *et al.* High-capacity Si-graphite composite electrodes with a self-formed porous structure by a partially neutralized polyacrylate for Li-ion batteries. *Energy & Environmental Science* **5**, 9014-9020, doi:10.1039/c2ee22292b (2012).

160 Hao, W. J., Zhan, H. H. & Yu, J. Construction of carbon coating and multi-dimensional networks for Li3V2(PO4)(3) nanoparticles by polyvinyl alcohol and graphene sheets. *Materials Letters* **83**, 121-123, doi:10.1016/j.matlet.2012.05.125 (2012).

161 Harris, S. J., Rahani, E. K. & Shenoy, V. B. Direct In Situ Observation and Numerical Simulations of Non-Shrinking-Core Behavior in an MCMB Graphite Composite. *J. Electrochem. Soc.* **159**, A1501-A1507, doi:10.1149/2.055209jes (2012).

162 Hashem, A. M., Groult, H., Mauger, A., Zaghib, K. & Julien, C. M. Electrochemical properties of nanofibers alpha-MoO3 as cathode materials for Li batteries. *J. Power Sources* **219**, 126-132, doi:10.1016/j.jpowsour.2012.06.093 (2012).

163 Hayashi, A. The research history of Professor Tsutomu Minami. *Physics and Chemistry of Glasses-European Journal of Glass Science and Technology Part B* **53**, 52-60 (2012).

164 Hayashi, A., Matsuyama, T., Sakuda, A. & Tatsumisago, M. Amorphous Titanium Sulfide Electrode for All-solid-state Rechargeable Lithium Batteries with High Capacity. *Chemistry Letters* **41**, 886-888, doi:10.1246/cl.2012.886 (2012).

165 He, D., Cho, S. Y., Kim, D. W., Lee, C. & Kang, Y. Enhanced Ionic Conductivity of Semi-IPN Solid Polymer Electrolytes Based on Star-Shaped Oligo(ethyleneoxy)cyclotriphosphazenes. *Macromolecules* **45**, 7931-7938, doi:10.1021/ma3016745 (2012).

166 He, D. L. *et al.* Self-assembly of cubic Co3O4 crystals and charge and discharge performances for lithium-ion battery. *Micro & Nano Letters* **7**, 773-777, doi:10.1049/mnl.2012.0354 (2012).

167 He, L. *et al.* Synthesis and electrochemical performance of spinel-type LiMn2O4 using gamma-MnOOH rods as self-template for lithium ion battery. *J. Power Sources* **220**, 228-235, doi:10.1016/j.jpowsour.2012.07.118 (2012).

168 He, L. F. *et al.* Growth of TiO2 nanorod arrays on reduced graphene oxide with enhanced lithium-ion storage. *Journal of Materials Chemistry* **22**, 19061-19066, doi:10.1039/c2jm33571a (2012).

169 He, Y. *et al.* Shape evolution of patterned amorphous and polycrystalline silicon microarray thin film electrodes caused by lithium insertion and extraction. *J. Power Sources* **216**, 131-138, doi:10.1016/j.jpowsour.2012.04.105 (2012).

170 He, Z. J. *et al.* Spherical Li4Ti5O12 synthesized by spray drying from a different kind of solution. *J. Alloy. Compd.* **540**, 39-45, doi:10.1016/j.jallcom.2012.06.044 (2012).

171 Herranz, J., Garsuch, A. & Gasteiger, H. A. Using Rotating Ring Disc Electrode Voltammetry to Quantify the Superoxide Radical Stability of Aprotic Li-Air Battery Electrolytes. *Journal of Physical Chemistry C* **116**, 19084-19094, doi:10.1021/jp304277z (2012).

172 Herrera-Miranda, D. *et al.* High surface area nanocrystalline hausmannite synthesized by a solvent-free route. *Mater. Res. Bull.* **47**, 2369-2374, doi:10.1016/j.materresbull.2012.05.050 (2012).

173 Hibino, M., Kimura, T., Suga, Y., Kudo, T. & Mizuno, N. Oxygen rocking aqueous batteries utilizing reversible topotactic oxygen insertion/extraction in iron-based perovskite oxides Ca1-xLaxFeO3-delta. *Scientific Reports* **2**, doi:10.1038/srep00601 (2012).

174 Hildebrandt, S. *et al.* Sol-gel synthesis of sodium and lithium based materials. *Journal of Sol-Gel Science and Technology* **63**, 307-314, doi:10.1007/s10971-012-2789-4 (2012).

175 Hong, J. *et al.* Structure and Electrochemistry of Vanadium-Modified LiFePO4. *Journal of Physical Chemistry C* **116**, 20787-20793, doi:10.1021/jp306936t (2012).

176 Hong, S. A. *et al.* Carbon coating on lithium iron phosphate (LiFePO4): Comparison between continuous supercritical hydrothermal method and solid-state method. *Chemical Engineering Journal* **198**, 318-326, doi:10.1016/j.cej.2012.05.058 (2012).

177 Hou, J. B., Yang, M., Ellis, M. W., Moore, R. B. & Yi, B. L. Lithium oxides precipitation in nonaqueous Li-air batteries. *Phys. Chem. Chem. Phys.* **14**, 13487-13501, doi:10.1039/c2cp42768k (2012).

178 Hsu, K. C., Liu, C. E., Chen, P. C., Lee, C. Y. & Chiu, H. T. One-step vapor-solid reaction growth of Sn@C core-shell nanowires as an anode material for Li-ion batteries. *Journal of Materials Chemistry* **22**, 21533-21539, doi:10.1039/c2jm34654k (2012).

179 Hu, B. N. *et al.* Effects of amorphous AlPO4 coating on the electrochemical performance of BiF3 cathode materials for lithium-ion batteries. *J. Power Sources* **218**, 204-211, doi:10.1016/j.jpowsour.2012.07.010 (2012).

180 Hu, J. L. *et al.* Self-assembly of TiO2 composite microspheres: Facile synthesis, characterization and photocatalytic activities. *Crystengcomm* **14**, 7118-7122, doi:10.1039/c2ce25468a (2012).

181 Hu, X., Stanton, S., Cai, L. & White, R. E. Model order reduction for solid-phase diffusion in physics-based lithium ion cell models. *J. Power Sources* **218**, 212-220, doi:10.1016/j.jpowsour.2012.07.007 (2012).

182 Hu, X. L. *et al.* A new nanocomposite polymer electrolyte based on poly(vinyl alcohol) incorporating hypergrafted nano-silica. *Journal of Materials Chemistry* **22**, 18961-18967, doi:10.1039/2jm33156j (2012).

183 Huang, H. W. *et al.* Thin copper oxide nanowires/carbon nanotubes interpenetrating networks for lithium ion batteries. *Crystengcomm* **14**, 7294-7300, doi:10.1039/c2ce25873k (2012).

184 Huang, L. X. *et al.* Effects of preparation temperature of graphite oxide on the structure of graphite and electrochemical properties of graphene-based lithium-ion batteries. *Acta Physica Sinica* **61** (2012).

185 Huang, X. S. A lithium-ion battery separator prepared using a phase inversion process. *J. Power Sources* **216**, 216-221, doi:10.1016/j.jpowsour.2012.05.019 (2012).

186 Huang, Z. D. *et al.* Porous C-LiFePO4-C composite microspheres with a hierarchical conductive architecture as a high performance cathode for lithium ion batteries. *Journal of Materials Chemistry* **22**, 19643-19645, doi:10.1039/c2jm33960a (2012).

187 Hung, T. F. *et al.* X-ray Absorption Spectroscopy Approaches to Electronic State and Coordination Type of Lithium Phosphorus Oxynitride Thin Films. *Journal of the Chinese Chemical Society* **59**, 1270-1274, doi:10.1002/jccs.201200141 (2012).

188 Huttin, M. & Kamlah, M. Phase-field modeling of stress generation in electrode particles of lithium ion batteries. *Appl. Phys. Lett.* **101**, doi:10.1063/1.4754705 (2012).

189 Hwang, S. G., Kim, G. O., Yun, S. R. & Ryu, K. S. NiO nanoparticles with plate structure grown on graphene as fast charge-discharge anode material for lithium ion batteries. *Electrochim. Acta* **78**, 406-411, doi:10.1016/j.electacta.2012.06.031 (2012).

190 Idemoto, Y., Kashima, T. & Kitamura, N. Investigation on Crystal and Electronic Structures of 0.5Li(2)MnO(3)-0.5LiMn(x)Ni(x)Co((1-2x))O(2) (x=1/3, 5/12) Samples Heat-Treated under Vacuum Reducing Conditions. *Electrochemistry* **80**, 791-799, doi:10.5796/electrochemistry.80.791 (2012).

191 Illig, J. *et al.* Separation of Charge Transfer and Contact Resistance in LiFePO4-Cathodes by Impedance Modeling. *J. Electrochem. Soc.* **159**, A952-A960, doi:10.1149/2.030207jes (2012).

192 Imanishi, N., Takeda, Y. & Yamamoto, O. Aqueous Lithium-Air Rechargeable Batteries. *Electrochemistry* **80**, 706-715, doi:10.5796/electrochemistry.80.706 (2012).

193 Iqbal, A. *et al.* Enhanced electrochemical performance of La- and Zn-co-doped LiMn2O4 spinel as the cathode material for lithium-ion batteries. *Journal of Nanoparticle Research* **14**, doi:10.1007/s11051-012-1206-9 (2012).

194 Iqbal, M. Z. *et al.* Structural and electrochemical properties of SnO nanoflowers as an anode material for lithium ion batteries. *Scripta Materialia* **67**, 665-668, doi:10.1016/j.scriptamat.2012.07.010 (2012).

195 Ishihara, T., Thapa, A. K., Hidaka, Y. & Ida, S. Rechargeable Lithium-Air Battery Using Mesoporous Co3O4 Modified with Pd for Air Electrode. *Electrochemistry* **80**, 731-733, doi:10.5796/electrochemistry.80.731 (2012).

196 Ishikawa, H. *et al.* Chronopotentiometric Investigation of Anode Deterioration in Lithium Ion Secondary Cell Incorporating Reference Electrode. *Electrochemistry* **80**, 762-764, doi:10.5796/electrochemistry.80.762 (2012).

197 Iturrondobeitia, A. *et al.* Effect of doping LiMn2O4 spinel with a tetravalent species such as Si(IV) versus with a trivalent species such as Ga(III). Electrochemical, magnetic and ESR study. *J. Power Sources* **216**, 482-488, doi:10.1016/j.jpowsour.2012.06.031 (2012).

198 Izumi, A. *et al.* Development of high capacity lithium-ion battery applying three-dimensionally patterned electrode. *Electrochim. Acta* **79**, 218-222, doi:10.1016/j.electacta.2012.07.001 (2012).

199 Jang, B. *et al.* Direct Synthesis of Self-Assembled Ferrite/Carbon Hybrid Nanosheets for High Performance Lithium-Ion Battery Anodes. *J. Am. Chem. Soc.* **134**, 15010-15015, doi:10.1021/ja305539r (2012).

200 Jang, M. W., Jung, H. G., Scrosati, B. & Sun, Y. K. Improved Co-substituted, LiNi0.5-xCo2xMn1.5-xO4 lithium ion battery cathode materials. *J. Power Sources* **220**, 354-359, doi:10.1016/j.jpowsour.2012.07.104 (2012).

201 Jayanth-Babu, K., Jeevan-Kumar, P., Hussain, O. M. & Julien, C. M. Influence of annealing temperature on microstructural and electrochemical properties of rf-sputtered LiMn2O4 film cathodes. *Journal of Solid State Electrochemistry* **16**, 3383-3390, doi:10.1007/s10008-012-1784-6 (2012).

202 Jee, S. H. *et al.* Enhancement of Cycling Performance by Li2O-Sn Anode for All-Solid-State Batteries. *Japanese Journal of Applied Physics* **51**, doi:10.1143/jjap.51.085803 (2012).

203 Jeon, J. *et al.* Tuning glycolide as an SEI-forming additive for thermally robust Li-ion batteries. *Journal of Materials Chemistry* **22**, 21003-21008, doi:10.1039/c2jm34191c (2012).

204 Jeong, H. S., Choi, E. S., Lee, S. Y. & Kim, J. H. Evaporation-induced, close-packed silica nanoparticle-embedded nonwoven composite separator membranes for high-voltage/high-rate lithium-ion batteries: Advantageous effect of highly percolated, electrolyte-philic microporous architecture. *Journal of Membrane Science* **415**, 513-519, doi:10.1016/j.memsci.2012.05.038 (2012).

205 Ji, G., Ma, Y., Ding, B. & Lee, J. Y. Improving the Performance of High Capacity Li-Ion Anode Materials by Lithium Titanate Surface Coating. *Chem. Mat.* **24**, 3329-3334, doi:10.1021/cm301432w (2012).

206 Jiang, K. C. *et al.* Superior Hybrid Cathode Material Containing Lithium-Excess Layered Material and Graphene for Lithium-Ion Batteries. *ACS Appl. Mater. Interfaces* **4**, 4858-4863, doi:10.1021/am301202a (2012).

207 Jin, B. K., Cho, Y. C., Shin, D. W. & Choi, Y. G. Solution-based fabrication of germanium sulphide doped with or without Li ions for solid electrolyte applications. *Journal of Ceramic Processing Research* **13**, S110-S113 (2012).

208 Jin, Y. D., Fang, S. H., Chai, M., Yang, L. & Hirano, S. Ether-Functionalized Trialkylimidazolium Ionic Liquids: Synthesis, Characterization, and Properties. *Industrial & Engineering Chemistry Research* **51**, 11011-11020, doi:10.1021/ie300849u (2012).

209 Jin, Z. Q., Xie, K., Hong, X. B., Hu, Z. Q. & Liu, X. Application of lithiated Nafion ionomer film as functional separator for lithium sulfur cells. *J. Power Sources* **218**, 163-167, doi:10.1016/j.jpowsour.2012.06.100 (2012).

210 Jo, M., Yoo, H., Jung, Y. S. & Cho, J. Carbon-coated nanoclustered LiMn0.71Fe0.29PO4 cathode for lithium-ion batteries. *J. Power Sources* **216**, 162-168, doi:10.1016/j.jpowsour.2012.05.059 (2012).

211 Jung, D. W., Jeong, J. H., Kim, K. H., Kong, B. S. & Oh, E. S. SnO2 Nanoparticles Distributed on Multi-Walled Carbon Nanotubes and Ball-Milled Graphite as Anode Materials of Lithium Ion Batteries. *Journal of Nanoscience and Nanotechnology* **12**, 5435-5439, doi:10.1166/jnn.2012.6397 (2012).

212 Jung, H. G. *et al.* A Transmission Electron Microscopy Study of the Electrochemical Process of Lithium-Oxygen Cells. *Nano Lett.* **12**, 4333-4335, doi:10.1021/nl302066d (2012).

213 Jung, H. R., Park, S. H. & Lee, W. J. Cu2O-SnO/poly(3,4-ethylenedioxythiophene) nanocomposites with core-shell structures and their electrochemical characteristics. *Materials Chemistry and Physics* **135**, 340-347, doi:10.1016/j.matchemphys.2012.04.056 (2012).

214 Jung, K. N. *et al.* Manganese oxide/carbon composite nanofibers: electrospinning preparation and application as a bi-functional cathode for rechargeable lithium-oxygen batteries. *Journal of Materials Chemistry* **22**, 21845-21848, doi:10.1039/c2jm34500e (2012).

215 Jung, S. C., Choi, J. W. & Han, Y. K. Anisotropic Volume Expansion of Crystalline Silicon during Electrochemical Lithium Insertion: An Atomic Level Rationale. *Nano Lett.* **12**, 5342-5347, doi:10.1021/nl3027197 (2012).

216 Kadoma, Y. *et al.* Influence of the Carbon Source on the Surface and Electrochemical Characteristics of Lithium Excess Li4.3Ti5O12 Carbon Composite. *Electrochemistry* **80**, 759-761, doi:10.5796/electrochemistry.80.759 (2012).

217 Kam, K. C., Mehta, A., Heron, J. T. & Doeff, M. M. Electrochemical and Physical Properties of Ti-Substituted Layered Nickel Manganese Cobalt Oxide (NMC) Cathode Materials. *J. Electrochem. Soc.* **159**, A1383-A1392, doi:10.1149/2.060208jes (2012).

218 Kamali, A. R., Divitini, G., Schwandt, C. & Fray, D. J. Correlation between microstructure and thermokinetic characteristics of electrolytic carbon nanomaterials. *Corrosion Science* **64**, 90-97, doi:10.1016/j.corsci.2012.07.007 (2012).

219 Kamzin, A. S. *et al.* Mossbauer Studies of Structural Properties and Electrochemical Characteristics of LiFePO4. *Technical Physics Letters* **38**, 715-718, doi:10.1134/s1063785012080081 (2012).

220 Kang, C. *et al.* 3-dimensional carbon nanotube for Li-ion battery anode. *J. Power Sources* **219**, 364-370, doi:10.1016/j.jpowsour.2012.07.050 (2012).

221 Kang, S., Park, M. H., Lee, H. & Han, Y. K. A joint experimental and theoretical determination of the structures of oxidized and reduced molecules. *Electrochem. Commun.* **23**, 83-86, doi:10.1016/j.elecom.2012.07.011 (2012).

222 Kang, W. P., Zhao, C. H. & Shen, Q. Lithium Storage Capability of Nanocrystalline CuO Improved by its Water- Based Interactions with Sodium Alginate. *International Journal of Electrochemical Science* **7**, 8194-8204 (2012).

223 Karan, N. K., Balasubramanian, M., Fister, T. T., Burrell, A. K. & Du, P. Bulk-Sensitive Characterization of the Discharged Products in Li-O-2 Batteries by Nonresonant Inelastic X-ray Scattering. *Journal of Physical Chemistry C* **116**, 18132-18138, doi:10.1021/jp306298e (2012).

224 Kato, Y., Kawamoto, K., Kanno, R. & Hirayama, M. Discharge Performance of All-Solid-State Battery Using a Lithium Superionic Conductor Li10GeP2S12. *Electrochemistry* **80**, 749-751, doi:10.5796/electrochemistry.80.749 (2012).

225 Ke, F. S. *et al.* Nanoarchitectured Fe3O4 array electrode and its excellent lithium storage performance. *Electrochim. Acta* **78**, 585-591, doi:10.1016/j.electacta.2012.06.053 (2012).

226 Kim, D. Y., Song, M. S., Eom, J. Y. & Kwon, H. S. Synthesis of VBO3-carbon composite by ball-milling and microwave heating and its electrochemical properties as negative electrode material of lithium ion batteries. *J. Alloy. Compd.* **542**, 132-135, doi:10.1016/j.jallcom.2012.07.062 (2012).

227 Kim, G. P. *et al.* A synthesis of graphene/Co3O4 thin films for lithium ion battery anodes by coelectrodeposition. *Electrochem. Commun.* **22**, 93-96, doi:10.1016/j.elecom.2012.05.032 (2012).

228 Kim, H. C. & Sastry, A. M. Effects of carbon fiber electrode deformation in multifunctional structural lithium ion batteries. *Journal of Intelligent Material Systems and Structures* **23**, 1787-1797, doi:10.1177/1045389x12449914 (2012).

229 Kim, J. H., Bae, S. Y., Min, J. H., Song, S. W. & Kim, D. W. Study on the cycling performance of Li4Ti5O12/LiCoO2 cells assembled with ionic liquid electrolytes containing an additive. *Electrochim. Acta* **78**, 11-16, doi:10.1016/j.electacta.2012.05.161 (2012).

230 Kim, K. *et al.* Characterization of Nano-Sized Epitaxial Li4Ti5O12(110) Film Electrode for Lithium Batteries. *Electrochemistry* **80**, 800-803, doi:10.5796/electrochemistry.80.800 (2012).

231 Kim, M. S., Moon, J. H., Yoo, P. J. & Park, J. H. Hollow Polypyrrole Films: Applications for Energy Storage Devices. *J. Electrochem. Soc.* **159**, A1052-A1056, doi:10.1149/2.062207jes (2012).

232 Kim, S. *et al.* Synthesis of layered-layered xLi(2)MnO(3)center dot(1-x)LiMO2 (M = Mn, Ni, Co) nanocomposite electrodes materials by mechanochemical process. *J. Power Sources* **220**, 422-429, doi:10.1016/j.jpowsour.2012.07.135 (2012).

233 Kim, Y. H., Yoon, M. Y., Lee, E. J. & Hwang, H. J. Effect of SiO2/B2O3 ratio on Li ion conductivity of a Li2O-B2O3-SiO2 glass electrolyte. *Journal of Ceramic Processing Research* **13**, S37-S41 (2012).

234 Kim, Y. S. *et al.* Synthesis and electrochemical characterization of Li11Nb0.9O2-x as a novel active material for the negative electrode of lithium secondary batteries. *Materials Letters* **83**, 14-16, doi:10.1016/j.matlet.2012.05.102 (2012).

235 Kitaura, H. & Zhou, H. S. Electrochemical performance and reaction mechanism of all-solid-state lithium-air batteries composed of lithium, Li1+xAlyGe2-y(PO4)(3) solid electrolyte and carbon nanotube air electrode. *Energy & Environmental Science* **5**, 9077-9084, doi:10.1039/c2ee22381c (2012).

236 Kitta, M., Akita, T., Maeda, Y. & Kohyama, M. Study of Surface Reaction of Spinel Li4Ti5O12 during the First Lithium Insertion and Extraction Processes Using Atomic Force Microscopy and Analytical Transmission Electron Microscopy. *Langmuir* **28**, 12384-12392, doi:10.1021/la301946h (2012).

237 Klass, V., Behm, M. & Lindbergh, G. Evaluating Real-Life Performance of Lithium-Ion Battery Packs in Electric Vehicles. *J. Electrochem. Soc.* **159**, A1856-A1860, doi:10.1149/2.047211jes (2012).

238 Klett, M. *et al.* Quantifying Mass Transport during Polarization in a Li Ion Battery Electrolyte by in Situ Li-7 NMR Imaging. *J. Am. Chem. Soc.* **134**, 14654-14657, doi:10.1021/ja305461j (2012).

239 Klimesova, E., Kusova, K., Vacik, J., Holy, V. & Pelant, I. Tuning luminescence properties of silicon nanocrystals by lithium doping. *J. Appl. Phys.* **112**, doi:10.1063/1.4754518 (2012).

240 Klink, S. *et al.* The importance of cell geometry for electrochemical impedance spectroscopy in three-electrode lithium ion battery test cells. *Electrochem. Commun.* **22**, 120-123, doi:10.1016/j.elecom.2012.06.010 (2012).

241 Ko, J. W. *et al.* Synthesis of graphene-wrapped CuO hybrid materials by CO2 mineralization. *Green Chemistry* **14**, 2391-2394, doi:10.1039/c2gc35560d (2012).

242 Koike, S. & Kobayashi, H. Performance of Sn-based Negative Electrode Films Prepared by Electrostatic Spray Deposition in Lithium Batteries. *Electrochemistry* **80**, 821-824, doi:10.5796/electrochemistry.80.821 (2012).

243 Kong, J. H. *et al.* Highly electrically conductive layered carbon derived from polydopamine and its functions in SnO2-based lithium ion battery anodes. *Chemical Communications* **48**, 10316-10318, doi:10.1039/c2cc35284b (2012).

244 Koo, B. *et al.* A Highly Cross-Linked Polymeric Binder for High-Performance Silicon Negative Electrodes in Lithium Ion Batteries. *Angew. Chem.-Int. Edit.* **51**, 8762-8767, doi:10.1002/anie.201201568 (2012).

245 Koo, M. *et al.* Bendable Inorganic Thin-Film Battery for Fully Flexible Electronic Systems. *Nano Lett.* **12**, 4810-4816, doi:10.1021/nl302254v (2012).

246 Kramer, E., Schmitz, R., Niehoff, P., Passerini, S. & Winter, M. SEI-forming mechanism of 1-Fluoropropane-2-one in lithium-ion batteries. *Electrochim. Acta* **81**, 161-165, doi:10.1016/j.electacta.2012.07.091 (2012).

247 Krause, L. J., Jensen, L. D. & Dahn, J. R. Measurement of Parasitic Reactions in Li Ion Cells by Electrochemical Calorimetry. *J. Electrochem. Soc.* **159**, A937-A943, doi:10.1149/2.021207jes (2012).

248 Ku, J. H., Ryu, J. H., Kim, S. H., Han, O. H. & Oh, S. M. Reversible Lithium Storage with High Mobility at Structural Defects in Amorphous Molybdenum Dioxide Electrode. *Advanced Functional Materials* **22**, 3658-3664, doi:10.1002/adfm.201102669 (2012).

249 Kuang, Q. & Zhao, Y. M. Two-step carbon coating of lithium vanadium phosphate as high-rate cathode for lithium-ion batteries. *J. Power Sources* **216**, 33-35, doi:10.1016/j.jpowsour.2012.04.078 (2012).

250 Kubota, K. *et al.* Direct synthesis of oxygen-deficient Li2MnO3-x for high capacity lithium battery electrodes. *J. Power Sources* **216**, 249-255, doi:10.1016/j.jpowsour.2012.05.061 (2012).

251 Kuezma, M., Devaraj, S. & Balaya, P. Li2MnSiO4 obtained by microwave assisted solvothermal method: electrochemical and surface studies. *Journal of Materials Chemistry* **22**, 21279-21284, doi:10.1039/c2jm34455f (2012).

252 Kung, C. W. *et al.* CoS Acicular Nanorod Arrays for the Counter Electrode of an Efficient Dye-Sensitized Solar Cell. *ACS Nano* **6**, 7016-7025, doi:10.1021/nn302063s (2012).

253 Kuo, S. L., Liu, W. R. & Wu, H. C. Lithium Storage Behavior of Graphene Nanosheets-based Materials. *Journal of the Chinese Chemical Society* **59**, 1220-1225, doi:10.1002/jccs.201200099 (2012).

254 Kweon, S. C., Oh, I. H., Lee, J. K. & Khodin, A. A. Fullerite/tin oxide interface barriers in a lithium-ion secondary cell. *Materials Letters* **83**, 88-90, doi:10.1016/j.matlet.2012.05.103 (2012).

255 Kwon, Y. H. *et al.* Cable-Type Flexible Lithium Ion Battery Based on Hollow Multi-Helix Electrodes. *Advanced Materials* **24**, 5192-5197, doi:10.1002/adma.201202196 (2012).

256 Lai, Y. Q., Ren, C. Y., Lu, H., Zhang, Z. A. & Li, J. Compatibility of Diphenyloctyl Phosphate as Flame-Retardant Additive with LiNi1/3Co1/3Mn1/3O2/Artificial Graphite Cells. *J. Electrochem. Soc.* **159**, A1267-A1272, doi:10.1149/2.058208jes (2012).

257 Langer, T. *et al.* Electrochemical Lithiation of Silicon Clathrate-II. *J. Electrochem. Soc.* **159**, A1318-A1322, doi:10.1149/2.082208jes (2012).

258 Lasri, K. *et al.* Origin of the irreversible capacity of the Fe0.5TiOPO4 anode material. *Solid State Ion.* **224**, 15-20, doi:10.1016/j.ssi.2012.07.006 (2012).

259 Lawrence, R., Gnanaraj, J., Geng, X. & Liang, J. Y. Carbon Nanofibers as Effective, Low Cost Replacements for Carbon Nanotubes in High Performance Lithium-Ion Batteries. *Science of Advanced Materials* **4**, 877-880, doi:10.1166/sam.2012.1360 (2012).

260 Le, M. L. P. *et al.* Electrolyte based on fluorinated cyclic quaternary ammonium ionic liquids. *Ionics* **18**, 817-827, doi:10.1007/s11581-012-0688-x (2012).

261 Leadbetter, J. & Swan, L. G. Selection of battery technology to support grid-integrated renewable electricity. *J. Power Sources* **216**, 376-386, doi:10.1016/j.jpowsour.2012.05.081 (2012).

262 Lee, E. & Persson, K. A. Li Absorption and Intercalation in Single Layer Graphene and Few Layer Graphene by First Principles. *Nano Lett.* **12**, 4624-4628, doi:10.1021/nl3019164 (2012).

263 Lee, E. S., Nam, K. W., Hu, E. Y. & Manthiram, A. Influence of Cation Ordering and Lattice Distortion on the Charge-Discharge Behavior of LiMn1.5Ni0.5O4 Spinel between 5.0 and 2.0 V. *Chem. Mat.* **24**, 3610-3620, doi:10.1021/cm3020836 (2012).

264 Lee, J. E. *et al.* Facile and economical synthesis of hierarchical carbon-coated magnetite nanocomposite particles and their applications in lithium ion battery anodes. *Energy & Environmental Science* **5**, 9528-9533, doi:10.1039/c2ee22792d (2012).

265 Lee, J. H. *et al.* The role of vacancies and defects in Na0.44MnO2 nanowire catalysts for lithium-oxygen batteries. *Energy & Environmental Science* **5**, 9558-9565, doi:10.1039/c2ee21543h (2012).

266 Lee, J. K., Yoon, W. Y. & Kim, B. K. Electrochemical Behavior of Si Nanoparticle Anode Coated with Diamond-Like Carbon for Lithium-Ion Battery. *J. Electrochem. Soc.* **159**, A1844-A1848, doi:10.1149/2.045211jes (2012).

267 Lee, J. L., Chemistruck, A. & Plett, G. L. One-dimensional physics-based reduced-order model of lithium-ion dynamics. *J. Power Sources* **220**, 430-448, doi:10.1016/j.jpowsour.2012.07.075 (2012).

268 Lee, J. R., Won, J. H., Kim, J. H., Kim, K. J. & Lee, S. Y. Evaporation-induced self-assembled silica colloidal particle-assisted nanoporous structural evolution of poly(ethylene terephthalate) nonwoven composite separators for high-safety/high-rate lithium-ion batteries. *J. Power Sources* **216**, 42-47, doi:10.1016/j.jpowsour.2012.05.052 (2012).

269 Lee, M. L., Liao, S. C., Chen, J. M., Yeh, J. W. & Shih, H. C. Core-Shelled MCMB-Li4Ti5O12 Anode Material for Lithium-ion Batteries. *Journal of the Chinese Chemical Society* **59**, 1206-1210, doi:10.1002/jccs.201200175 (2012).

270 Lee, S., Cho, Y., Song, H. K., Lee, K. T. & Cho, J. Carbon-Coated Single-Crystal LiMn2O4 Nanoparticle Clusters as Cathode Material for High-Energy and High-Power Lithium-Ion Batteries. *Angew. Chem.-Int. Edit.* **51**, 8748-8752, doi:10.1002/anie.201203581 (2012).

271 Lee, S. & Park, S. S. Structure, Defect Chemistry, and Lithium Transport Pathway of Lithium Transition Metal Pyrophosphates (Li2MP2O7, M: Mn, Fe, and Co): Atomistic Simulation Study. *Chem. Mat.* **24**, 3550-3557, doi:10.1021/cm301921d (2012).

272 Lee, S. H., Seo, S. D., Park, K. S., Shim, H. W. & Kim, D. W. Synthesis of graphene nanosheets by the electrolytic exfoliation of graphite and their direct assembly for lithium ion battery anodes. *Materials Chemistry and Physics* **135**, 309-316, doi:10.1016/j.matchemphys.2012.04.043 (2012).

273 Lei, J. F., Li, W. S., Li, X. P. & Cairns, E. J. Nanoconic TiO2 hollow spheres: novel buffers architectured for high-capacity anode materials. *Journal of Materials Chemistry* **22**, 22022-22027, doi:10.1039/c2jm34332k (2012).

274 Leskes, M. *et al.* Direct Detection of Discharge Products in Lithium-Oxygen Batteries by Solid-State NMR Spectroscopy. *Angew. Chem.-Int. Edit.* **51**, 8560-8563, doi:10.1002/anie.201202183 (2012).

275 Lewandowski, A., Swiderska-Mocek, A. & Waliszewski, L. Solid electrolyte interphase formation on metallic lithium. *Journal of Solid State Electrochemistry* **16**, 3391-3397, doi:10.1007/s10008-012-1786-4 (2012).

276 Li, B. H. *et al.* Facile synthesis of Li4Ti5O12/C composite with super rate performance. *Energy & Environmental Science* **5**, 9595-9602, doi:10.1039/c2ee22591c (2012).

277 Li, C. C. & Lin, Y. S. Interactions between organic additives and active powders in water-based lithium iron phosphate electrode slurries. *J. Power Sources* **220**, 413-421, doi:10.1016/j.jpowsour.2012.07.125 (2012).

278 Li, D. *et al.* Microwave-assisted Synthesis of Flower-like Structure epsilon-MnO2 as Cathode for Lithium Ion Batteries. *Journal of the Chinese Chemical Society* **59**, 1211-1215, doi:10.1002/jccs.201200193 (2012).

279 Li, D., Lian, F., Hou, X. M. & Chou, K. C. Reaction mechanisms for 0.5Li(2)MnO(3)center dot 0.5LiMn(0.5)Ni(0.5)O(2) precursor prepared by low-heating solid state reaction. *International Journal of Minerals Metallurgy and Materials* **19**, 856-862, doi:10.1007/s12613-012-0639-6 (2012).

280 Li, D. *et al.* Enhanced Electrochemical Performance of MoS2 for Lithium Ion Batteries by Simple Chemical Lithiation. *Journal of the Chinese Chemical Society* **59**, 1196-1200, doi:10.1002/jccs.201200176 (2012).

281 Li, G. C., Li, G. R., Ye, S. H. & Gao, X. P. A Polyaniline-Coated Sulfur/Carbon Composite with an Enhanced High-Rate Capability as a Cathode Material for Lithium/Sulfur Batteries. *Advanced Energy Materials* **2**, 1238-1245, doi:10.1002/aenm.201200017 (2012).

282 Li, G. R., Feng, X., Ding, Y., Ye, S. H. & Gao, X. P. AlF3-coated Li(Li0.17Ni0.25Mn0.58)O-2 as cathode material for Li-ion batteries. *Electrochim. Acta* **78**, 308-315, doi:10.1016/j.electacta.2012.05.142 (2012).

283 Li, H. B., Kang, W. J., Yu, Y., Liu, J. F. & Qian, Y. T. Synthesis of bamboo-structured carbon nanotubes and honeycomb carbons with long-cycle Li-storage performance by in situ generated zinc oxide. *Carbon* **50**, 4787-4793, doi:10.1016/j.carbon.2012.06.001 (2012).

284 Li, H. Q. *et al.* High cyclability of ionic liquid-produced TiO2 nanotube arrays as an anode material for lithium-ion batteries. *J. Power Sources* **218**, 88-92, doi:10.1016/j.jpowsour.2012.06.096 (2012).

285 Li, J., Su, Q. M. & Du, G. H. Facile synthesis of flowerlike CuO by double-hydroxides treatment and their electrochemical properties. *Materials Letters* **84**, 97-100, doi:10.1016/j.matlet.2012.06.064 (2012).

286 Li, J. L., Rulison, C., Kiggans, J., Daniel, C. & Wood, D. L. Superior Performance of LiFePO4 Aqueous Dispersions via Corona Treatment and Surface Energy Optimization. *J. Electrochem. Soc.* **159**, A1152-A1157, doi:10.1149/2.018208jes (2012).

287 Li, J. W., Mazzola, M. S., Gafford, J., Jia, B. & Xin, M. Bandwidth based electrical-analogue battery modeling for battery modules. *J. Power Sources* **218**, 331-340, doi:10.1016/j.jpowsour.2012.07.006 (2012).

288 Li, L. *et al.* Ascorbic-acid-assisted recovery of cobalt and lithium from spent Li-ion batteries. *J. Power Sources* **218**, 21-27, doi:10.1016/j.jpowsour.2012.06.068 (2012).

289 Li, L. J., Zhao, X. S., Fu, Y. Z. & Manthiram, A. Polyprotic acid catholyte for high capacity dual-electrolyte Li-air batteries. *Phys. Chem. Chem. Phys.* **14**, 12737-12740, doi:10.1039/c2cp42250f (2012).

290 Li, M. T. *et al.* Polymeric ionic liquid membranes as electrolytes for lithium battery applications. *Journal of Applied Electrochemistry* **42**, 851-856, doi:10.1007/s10800-012-0450-0 (2012).

291 Li, N. *et al.* Hydrothermal synthesis of layered Li(1.81)H(0.19)Ti(2)O5 center dot xH(2)O nanosheets and their transformation to single-crystalline Li4Ti5O12 nanosheets as the anode materials for Li-ion batteries. *Crystengcomm* **14**, 6435-6440, doi:10.1039/c2ce25900a (2012).

292 Li, S. R. *et al.* Facile synthesis of micrometer Li1.05Mn1.95O4 and its low temperature performance for high power lithium ion batteries. *Electrochim. Acta* **81**, 191-196, doi:10.1016/j.electacta.2012.07.086 (2012).

293 Li, T., Yang, J. Y. & Lu, S. G. Effect of modified elastomeric binders on the electrochemical properties of silicon anodes for lithium-ion batteries. *International Journal of Minerals Metallurgy and Materials* **19**, 752-756, doi:10.1007/s12613-012-0623-1 (2012).

294 Li, X. C. *et al.* Magnetic titania-silica composite-Polypyrrole core-shell spheres and their high sensitivity toward hydrogen peroxide as electrochemical sensor. *Journal of Colloid and Interface Science* **387**, 39-46, doi:10.1016/j.jcis.2012.07.071 (2012).

295 Li, X. F. *et al.* Novel approach toward a binder-free and current collector-free anode configuration: highly flexible nanoporous carbon nanotube electrodes with strong mechanical strength harvesting improved lithium storage. *Journal of Materials Chemistry* **22**, 18847-18853, doi:10.1039/c2jm33297c (2012).

296 Li, X. L. *et al.* Functionalized Graphene Sheets as Molecular Templates for Controlled Nucleation and Self-Assembly of Metal Oxide-Graphene Nanocomposites. *Advanced Materials* **24**, 5136-5141, doi:10.1002/adma.201202189 (2012).

297 Li, Y. F., Huang, K. & Xing, Y. C. A hybrid Li-air battery with buckypaper air cathode and sulfuric acid electrolyte. *Electrochim. Acta* **81**, 20-24, doi:10.1016/j.electacta.2012.07.060 (2012).

298 Li, Y. L. *et al.* Discharge product morphology and increased charge performance of lithium-oxygen batteries with graphene nanosheet electrodes: the effect of sulphur doping. *Journal of Materials Chemistry* **22**, 20170-20174, doi:10.1039/c2jm34718k (2012).

299 Li, Z. *et al.* Pre-Charge Treatment of Li-Riched Li Li0.2Co0.4Mn0.4 O-2 Cathode Material for Lithium Ion Batteries. *Science of Advanced Materials* **4**, 843-846, doi:10.1166/sam.2012.1354 (2012).

300 Li, Z. Q. *et al.* Three-dimensional nanohybrids of Mn3O4/ordered mesoporous carbons for high performance anode materials for lithium-ion batteries. *Journal of Materials Chemistry* **22**, 16640-16648, doi:10.1039/c2jm33195k (2012).

301 Lian, X. J. *et al.* Retrograded starches as potential anodes in lithium-ion rechargeable batteries. *International Journal of Biological Macromolecules* **51**, 632-634, doi:10.1016/j.ijbiomac.2012.06.015 (2012).

302 Lin, C. Y. & Chang, C. C. Compatibility of LiFePO4 and LiNi1/3Mn1/3Co1/3O2 Electrode Materials with Quaternary-ammonium Based Ionic Liquid Mixed with Organic Solvent Electrolyte System. *Journal of the Chinese Chemical Society* **59**, 1244-1249, doi:10.1002/jccs.201200156 (2012).

303 Lin, Y. C. *et al.* Transport Properties of Nano-sized TiO2-based Composite Polymer Electrolyte Prepared by a Green Method. *Journal of the Chinese Chemical Society* **59**, 1250-1257, doi:10.1002/jccs.201200254 (2012).

304 Lipson, A. L. *et al.* Enhanced Lithiation of Doped 6H Silicon Carbide (0001) via High Temperature Vacuum Growth of Epitaxial Graphene. *Journal of Physical Chemistry C* **116**, 20949-20957, doi:10.1021/jp307220y (2012).

305 Liu, A. P. & Dong, W. J. Highlights on inorganic solid state chemistry and energy materials. *Science China-Technological Sciences* **55**, 3248-3252, doi:10.1007/s11431-012-5056-6 (2012).

306 Liu, D. L., Bai, Y., Zhao, S. & Zhang, W. F. Improved cycling performance of 5 V spinel LiMn1.5Ni0.5O4 by amorphous FePO4 coating. *J. Power Sources* **219**, 333-338, doi:10.1016/j.jpowsour.2012.07.058 (2012).

307 Liu, G., Su, Z., Sarfraz, S., Xi, K. & Lai, C. General synthesis and electrochemical performance of TiO2-based microspheres with core-shell structure. *Materials Letters* **84**, 143-146, doi:10.1016/j.matlet.2012.06.038 (2012).

308 Liu, G. Y. *et al.* Facile synthesis of nanocrystalline Li4Ti5O12 by microemulsion and its application as anode material for Li-ion batteries. *J. Power Sources* **220**, 84-88, doi:10.1016/j.jpowsour.2012.07.087 (2012).

309 Liu, H. B. *et al.* LiAlH4 and PBr3 assisted high quality synthesis of graphene with excellent performances for lithium ion batteries. *Materials Letters* **83**, 62-64, doi:10.1016/j.matlet.2012.05.110 (2012).

310 Liu, H. D., Huang, J. M., Li, X. L., Liu, J. & Zhang, Y. X. One-step hydrothermal synthesis of flower-like SnO2/carbon nanotubes composite and its electrochemical properties. *Journal of Sol-Gel Science and Technology* **63**, 569-572, doi:10.1007/s10971-012-2776-9 (2012).

311 Liu, H. W. & Wang, J. Hydrothermal Synthesis and Electrochemical Performance of MnCo2O4 Nanoparticles as Anode Material in Lithium-Ion Batteries. *Journal of Electronic Materials* **41**, 3107-3110, doi:10.1007/s11664-012-2210-7 (2012).

312 Liu, L. *et al.* Improvement of Electrochemical Properties of LiV3O8/LiMn2O4 ARLB by NiO Nanofibers Coating on the Anode. *J. Electrochem. Soc.* **159**, A1230-A1235, doi:10.1149/2.044208jes (2012).

313 Liu, L. L. *et al.* Nanoporous Carbon as Anode Material of High Rate Capability for Lithium Ion Batteries. *Journal of the Chinese Chemical Society* **59**, 1216-1219, doi:10.1002/jccs.201200168 (2012).

314 Liu, R. R. *et al.* In situ gelatin carbonation to prepare a binder-free LiFePO4 cathode for high-power lithium ion batteries. *Electrochim. Acta* **78**, 563-568, doi:10.1016/j.electacta.2012.06.052 (2012).

315 Liu, S. Y. *et al.* Self-assembly of a CoFe2O4/graphene sandwich by a controllable and general route: towards a high-performance anode for Li-ion batteries. *Journal of Materials Chemistry* **22**, 19738-19743, doi:10.1039/c2jm34019d (2012).

316 Liu, W. M. *et al.* Synthesis and characterization of LiCoO2-coated LiNi0.8Co0.15Al0.05O2 cathode materials. *Materials Letters* **83**, 11-13, doi:10.1016/j.matlet.2012.05.100 (2012).

317 Liu, X., Xie, K., Wang, J., Zheng, C. M. & Pan, Y. Si/Si-O-C composite anode materials exhibiting good C rate performances prepared by a sol-gel method. *Journal of Materials Chemistry* **22**, 19621-19624, doi:10.1039/c2jm34011a (2012).

318 Liu, X. F. *et al.* N-Methyl-2-pyrrolidone-assisted solvothermal synthesis of nanosize orthorhombic lithium iron phosphate with improved Li-storage performance. *Journal of Materials Chemistry* **22**, 18908-18914, doi:10.1039/c2jm32962j (2012).

319 Liu, X. J., Xu, Z. Z., Ahn, H. J., Lyu, S. K. & Ahn, I. S. Electrochemical characteristics of cathode materials NiS2 and Fe-doped NiS2 synthesized by mechanical alloying for lithium-ion batteries. *Powder Technology* **229**, 24-29, doi:10.1016/j.powtec.2012.05.035 (2012).

320 Liu, X. S. *et al.* Phase Transformation and Lithiation Effect on Electronic Structure of LixFePO4: An In-Depth Study by Soft X-ray and Simulations. *J. Am. Chem. Soc.* **134**, 13708-13715, doi:10.1021/ja303225e (2012).

321 Liu, Y. *et al.* A facile method for fabricating TiO2@mesoporous carbon and three-layered nanocomposites. *Nanotechnology* **23**, doi:10.1088/0957-4484/23/32/325602 (2012).

322 Liu, Y. B., Cai, Z. J., Tan, L. & Li, L. Ion exchange membranes as electrolyte for high performance Li-ion batteries. *Energy & Environmental Science* **5**, 9007-9013, doi:10.1039/c2ee22753c (2012).

323 Liu, Y. J. *et al.* Concave Co3O4 octahedral mesocrystal: polymer-mediated synthesis and sensing properties. *Crystengcomm* **14**, 6264-6270, doi:10.1039/c2ce25788b (2012).

324 Liu, Z. Y., Bai, H. W. & Sun, D. D. High-Performance Lithium-Ion Anodes with Hierarchically Assembled Single-Crystal SnO2 Nanoflake Spheres. *Chemistry-an Asian Journal* **7**, 2381-2385, doi:10.1002/asia.201200429 (2012).

325 Longo, R. C., Xiong, K., Wang, W. & Cho, K. Influence of the exchange-correlation potential on the electrochemical properties of multicomponent silicate cathode materials. *Electrochim. Acta* **80**, 84-89, doi:10.1016/j.electacta.2012.06.110 (2012).

326 Lopez, M. C., Ortiz, G. F. & Tirado, J. L. A Functionalized Co2P Negative Electrode for Batteries Demanding High Li-Potential Reaction. *J. Electrochem. Soc.* **159**, A1253-A1261, doi:10.1149/2.052208jes (2012).

327 Lu, J. P. *et al.* Ultrasensitive Phototransistor Based on K-Enriched MoO3 Single Nanowires. *Journal of Physical Chemistry C* **116**, 22015-22020, doi:10.1021/jp305231j (2012).

328 Lu, M., Tian, Y. Y., Zheng, X. D., Gao, J. & Huang, B. Enhanced performance of spherical natural graphite coated by Li4Ti5O12 as anode for lithium-ion batteries. *J. Power Sources* **219**, 188-192, doi:10.1016/j.jpowsour.2012.07.044 (2012).

329 Lu, W., Goering, A., Qu, L. T. & Dai, L. M. Lithium-ion batteries based on vertically-aligned carbon nanotube electrodes and ionic liquid electrolytes. *Phys. Chem. Chem. Phys.* **14**, 12099-12104, doi:10.1039/c2cp40726d (2012).

330 Lu, Y. *et al.* Controllable Synthesis of a Monophase Nickel Phosphide/Carbon (Ni5P4/C) Composite Electrode via Wet-Chemistry and a Solid-State Reaction for the Anode in Lithium Secondary Batteries. *Advanced Functional Materials* **22**, 3927-3935, doi:10.1002/adfm.201102660 (2012).

331 Lu, Y. *et al.* Ni2P/Graphene Sheets as Anode Materials with Enhanced Electrochemical Properties versus Lithium. *Journal of Physical Chemistry C* **116**, 22217-22225, doi:10.1021/jp3073987 (2012).

332 Lu, Y. C. *et al.* In Situ Ambient Pressure X-ray Photoelectron Spectroscopy Studies of Lithium-Oxygen Redox Reactions. *Scientific Reports* **2**, doi:10.1038/srep00715 (2012).

333 Luan, X. N., Guan, D. S. & Wang, Y. Enhancing High-Rate and Elevated-Temperature Performances of Nano-Sized and Micron-Sized LiMn2O4 in Lithium-Ion Batteries with Ultrathin Surface Coatings. *Journal of Nanoscience and Nanotechnology* **12**, 7113-7120, doi:10.1166/jnn.2012.6577 (2012).

334 Luo, D. *et al.* Low-concentration donor-doped LiCoO2 as a high performance cathode material for Li-ion batteries to operate between-10.4 and 45.4 degrees C. *Journal of Materials Chemistry* **22**, 22233-22241, doi:10.1039/c2jm35550g (2012).

335 Luo, D. F., Hou, X. H., Yang, J. H., Tan, Z. Z. & Luo, X. D. First Principles Studies on the Electronics Structures of (Li0.75Na0.25)(Fe0.75Mn0.25)PO4 Cathode Materials. *Rare Metal Materials and Engineering* **41**, 1323-1326 (2012).

336 Luo, G. X. *et al.* Structure, Electrode Voltage and Activation Energy of LiMnxCoyNi1-x-yO2 Solid Solutions as Cathode Materials for Li Batteries from First-Principles. *J. Electrochem. Soc.* **159**, A1203-A1208, doi:10.1149/2.025208jes (2012).

337 Luo, M. *et al.* General strategy for one-pot synthesis of metal sulfide hollow spheres with enhanced photocatalytic activity. *Applied Catalysis B-Environmental* **125**, 180-188, doi:10.1016/j.apcatb.2012.05.041 (2012).

338 Lux, S. F. *et al.* Enhanced Electrochemical Performance of Graphite Anodes for Lithium-Ion Batteries by Dry Coating with Hydrophobic Fumed Silica. *J. Electrochem. Soc.* **159**, A1849-A1855, doi:10.1149/2.070211jes (2012).

339 Mahesh, K. C., Manjunatha, H., Shivashankaraiah, R. B., Suresh, G. S. & Venkatesha, T. V. Synthesis of LiNi1/3Mn1/3Co1/3O2 Cathode Material and its Electrochemical Characterization in an Aqueous Electrolyte. *J. Electrochem. Soc.* **159**, A1040-A1047, doi:10.1149/2.058207jes (2012).

340 Mai, Y. J. *et al.* MnO/reduced graphene oxide sheet hybrid as an anode for Li-ion batteries with enhanced lithium storage performance. *J. Power Sources* **216**, 201-207, doi:10.1016/j.jpowsour.2012.05.084 (2012).

341 Makimura, Y., Zheng, S. J., Ikuhara, Y. & Ukyo, Y. Microstructural Observation of LiNi0.8Co0.15Al0.05O2 after Charge and Discharge by Scanning Transmission Electron Microscopy. *J. Electrochem. Soc.* **159**, A1070-A1073, doi:10.1149/2.073207jes (2012).

342 Manjunatha, H., Mahesh, K. C., Suresh, G. S. & Venkatesha, T. V. Kinetics of lithium insertion into LiMnPO4 from aqueous saturated LiOH: A study using galvanostatic and potentiostatic intermittent titration techniques. *Electrochim. Acta* **80**, 269-281, doi:10.1016/j.electacta.2012.07.003 (2012).

343 Mao, L. P. *et al.* Electrochemical performance of electrolytes based upon lithium bis(oxalate)borate and sulfolane/alkyl sulfite mixtures for high temperature lithium-ion batteries. *Electrochim. Acta* **79**, 197-201, doi:10.1016/j.electacta.2012.06.102 (2012).

344 Mao, S. *et al.* A General Approach to One-Pot Fabrication of Crumpled Graphene-Based Nanohybrids for Energy Applications. *ACS Nano* **6**, 7505-7513, doi:10.1021/nn302818J (2012).

345 Marino, C., Fullenwarth, J., Monconduit, L. & Lestriez, B. Diagnostic of the failure mechanism in NiSb2 electrode for Li battery through analysis of its polarization on galvanostatic cycling. *Electrochim. Acta* **78**, 177-182, doi:10.1016/j.electacta.2012.05.126 (2012).

346 Martha, S. K., Nanda, J., Veith, G. M. & Dudney, N. J. Surface studies of high voltage lithium rich composition: Li1.2Mn0.525Ni0.175Co0.1O2. *J. Power Sources* **216**, 179-186, doi:10.1016/j.jpowsour.2012.05.049 (2012).

347 Martin, L., Vallverdu, G., Martinez, H., Le Cras, F. & Baraille, I. First principles calculations of solid-solid interfaces: an application to conversion materials for lithium-ion batteries. *Journal of Materials Chemistry* **22**, 22063-22071, doi:10.1039/c2jm35078e (2012).

348 Matsui, Y. *et al.* Charge-Discharge Characteristics of a LiNi1/3Mn1/3Co1/3O2 Cathode in FSI-based Ionic Liquids. *Electrochemistry* **80**, 808-811, doi:10.5796/electrochemistry.80.808 (2012).

349 Mazouzi, D. *et al.* New insights into the silicon-based electrode's irreversibility along cycle life through simple gravimetric method. *J. Power Sources* **220**, 180-184, doi:10.1016/j.jpowsour.2012.08.007 (2012).

350 Mba, J. M. A., Croguennec, L., Basir, N. I., Barker, J. & Masquelier, C. Lithium Insertion or Extraction from/into Tavorite-Type LiVPO4F: An In Situ X-ray Diffraction Study. *J. Electrochem. Soc.* **159**, A1171-A1175, doi:10.1149/2.022208jes (2012).

351 McCalla, E., Carey, G. H. & Dahn, J. R. Lithium loss mechanisms during synthesis of layered LixNi2-xO2 for lithium ion batteries. *Solid State Ion.* **219**, 11-19, doi:10.1016/j.ssi.2012.05.007 (2012).

352 Mi, L. W. *et al.* 3D hierarchically patterned tubular NiSe with nano-/microstructures for Li ion battery design. *Dalton Transactions* **41**, 12595-12600, doi:10.1039/c2dt31787g (2012).

353 Minakshi, M. & Kandhasamy, S. Influence of sol-gel derived lithium cobalt phosphate in alkaline rechargeable battery. *Journal of Sol-Gel Science and Technology* **64**, 47-53, doi:10.1007/s10971-012-2826-3 (2012).

354 Minami, T. New borate glasses for ionics. *Physics and Chemistry of Glasses-European Journal of Glass Science and Technology Part B* **53**, 17-26 (2012).

355 Ming, J. *et al.* Fine control of titania deposition to prepare C@TiO2 composites and TiO2 hollow particles for photocatalysis and lithium-ion battery applications. *Journal of Materials Chemistry* **22**, 22135-22141, doi:10.1039/c2jm34106a (2012).

356 Miyuki, T., Kojima, T., Okuyama, Y. & Sakai, T. Development of Olganosulfur Cathodes Using Nanofiber Nonwoven Precursor and Their Electrode Performance for The Rechargeable Lithium Battery. *Sen-I Gakkaishi* **68**, 179-183 (2012).

357 Mohan, P., Kalaignan, G. P. & Muralidharan, V. S. Improved the Electrochemical Performance of LiCe1-xNixO2 Cathode Material for Rechargeable Lithium Ion Battery. *Journal of Nanoscience and Nanotechnology* **12**, 7052-7059, doi:10.1166/jnn.2012.6510 (2012).

358 Mohanty, D. & Gabrisch, H. Microstructural investigation of LixNi1/3Mn1/3Co1/3O2 (x <= 1) and its aged products via magnetic and diffraction study. *J. Power Sources* **220**, 405-412, doi:10.1016/j.jpowsour.2012.08.005 (2012).

359 Momma, T., Matsunaga, M., Mukoyama, D. & Osaka, T. Ac impedance analysis of lithium ion battery under temperature control. *J. Power Sources* **216**, 304-307, doi:10.1016/j.jpowsour.2012.05.095 (2012).

360 Morimoto, H., Sudo, T., Watanabe, H. & Tobishima, S. Electrochemical Properties of High-Capacity SiO-C Anodes Prepared by the Addition of Iron Oxide Powder for Lithium Secondary Batteries. *Electrochemistry* **80**, 812-816, doi:10.5796/electrochemistry.80.812 (2012).

361 Mukherjee, R., Thomas, A. V., Krishnamurthy, A. & Koratkar, N. Photothermally Reduced Graphene as High-Power Anodes for Lithium-Ion Batteries. *ACS Nano* **6**, 7867-7878, doi:10.1021/nn303145j (2012).

362 Muller, F. *et al.* New Sulfonated Polystyrene and Styrene-Ethylene/Butylene-Styrene Block Copolymers for Applications in Electrodialysis. *Journal of Physical Chemistry B* **116**, 11767-11779, doi:10.1021/jp3068415 (2012).

363 Murakami, M., Yamashige, H., Arai, H., Uchimoto, Y. & Ogumi, Z. Association of paramagnetic species with formation of LiF at the surface of LiCoO2. *Electrochim. Acta* **78**, 49-54, doi:10.1016/j.electacta.2012.05.141 (2012).

364 Nacimiento, F., Alcantara, R., Gonzalez, J. R. & Tirado, J. L. Electrodeposited Polyacrylonitrile and Cobalt-Tin Composite Thin Film on Titanium Substrate. *J. Electrochem. Soc.* **159**, A1028-A1033, doi:10.1149/2.054207jes (2012).

365 Nagao, M., Hayashi, A. & Tatsumisago, M. Bulk-Type Lithium Metal Secondary Battery with Indium Thin Layer at Interface between Li Electrode and Li2S-P2S5 Solid Electrolyte. *Electrochemistry* **80**, 734-736, doi:10.5796/electrochemistry.80.734 (2012).

366 Nagao, M., Hayashi, A. & Tatsumisago, M. Fabrication of favorable interface between sulfide solid electrolyte and Li metal electrode for bulk-type solid-state Li/S battery. *Electrochem. Commun.* **22**, 177-180, doi:10.1016/j.elecom.2012.06.015 (2012).

367 Nagpure, S. C., Downing, R. G., Bhushan, B. & Babu, S. S. Discovery of lithium in copper current collectors used in batteries. *Scripta Materialia* **67**, 669-672, doi:10.1016/j.scriptamat.2012.07.009 (2012).

368 Nakahara, K. *et al.* Drastically Improved Performances of Graphite/Li1.26Mn0.52Fe0.22O2 Cell with Stepwise Pre-Cycling Treatment that Causes Peroxide Forming. *J. Electrochem. Soc.* **159**, A1398-A1404, doi:10.1149/2.014209jes (2012).

369 Nakajima, K., Oshima, S., Suzuki, M. & Kimura, K. Surface structures of equimolar mixtures of imidazolium-based ionic liquids using high-resolution Rutherford backscattering spectroscopy. *Surface Science* **606**, 1693-1699, doi:10.1016/jsusc.2012.07.013 (2012).

370 Nakanishi, S., Mizuno, F., Abe, T. & Iba, H. Enhancing Effect of Carbon Surface in the Non-Aqueous Li-O-2 Battery Cathode. *Electrochemistry* **80**, 783-786, doi:10.5796/electrochemistry.80.783 (2012).

371 Nakanishi, S., Mizuno, F., Nobuhara, K., Abe, T. & Iba, H. Influence of the carbon surface on cathode deposits in non-aqueous Li-O-2 batteries. *Carbon* **50**, 4794-4803, doi:10.1016/j.carbon.2012.06.003 (2012).

372 Nakayama, M., Kanekoa, M. & Wakihara, M. First-principles study of lithium ion migration in lithium transition metal oxides with spinel structure. *Phys. Chem. Chem. Phys.* **14**, 13963-13970, doi:10.1039/c2cp42154b (2012).

373 Nam, D. H., Kim, R. H., Lee, C. L. & Kwon, H. S. Highly Reversible Sn-Co Alloy Anode Using Porous Cu Foam Substrate for Li-Ion Batteries. *J. Electrochem. Soc.* **159**, A1822-A1826, doi:10.1149/2.050211jes (2012).

374 Nambu, N., Nachi, T., Takehara, M., Ue, M. & Sasaki, Y. Structural Isomerism Effect on Physical and Electrochemical Properties of Monofluorinated Linear Carbonates. *Electrochemistry* **80**, 771-773, doi:10.5796/electrochemistry.80.771 (2012).

375 Nambu, N. *et al.* Use of Monofluorinated Ethyl Propionates as Solvents for Lithium Secondary Batteries. *Electrochemistry* **80**, 746-748, doi:10.5796/electrochemistry.80.746 (2012).

376 Nambu, N., Yamamoto, J., Yamaguchi, K. & Sasaki, Y. Physicochemical Properties of 3-Propyl-4-propylsydnone as Solvent for Lithium Battery Electrolytes. *Electrochemistry* **80**, 780-782, doi:10.5796/electrochemistry.80.780 (2012).

377 Naoi, K., Ishimoto, S., Miyamoto, J. & Naoi, W. Second generation 'nanohybrid supercapacitor': Evolution of capacitive energy storage devices. *Energy & Environmental Science* **5**, 9363-9373, doi:10.1039/c2ee21675b (2012).

378 Nassar, M. Y. & Ahmed, I. S. Template-free hydrothermal derived cobalt oxide nanopowders: Synthesis, characterization, and removal of organic dyes. *Mater. Res. Bull.* **47**, 2638-2645, doi:10.1016/j.materresbull.2012.04.070 (2012).

379 Neidhardt, J. P. *et al.* A Flexible Framework for Modeling Multiple Solid, Liquid and Gaseous Phases in Batteries and Fuel Cells. *J. Electrochem. Soc.* **159**, A1528-A1542, doi:10.1149/2.023209jes (2012).

380 Nethravathi, C., Viswanath, B., Michael, J. & Rajamath, M. Hydrothermal synthesis of a monoclinic VO2 nanotube-graphene hybrid for use as cathode material in lithium ion batteries. *Carbon* **50**, 4839-4846, doi:10.1016/j.carbon.2012.06.010 (2012).

381 Nithya, C., Lakshmi, R. & Gopukumar, S. Effect of Mg Dopant on the Electrochemical Performance of LiNi0.5Mn0.5O2 Cathode Materials for Lithium Rechargeable Batteries. *J. Electrochem. Soc.* **159**, A1335-A1340, doi:10.1149/2.086208jes (2012).

382 Nithya, C., Thirunakaran, R., Sivashanmugam, A. & Gopukumar, S. High-Performing LiMgxCuyCo1-x-yO2 Cathode Material for Lithium Rechargeable Batteries. *ACS Appl. Mater. Interfaces* **4**, 4040-4046, doi:10.1021/am300842x (2012).

383 Noguchi, H., Miyazaki, S., Tanaka, Y. & Zhao, W. W. Formation of TiO2(B) Prepared from Lepidocrocite Type Precursor Containing Potassium. *Electrochemistry* **80**, 787-790, doi:10.5796/electrochemistry.80.787 (2012).

384 Noh, J. P. *et al.* The Effects of Substrate and Annealing on Structural and Electrochemical Properties in LiCoO2 Thin Films Prepared by DC Magnetron Sputtering. *Journal of Nanoscience and Nanotechnology* **12**, 5937-5941, doi:10.1166/jnn.2012.6399 (2012).

385 Nolis, G. M. *et al.* Structure, defects and thermal stability of delithiated olivine phosphates. *Journal of Materials Chemistry* **22**, 20482-20489, doi:10.1039/c2jm33183g (2012).

386 Norberg, N. S. & Kostecki, R. The Degradation Mechanism of a Composite LiMnPO4 Cathode. *J. Electrochem. Soc.* **159**, A1431-A1434, doi:10.1149/2.018209jes (2012).

387 Norberg, N. S. & Kostecki, R. Interfacial Phenomena at a Composite LiMnPO4 Cathode. *J. Electrochem. Soc.* **159**, A1091-A1094, doi:10.1149/2.076207jes (2012).

388 Novak, P. M., Wetz, D. A. & Shrestha, B. Fast Recharge of Electrochemical Energy Storage Devices at Pulsed Elevated Rates. *Ieee Transactions on Plasma Science* **40**, 2416-2424, doi:10.1109/tps.2011.2178617 (2012).

389 Nugroho, A., Kim, S. J., Chung, K. Y. & Kim, J. Synthesis of Li4Ti5O12 in supercritical water for Li-ion batteries: Reaction mechanism and high-rate performance. *Electrochim. Acta* **78**, 623-632, doi:10.1016/j.electacta.2012.06.060 (2012).

390 Ochida, M. *et al.* Influence of Manganese Dissolution on the Degradation of Surface Films on Edge Plane Graphite Negative-Electrodes in Lithium-Ion Batteries. *J. Electrochem. Soc.* **159**, A961-A966, doi:10.1149/2.031207jes (2012).

391 Ogawa, H., Unemoto, A. & Honma, I. Quasi-Solid-State Lithium-Sulfur Battery Using Room Temperature Ionic Liquid-Li-salt-Fumed Silica Nanoparticle Composites as Electrolytes. *Electrochemistry* **80**, 765-767, doi:10.5796/electrochemistry.80.765 (2012).

392 Ogihara, N. *et al.* Theoretical and Experimental Analysis of Porous Electrodes for Lithium-Ion Batteries by Electrochemical Impedance Spectroscopy Using a Symmetric Cell. *J. Electrochem. Soc.* **159**, A1034-A1039, doi:10.1149/2.057207jes (2012).

393 Ogumi, Z. & Arai, H. Innovation in Rechargeable Batteries and Battery Analysis Zempachi OGUMI and Hajime ARAI. *Electrochemistry* **80**, 695-699, doi:10.5796/electrochemistry.80.695 (2012).

394 Oh, S. M., Myung, S. T., Hassoun, J., Scrosati, B. & Sun, Y. K. Reversible NaFePO4 electrode for sodium secondary batteries. *Electrochem. Commun.* **22**, 149-152, doi:10.1016/j.elecom.2012.06.014 (2012).

395 Okubo, T. *et al.* Carbon Coating of Si Thin Flakes and Negative Electrode Properties in Lithium-Ion Batteries. *Electrochemistry* **80**, 720-724, doi:10.5796/electrochemistry.80.720 (2012).

396 Omar, N. *et al.* Rechargeable Energy Storage Systems for Plug-in Hybrid Electric Vehicles-Assessment of Electrical Characteristics. *Energies* **5**, 2952-2988, doi:10.3390/en5082952 (2012).

397 Onoda, M. & Hirose, H. Crystal Structures and 3d Electron Configurations for the LixV2(PO4)(3) Insertion Electrode System with a Semi-Double-Electron Reaction. *Journal of the Physical Society of Japan* **81**, doi:10.1143/jpsj.81.094801 (2012).

398 Ostreng, E., Nilsen, O. & Fjellvag, H. Optical Properties of Vanadium Pentoxide Deposited by ALD. *Journal of Physical Chemistry C* **116**, 19444-19450, doi:10.1021/jp304521k (2012).

399 Palacios, E., Leret, P., Fernandez, J. F., De Aza, A. H. & Rodriguez, M. A. Synthesis of amorphous acid iron phosphate nanoparticles. *Journal of Nanoparticle Research* **14**, doi:10.1007/s11051-012-1131-y (2012).

400 Pan, A. Q., Wu, H. B., Yu, L., Zhu, T. & Lou, X. W. Synthesis of Hierarchical Three-Dimensional Vanadium Oxide Microstructures as High-Capacity Cathode Materials for Lithium-Ion Batteries. *ACS Appl. Mater. Interfaces* **4**, 3874-3879, doi:10.1021/am3012593 (2012).

401 Pan, X. L., Xu, C. Y. & Zhen, L. Synthesis of LiMnPO4 microspheres assembled by plates, wedges and prisms with different crystallographic orientations and their electrochemical performance. *Crystengcomm* **14**, 6412-6418, doi:10.1039/c2ce25593f (2012).

402 Park, H. *et al.* SnO2 encapsulated TiO2 hollow nanofibers as anode material for lithium ion batteries. *Electrochem. Commun.* **22**, 81-84, doi:10.1016/j.elecom.2012.05.034 (2012).

403 Park, H. S., Kim, T. H., Lee, M. H. & Song, H. K. Catalytic carbonization of an uncarbonizable precursor by transition metals in olivine cathode materials of lithium ion batteries. *Journal of Materials Chemistry* **22**, 20305-20310, doi:10.1039/c2jm33841f (2012).

404 Park, J. S. *et al.* Evaluation of Sulfur and Multi-Walled Carbon Nanotube Composite Synthesized by Dissolution and Precipitation for Li/S Batteries. *Journal of Nanoscience and Nanotechnology* **12**, 5794-5798, doi:10.1166/jnn.2012.6316 (2012).

405 Park, S., Ito, S., Takasu, K. & Yao, T. Multistage Li Insertion and Extraction Relaxation Analysis of y-Fe2O3. *Electrochemistry* **80**, 804-807, doi:10.5796/electrochemistry.80.804 (2012).

406 Park, Y. U. *et al.* Tailoring a fluorophosphate as a novel 4 V cathode for lithium-ion batteries. *Scientific Reports* **2**, doi:10.1038/srep00704 (2012).

407 Pasta, M., Battistel, A. & La Mantia, F. Batteries for lithium recovery from brines. *Energy & Environmental Science* **5**, 9487-9491, doi:10.1039/c2ee22977c (2012).

408 Pei, B., Yao, H. X., Zhang, W. X. & Yang, Z. H. Hydrothermal synthesis of morphology-controlled LiFePO4 cathode material for lithium-ion batteries. *J. Power Sources* **220**, 317-323, doi:10.1016/j.jpowsour.2012.07.128 (2012).

409 Petersburg, C. F., Li, Z., Chernova, N. A., Whittingham, M. S. & Alamgir, F. M. Oxygen and transition metal involvement in the charge compensation mechanism of LiNi1/3Mn1/3Co1/3O2 cathodes. *Journal of Materials Chemistry* **22**, 19993-20000, doi:10.1039/c2jm33392a (2012).

410 Pharr, M., Zhao, K. J., Wang, X. W., Suo, Z. G. & Vlassak, J. J. Kinetics of Initial Lithiation of Crystalline Silicon Electrodes of Lithium-Ion Batteries. *Nano Lett.* **12**, 5039-5047, doi:10.1021/nl302841y (2012).

411 Pivko, M., Arcon, I., Bele, M., Dominko, R. & Gaberscek, M. A(3)V(2)(PO4)(3) (A = Na or Li) probed by in situ X-ray absorption spectroscopy. *J. Power Sources* **216**, 145-151, doi:10.1016/j.jpowsour.2012.05.037 (2012).

412 Placke, T. *et al.* Reversible Intercalation of Bis(trifluoromethanesulfonyl)imide Anions from an Ionic Liquid Electrolyte into Graphite for High Performance Dual-Ion Cells. *J. Electrochem. Soc.* **159**, A1755-A1765, doi:10.1149/2.011211jes (2012).

413 Ponrouch, A., Sevilla, M., Marchante, E., Palacin, M. R. & Fuertes, A. B. Facile synthesis of graphitic carbons decorated with SnO2 nanoparticles and their application as high capacity lithium-ion battery anodes. *Journal of Applied Electrochemistry* **42**, 901-908, doi:10.1007/s10800-012-0467-4 (2012).

414 Porthault, H., Baddour-Hadjean, R., Le Cras, F., Bourbon, C. & Franger, S. Raman study of the spinel-to-layered phase transformation in sol-gel LiCoO2 cathode powders as a function of the post-annealing temperature. *Vibrational Spectroscopy* **62**, 152-158, doi:10.1016/j.vibspec.2012.05.004 (2012).

415 Prada, E. *et al.* Simplified Electrochemical and Thermal Model of LiFePO4-Graphite Li-Ion Batteries for Fast Charge Applications. *J. Electrochem. Soc.* **159**, A1508-A1519, doi:10.1149/2.064209jes (2012).

416 Pukha, V. E. *et al.* Synthesis, Structure and Properties of Superhard Nanostructured Films Deposited by the C-60 Ion Beam. *Journal of Nanoscience and Nanotechnology* **12**, 4762-4768, doi:10.1166/jnn.2012.4925 (2012).

417 Qi, Y., Xu, Q. C. & Van der Ven, A. Chemically Induced Crack Instability When Electrodes Fracture. *J. Electrochem. Soc.* **159**, A1838-A1843, doi:10.1149/2.026211jes (2012).

418 Qian, Y. Q., Vu, A., Smyrl, W. & Stein, A. Facile Preparation and Electrochemical Properties of V2O5-Graphene Composite Films as Free-Standing Cathodes for Rechargeable Lithium Batteries. *J. Electrochem. Soc.* **159**, A1135-A1140, doi:10.1149/2.004208jes (2012).

419 Qin, Z. H., Zhou, X. F., Xia, Y. G., Tang, C. L. & Liu, Z. P. Morphology controlled synthesis and modification of high-performance LiMnPO4 cathode materials for Li-ion batteries. *Journal of Materials Chemistry* **22**, 21144-21153, doi:10.1039/c2jm30821e (2012).

420 Qiu, D. F. *et al.* MnO nanoparticles anchored on graphene nanosheets via in situ carbothermal reduction as high-performance anode materials for lithium-ion batteries. *Materials Letters* **84**, 9-12, doi:10.1016/j.matlet.2012.06.045 (2012).

421 Quan, Z., Osokoshi, T. & Sonoyama, N. Synthesis and electrochemical property of LiCoO2 thin film coated on the surface of carbon and anatase TiO2 powders. *J. Alloy. Compd.* **541**, 137-143, doi:10.1016/j.jallcom.2012.06.100 (2012).

422 Ramaraghavulu, R., Sivaiah, K. & Buddhudu, S. Structural and Dielectric Properties of LiV3O8 Ceramic Powders. *Ferroelectrics* **432**, 55-64, doi:10.1080/00150193.2012.707843 (2012).

423 Ranjusha, R. *et al.* Ultra fine MnO2 nanowire based high performance thin film rechargeable electrodes: Effect of surface morphology, electrolytes and concentrations. *Journal of Materials Chemistry* **22**, 20465-20471, doi:10.1039/c2jm35027k (2012).

424 Ren, C. Y. *et al.* Application of 1,2-Dimethoxy-4-nitro-benzene and 1,4-Dimethoxy-2-nitro-benzene as Overcharge Protection Additives in Lithium-Ion Batteries. *Acta Physico-Chimica Sinica* **28**, 2091-2096, doi:10.3866/pku.whxb201206142 (2012).

425 Ren, L. *et al.* An architectured TiO2 nanosheet with discrete integrated nanocrystalline subunits and its application in lithium batteries. *Journal of Materials Chemistry* **22**, 21513-21518, doi:10.1039/c2jm33085g (2012).

426 Ren, Y. M. *et al.* Synthesis and Superior Anode Performances of TiO2-Carbon-rGO Composites in Lithium-Ion Batteries. *ACS Appl. Mater. Interfaces* **4**, 4776-4780, doi:10.1021/am301131h (2012).

427 Rollet, M. *et al.* Characterization of Functional Poly(ethylene oxide)s and Their Corresponding Polystyrene Block Copolymers by Liquid Chromatography under Critical Conditions in Organic Solvents. *Macromolecules* **45**, 7171-7178, doi:10.1021/ma301199m (2012).

428 Rosina, K. J. *et al.* Structure of aluminum fluoride coated Li Li1/9Ni1/3Mn5/9 O-2 cathodes for secondary lithium-ion batteries. *Journal of Materials Chemistry* **22**, 20602-20610, doi:10.1039/c2jm34114j (2012).

429 Ruprecht, B., Wilkening, M., Uecker, R. & Heitjans, P. Extremely slow Li ion dynamics in monoclinic Li2TiO3-probing macroscopic jump diffusion via Li-7 NMR stimulated echoes. *Phys. Chem. Chem. Phys.* **14**, 11974-11980, doi:10.1039/c2cp41662j (2012).

430 Ryan, K. R., Trahey, L., Ingram, B. J. & Burrell, A. K. Limited Stability of Ether-Based Solvents in Lithium-Oxygen Batteries. *Journal of Physical Chemistry C* **116**, 19724-19728, doi:10.1021/jp306797s (2012).

431 Sagane, F., Abe, T. & Ogumi, Z. Electrochemical Analysis of Lithium-Ion Transfer Reaction through the Interface between Ceramic Electrolyte and Ionic Liquids. *J. Electrochem. Soc.* **159**, A1766-A1769, doi:10.1149/2.027211jes (2012).

432 Sahay, R. *et al.* High Aspect Ratio Electrospun CuO Nanofibers as Anode Material for Lithium-Ion Batteries with Superior Cycleability. *Journal of Physical Chemistry C* **116**, 18087-18092, doi:10.1021/jp3053949 (2012).

433 Sahraei, E., Campbell, J. & Wierzbicki, T. Modeling and short circuit detection of 18650 Li-ion cells under mechanical abuse conditions. *J. Power Sources* **220**, 360-372, doi:10.1016/j.jpowsour.2012.07.057 (2012).

434 Sakuda, A., Hayashi, A., Ohtomo, T., Hama, S. & Tatsumisago, M. Bulk-Type All-Solid-State Lithium Secondary Battery with Li2S-P2S5 Thin-Film Separator. *Electrochemistry* **80**, 839-841, doi:10.5796/electrochemistry.80.839 (2012).

435 Salanne, M., Marrocchelli, D. & Watson, G. W. Cooperative Mechanism for the Diffusion of Li+ Ions in LiMgSO4F. *Journal of Physical Chemistry C* **116**, 18618-18625, doi:10.1021/jp304767d (2012).

436 Sano, H., Sakaebe, H. & Matsumoto, H. In-situ Optical Microscope Morphology Observation of Lithium Electrodeposited in Room Temperature Ionic Liquids Containing Aliphatic Quaternary Ammonium Cation. *Electrochemistry* **80**, 777-779, doi:10.5796/electrochemistry.80.777 (2012).

437 Sasidharan, M., Gunawardhana, N., Yoshio, M. & Nakashima, K. Nb2O5 hollow nanospheres as anode material for enhanced performance in lithium ion batteries. *Mater. Res. Bull.* **47**, 2161-2164, doi:10.1016/j.materresbull.2012.06.004 (2012).

438 Satoh, T. *et al.* Physical and Electrochemical Properties of Trifluorinated Linear Ether as Solvent for Lithium Secondary Batteries. *Electrochemistry* **80**, 768-770, doi:10.5796/electrochemistry.80.768 (2012).

439 Schroder, K. W., Celio, H., Webb, L. J. & Stevenson, K. J. Examining Solid Electrolyte Interphase Formation on Crystalline Silicon Electrodes: Influence of Electrochemical Preparation and Ambient Exposure Conditions. *Journal of Physical Chemistry C* **116**, 19737-19747, doi:10.1021/jp307372m (2012).

440 Schroeder, M., Winter, M., Passerini, S. & Balducci, A. On the Use of Soft Carbon and Propylene Carbonate-Based Electrolytes in Lithium-Ion Capacitors. *J. Electrochem. Soc.* **159**, A1240-A1245, doi:10.1149/2.050208jes (2012).

441 Seo, B. H., Nguyen, T. H., Lee, D. C., Lee, K. B. & Kim, J. M. Condition Monitoring of Lithium Polymer Batteries Based on a Sigma-Point Kalman Filter. *Journal of Power Electronics* **12**, 778-786, doi:10.6113/jpe.2012.12.5.778 (2012).

442 Shah, M., Park, A. R., Zhang, K., Park, J. H. & Yoo, P. J. Green Synthesis of Biphasic TiO2-Reduced Graphene Oxide Nanocomposites with Highly Enhanced Photocatalytic Activity. *ACS Appl. Mater. Interfaces* **4**, 3893-3901, doi:10.1021/am301287m (2012).

443 Shakoor, R. A. *et al.* A combined first principles and experimental study on Na3V2(PO4)(2)F-3 for rechargeable Na batteries. *Journal of Materials Chemistry* **22**, 20535-20541, doi:10.1039/c2jm33862a (2012).

444 Shang, S. L. *et al.* Lattice dynamics, thermodynamics and elastic properties of monoclinic Li2CO3 from density functional theory. *Acta Materialia* **60**, 5204-5216, doi:10.1016/j.actamat.2012.06.006 (2012).

445 Shao, J., Li, X. Y., Qu, Q. T. & Zheng, H. H. One-step hydrothermal synthesis of hexangular starfruit-like vanadium oxide for high power aqueous supercapacitors. *J. Power Sources* **219**, 253-257, doi:10.1016/j.jpowsour.2012.07.045 (2012).

446 Sheem, K. Y., Song, E. H. & Lee, Y. H. High-rate charging performance using high-capacity carbon nanofilms coated on alumina nanoparticles for lithium ion battery anode. *Electrochim. Acta* **78**, 223-228, doi:10.1016/j.electacta.2012.05.135 (2012).

447 Shen, J. M. *et al.* Asymmetric deposition of manganese oxide in single walled carbon nanotube films as electrodes for flexible high frequency response electrochemical capacitors. *Electrochim. Acta* **78**, 122-132, doi:10.1016/j.electacta.2012.05.138 (2012).

448 Shen, J. Y. *et al.* Anatase/rutile TiO2 nanocomposite microspheres with hierarchically porous structures for high-performance lithium-ion batteries. *Rsc Advances* **2**, 9173-9178, doi:10.1039/c2ra20962d (2012).

449 Shen, J. Y., Wang, H., Zhou, Y., Ye, N. Q. & Wang, L. J. Continuous hollow TiO2 structures with three-dimensional interconnected single crystals and large pore mesoporous shells for high-performance lithium-ion batteries. *Crystengcomm* **14**, 6215-6220, doi:10.1039/c2ce25833a (2012).

450 Shi, C. *et al.* eta-Fe2O3 spindles as anode materials for lithium-ion batteries with excellent stable and high electrochemical performance. *Materials Letters* **83**, 35-38, doi:10.1016/j.matlet.2012.05.096 (2012).

451 Shi, S. Q. *et al.* Direct Calculation of Li-Ion Transport in the Solid Electrolyte Interphase. *J. Am. Chem. Soc.* **134**, 15476-15487, doi:10.1021/ja305366r (2012).

452 Shi, Y. *et al.* Graphene wrapped LiFePO4/C composites as cathode materials for Li-ion batteries with enhanced rate capability. *Journal of Materials Chemistry* **22**, 16465-16470, doi:10.1039/c2jm32649c (2012).

453 Shi, Y., Shi, M. M., Qiao, Y. Q., Tu, J. P. & Chen, H. Z. Fe3O4 nanobelts: one-pot and template-free synthesis, magnetic property, and application for lithium storage. *Nanotechnology* **23**, doi:10.1088/0957-4484/23/39/395601 (2012).

454 Shi, Y. L. *et al.* Electrochemical impedance spectroscopy investigation of the FeF3/C cathode for lithium-ion batteries. *Solid State Ion.* **222**, 23-30, doi:10.1016/j.ssi.2012.06.024 (2012).

455 Shimoi, N. & Tanaka, Y. Improvement in Si active material particle performance for lithium-ion batteries by surface modification of an inductivity coupled plasma-chemical vapor deposition. *Electrochim. Acta* **80**, 227-232, doi:10.1016/j.electacta.2012.07.006 (2012).

456 Shin, D. W., Bridges, C. A., Huq, A., Paranthaman, M. P. & Manthiram, A. Role of Cation Ordering and Surface Segregation in High-Voltage Spinel LiMn1.5Ni0.5-xMxO4 (M = Cr, Fe, and Ga) Cathodes for Lithium-Ion Batteries. *Chem. Mat.* **24**, 3720-3731, doi:10.1021/cm301844w (2012).

457 Shiva, K., Das, S. K. & Bhattacharyya, A. J. Benefits of Electronic Wiring and Spacers on Lithium Storage in Nanostructured Lithium-Ion Battery Anodes. *Nanoscience and Nanotechnology Letters* **4**, 720-723, doi:10.1166/nnl.2012.1376 (2012).

458 Shivashankaraiah, R. B., Manjunatha, H., Mahesh, K. C., Suresh, G. S. & Venkatesha, T. V. Electrochemical Characterization of LiTi2(PO4)(3) as Anode Material for Aqueous Rechargeable Lithium Batteries. *J. Electrochem. Soc.* **159**, A1074-A1082, doi:10.1149/2.074207jes (2012).

459 Shrestha, B., Wetz, D. A. & Novak, P. M. Pulsed Elevated Rate Discharge of Electrochemical Energy Storage Devices. *Ieee Transactions on Plasma Science* **40**, 2462-2469, doi:10.1109/tps.2011.2181960 (2012).

460 Shu, G. J., Wu, M. W. & Chou, F. C. Finite-size effect of antiferromagnetic transition and electronic structure in LiFePO4. *Physical Review B* **86**, doi:10.1103/PhysRevB.86.161106 (2012).

461 Shu, H. B. *et al.* Enhancement of Electrochemical Properties for Monodisperse Spherical LiFePO4/C Synthesized by Ammonia Assisted Hydrothermal Route via Ni and F Co-Doping. *J. Electrochem. Soc.* **159**, A1904-A1911, doi:10.1149/2.002212jes (2012).

462 Shui, J. L., Karan, N. K., Balasubramanian, M., Li, S. Y. & Liu, D. J. Fe/N/C Composite in Li-O-2 Battery: Studies of Catalytic Structure and Activity toward Oxygen Evolution Reaction. *J. Am. Chem. Soc.* **134**, 16654-16661, doi:10.1021/ja3042993 (2012).

463 Shui, M. *et al.* Synthesis, spectral character, electrochemical performance and in situ structure studies of Li1+xV3O8 cathode material prepared by tartaric acid assisted sol-gel process. *Mater. Res. Bull.* **47**, 2455-2459, doi:10.1016/j.materresbull.2012.05.018 (2012).

464 Si, Y., Ren, T., Li, Y., Ding, B. & Yu, J. Y. Fabrication of magnetic polybenzoxazine-based carbon nanofibers with Fe3O4 inclusions with a hierarchical porous structure for water treatment. *Carbon* **50**, 5176-5185, doi:10.1016/j.carbon.2012.06.059 (2012).

465 Singh, G., West, W. C., Soler, J. & Katiyar, R. S. In situ Raman spectroscopy of layered solid solution Li2MnO3-LiMO2 (M = Ni, Mn, Co). *J. Power Sources* **218**, 34-38, doi:10.1016/j.jpowsour.2012.06.083 (2012).

466 Singh, P., Patel, M., Gupta, A., Bhattacharyya, A. J. & Hegde, M. S. Sonochemical Synthesis of Pt Ion Substituted TiO2 (Ti0.9Pt0.1O2): A High Capacity Anode Material for Lithium Battery. *J. Electrochem. Soc.* **159**, A1189-A1197, doi:10.1149/2.029208jes (2012).

467 Sladkevich, S. *et al.* The formation of a peroxoantimonate thin film coating on graphene oxide (GO) and the influence of the GO on its transformation to antimony oxides and elemental antimony. *Carbon* **50**, 5463-5471, doi:10.1016/j.carbon.2012.07.033 (2012).

468 Soccorso, G. *et al.* 20 mm lithium button battery causing an oesophageal perforation in a toddler: lessons in diagnosis and treatment. *Archives of Disease in Childhood* **97**, 746-747, doi:10.1136/archdischild-2012-301631 (2012).

469 Son, S. B. *et al.* A Highly Reversible Nano-Si Anode Enabled by Mechanical Confinement in an Electrochemically Activated LixTi4Ni4Si7 Matrix. *Advanced Energy Materials* **2**, 1226-1231, doi:10.1002/aenm.201200180 (2012).

470 Sone, Y., Hatakeyama, K., Yamada, S. & Umeda, M. Cycle-Life and Storage Tests of Lithium-Ion Secondary Cells with and without Additive in Electrolyte Solution. *Electrochemistry* **80**, 817-820, doi:10.5796/electrochemistry.80.817 (2012).

471 Song, B. H., Lai, M. O. & Lu, L. Influence of Ru substitution on Li-rich 0.55Li(2)MnO(3)center dot 0.45LiNi(1/3)Co(1/3)Mn(1/3)O(2) cathode for Li-ion batteries. *Electrochim. Acta* **80**, 187-195, doi:10.1016/j.electacta.2012.06.118 (2012).

472 Song, B. H., Liu, Z. W., Lai, M. O. & Lu, L. Structural evolution and the capacity fade mechanism upon long-term cycling in Li-rich cathode material. *Phys. Chem. Chem. Phys.* **14**, 12875-12883, doi:10.1039/c2cp42068f (2012).

473 Song, H. G., Kim, S. B. & Park, Y. J. Enhanced electrochemical properties of Li Ni0.5Co0.2Mn0.3 O-2 cathode by surface coating using LaF3 and MgF2. *Journal of Electroceramics* **29**, 163-169, doi:10.1007/s10832-012-9747-y (2012).

474 Song, N. N., Jiang, H. X., Cui, T. L., Chang, L. L. & Wang, X. J. Synthesis and enhanced gas-sensing properties of mesoporous hierarchical alpha-Fe2O3 architectures from an eggshell membrane. *Micro & Nano Letters* **7**, 943-946, doi:10.1049/mnl.2012.0631 (2012).

475 Song, T. *et al.* A Ge inverse opal with porous walls as an anode for lithium ion batteries. *Energy & Environmental Science* **5**, 9028-9033, doi:10.1039/c2ee22358a (2012).

476 Soni, S. K., Sheldon, B. W., Xiao, X. C., Bower, A. F. & Verbrugge, M. W. Diffusion Mediated Lithiation Stresses in Si Thin Film Electrodes. *J. Electrochem. Soc.* **159**, A1520-A1527, doi:10.1149/2.009209jes (2012).

477 Soundararajan, D., Kim, Y. I., Kim, J. H., Kim, K. H. & Ko, J. M. Hydrothermal Synthesis and Electrochemical Characteristics of Crystalline alpha-MnO2 Nanotubes. *Science of Advanced Materials* **4**, 805-812, doi:10.1166/sam.2012.1348 (2012).

478 Srivastava, M., Singh, J., Yashpal, M. & Ojha, A. K. Synthesis, Growth Mechanism and Characterization of Single Crystalline alpha-Fe2O3 Spherical Nanoparticles. *Journal of Nanoscience and Nanotechnology* **12**, 6248-6257, doi:10.1166/jnn.2012.6454 (2012).

479 Stepnitz, R., Shields, W., McDonald, E. & Gielen, A. Validity of smoke alarm self-report measures and reasons for over-reporting. *Injury Prevention* **18**, 298-302, doi:10.1136/injuryprev-2011-040193 (2012).

480 Strahs, P. *et al.* Development of a proof-of-concept hybrid electric fuel cell vehicle. *Journal of Renewable and Sustainable Energy* **4**, doi:10.1063/1.4718369 (2012).

481 Su, Y. S., Fu, Y. Z. & Manthiram, A. Self-weaving sulfur-carbon composite cathodes for high rate lithium-sulfur batteries. *Phys. Chem. Chem. Phys.* **14**, 14495-14499, doi:10.1039/c2cp42796f (2012).

482 Su, Y. S. & Manthiram, A. A new approach to improve cycle performance of rechargeable lithium-sulfur batteries by inserting a free-standing MWCNT interlayer. *Chemical Communications* **48**, 8817-8819, doi:10.1039/c2cc33945e (2012).

483 Su, Y. Z. *et al.* Two-Dimensional Carbon-Coated Graphene/Metal Oxide Hybrids for Enhanced Lithium Storage. *ACS Nano* **6**, 8349-8356, doi:10.1021/nn303091t (2012).

484 Sun, H. *et al.* A composite material of uniformly dispersed sulfur on reduced graphene oxide: Aqueous one-pot synthesis, characterization and excellent performance as the cathode in rechargeable lithium-sulfur batteries. *Nano Research* **5**, 726-738, doi:10.1007/s12274-012-0257-7 (2012).

485 Sun, H. X., Qin, X. D. & Zaera, F. Activation of Metal-Organic Precursors by Electron Bombardment in the Gas Phase for Enhanced Deposition of Solid Films. *J. Phys. Chem. Lett.* **3**, 2523-2527, doi:10.1021/jz3011332 (2012).

486 Sun, Q., Ren, Q. Q. & Fu, Z. W. NASICON-type Fe-2(MoO4)(3) thin film as cathode for rechargeable sodium ion battery. *Electrochem. Commun.* **23**, 145-148, doi:10.1016/j.elecom.2012.07.023 (2012).

487 Sun, W. W. *et al.* Nanoporous LiMn2O4 nanosheets with exposed {111} facets as cathodes for highly reversible lithium-ion batteries. *Journal of Materials Chemistry* **22**, 20952-20957, doi:10.1039/c2jm32658b (2012).

488 Sun, X. F. & Xu, Y. L. Fe excess in hydrothermally synthesized LiFePO4. *Materials Letters* **84**, 139-142, doi:10.1016/j.matlet.2012.06.053 (2012).

489 Sun, X. G., Wang, X. Q., Mayes, R. T. & Dai, S. Lithium-Sulfur Batteries Based on Nitrogen-Doped Carbon and an Ionic-Liquid Electrolyte. *Chemsuschem* **5**, 2079-2085, doi:10.1002/cssc.201200101 (2012).

490 Sun, X. R. *et al.* Enhanced electrochemical performance of LiFePO4 cathode with in-situ chemical vapor deposition synthesized carbon nanotubes as conductor. *J. Power Sources* **220**, 264-268, doi:10.1016/j.jpowsour.2012.07.082 (2012).

491 Sun, Y. M., Hu, X. L., Luo, W. & Huang, Y. H. Ultrathin CoO/Graphene Hybrid Nanosheets: A Highly Stable Anode Material for Lithium-Ion Batteries. *Journal of Physical Chemistry C* **116**, 20794-20799, doi:10.1021/jp3070147 (2012).

492 Sun, Y. M., Hu, X. L., Luo, W. & Huang, Y. H. Porous carbon-modified MnO disks prepared by a microwave-polyol process and their superior lithium-ion storage properties. *Journal of Materials Chemistry* **22**, 19190-19195, doi:10.1039/c2jm32036c (2012).

493 Sundararagavan, S. & Baker, E. Evaluating energy storage technologies for wind power integration. *Solar Energy* **86**, 2707-2717, doi:10.1016/j.solener.2012.06.013 (2012).

494 Takahashi, C., Shirai, T. & Fuji, M. Study on intercalation of ionic liquid into montmorillonite and its property evaluation. *Materials Chemistry and Physics* **135**, 681-686, doi:10.1016/j.matchemphys.2012.05.044 (2012).

495 Takahashi, K. *et al.* A Water Stable High Lithium Ion Conducting Li1.4Ti1.6Al0.4(PO4)(3)-Epoxy Resin Hybrid Sheet. *J. Electrochem. Soc.* **159**, A1065-A1069, doi:10.1149/2.072207jes (2012).

496 Takeuchi, E. S., Marschilok, A. C. & Takeuchi, K. J. Secondary Battery Science: At the Confluence of Electrochemistry and Materials Engineering. *Electrochemistry* **80**, 700-705, doi:10.5796/electrochemistry.80.700 (2012).

497 Tan, K. S., Grimsdale, A. C. & Yazami, R. Synthesis and Characterization of Biphenyl-Based Lithium Solvated Electron Solutions. *Journal of Physical Chemistry B* **116**, 9056-9060, doi:10.1021/jp302160a (2012).

498 Tang, M., Lu, S. D. & Newman, J. Experimental and Theoretical Investigation of Solid-Electrolyte-Interphase Formation Mechanisms on Glassy Carbon. *J. Electrochem. Soc.* **159**, A1775-A1785, doi:10.1149/2.025211jes (2012).

499 Tang, Q., Zhou, Z. & Shen, P. W. Are MXenes Promising Anode Materials for Li Ion Batteries? Computational Studies on Electronic Properties and Li Storage Capability of Ti3C2 and Ti3C2X2 (X = F, OH) Monolayer. *J. Am. Chem. Soc.* **134**, 16909-16916, doi:10.1021/ja3013463r (2012).

500 Tang, Q. W., Shan, Z. Q., Wang, L. & Qin, X. MoO2-graphene nanocomposite as anode material for lithium-ion batteries. *Electrochim. Acta* **79**, 148-153, doi:10.1016/j.electacta.2012.06.093 (2012).

501 Tang, W. *et al.* A hybrid of V2O5 nanowires and MWCNTs coated with polypyrrole as an anode material for aqueous rechargeable lithium batteries with excellent cycling performance. *Journal of Materials Chemistry* **22**, 20143-20145, doi:10.1039/c2jm34563c (2012).

502 Tang, Y. N., Xue, Z. M., Ding, J. & Chen, C. H. Two unsymmetrical lithium organoborates with mixed-ligand of croconato and oxalicdiolato or benzenediolato for lithium battery electrolytes. *J. Power Sources* **218**, 134-139, doi:10.1016/j.jpowsour.2012.06.044 (2012).

503 Tang, Y. P., Tan, X. X., Hou, G. Y., Cao, H. Z. & Zheng, G. Q. Synthesis of dense nanocavities inside TiO2 nanowire array and its electrochemical properties as a three-dimensional anode material for Li-ion batteries. *Electrochim. Acta* **78**, 154-159, doi:10.1016/j.electacta.2012.05.112 (2012).

504 Tapia-Ruiz, N., Nithya, C., Jayakrishnan, S., Gopukumar, S. & Gregory, D. H. Mechanochemical Synthesis of Tin Nanowires for Anodes in Li+ Ion Secondary Batteries. *Journal of the Chinese Chemical Society* **59**, 1190-1195, doi:10.1002/jccs.201200199 (2012).

505 Thapa, A. K. *et al.* Gold-Palladium nanoparticles supported by mesoporous beta-MnO2 air electrode for rechargeable Li-Air battery. *J. Power Sources* **220**, 211-216, doi:10.1016/j.jpowsour.2012.08.003 (2012).

506 Thorne, J. S., Dahn, J. R., Obrovac, M. N. & Dunlap, R. A. A comparison of sputtered and mechanically milled Cu6Sn5 + C materials for Li-ion battery negative electrodes. *J. Power Sources* **216**, 139-144, doi:10.1016/j.jpowsour.2012.05.067 (2012).

507 Torkaman, M., Aziz, A., Abu Bakar, M. & Ab Ghani, S. ELECTROCHEMICAL SYNTHESIS AND CHARACTERIZATION OF DIFFERENT MORPHOLOGIES NANORAMSDELLITE-MnO2. *Nano* **7**, doi:10.1142/s1793292012500300 (2012).

508 Tran, P. D. & Barber, J. Proton reduction to hydrogen in biological and chemical systems. *Phys. Chem. Chem. Phys.* **14**, 13772-13784, doi:10.1039/c2cp42413d (2012).

509 Trevey, J. E., Gilsdorf, J. R., Stoldt, C. R., Lee, S. H. & Liu, P. Electrochemical Investigation of All-Solid-State Lithium Batteries with a High Capacity Sulfur-Based Electrode. *J. Electrochem. Soc.* **159**, A1019-A1022, doi:10.1149/2.052207jes (2012).

510 Tritsaris, G. A., Zhao, K. J., Okeke, O. U. & Kaxiras, E. Diffusion of Lithium in Bulk Amorphous Silicon: A Theoretical Study. *Journal of Physical Chemistry C* **116**, 22212-22216, doi:10.1021/jp307221q (2012).

511 Truong, T. T., Liu, Y. Z., Ren, Y., Trahey, L. & Sun, Y. G. Morphological and Crystalline Evolution of Nanostructured MnO2 and Its Application in Lithium-Air Batteries. *ACS Nano* **6**, 8067-8077, doi:10.1021/nn302654p (2012).

512 Tsubouchi, S. *et al.* Spectroscopic Characterization of Surface Films Formed on Edge Plane Graphite in Ethylene Carbonate-Based Electrolytes Containing Film-Forming Additives. *J. Electrochem. Soc.* **159**, A1786-A1790, doi:10.1149/2.028211jes (2012).

513 Uchida, S., Yamagata, M. & Ishikawa, M. Improvement of Synthesis Method for LiFePO4/C Cathode Material by High-Frequency Induction Heating. *Electrochemistry* **80**, 825-828, doi:10.5796/electrochemistry.80.825 (2012).

514 Ueno, K. *et al.* Glyme-Lithium Salt Equimolar Molten Mixtures: Concentrated Solutions or Solvate Ionic Liquids? *Journal of Physical Chemistry B* **116**, 11323-11331, doi:10.1021/jp307378j (2012).

515 Usui, H., Kiri, Y. & Sakaguchi, H. Effect of carrier gas on anode performance of Si thick-film electrodes prepared by gas-deposition method. *Thin Solid Films* **520**, 7006-7010, doi:10.1016/j.tsf.2012.07.093 (2012).

516 van Bommel, A. & Divigalpitiya, R. Effect of Calendering LiFePO4 Electrodes. *J. Electrochem. Soc.* **159**, A1791-A1795, doi:10.1149/2.029211jes (2012).

517 Vanimisetti, S. K. & Ramakrishnan, N. Effect of the electrode particle shape in Li-ion battery on the mechanical degradation during charge-discharge cycling. *Proceedings of the Institution of Mechanical Engineers Part C-Journal of Mechanical Engineering Science* **226**, 2192-2213, doi:10.1177/0954406211432668 (2012).

518 Varzi, A., Taubert, C. & Wohlfahrt-Mehrens, M. The effects of pristine and carboxylated multi-walled carbon nanotubes as conductive additives on the performance of LiNi0.33Co0.33Mn0.33O2 and LiFePO4 positive electrodes. *Electrochim. Acta* **78**, 17-26, doi:10.1016/j.electacta.2012.05.127 (2012).

519 Vidal-Abarca, C., Lavela, P., Aragon, M. J., Plylahan, N. & Tirado, J. L. The influence of iron substitution on the electrochemical properties of Li1+xTi2-xFex(PO4)(3)/C composites as electrodes for lithium batteries. *Journal of Materials Chemistry* **22**, 21602-21607, doi:10.1039/c2jm4227h (2012).

520 Vlad, A. *et al.* Roll up nanowire battery from silicon chips. *Proceedings of the National Academy of Sciences of the United States of America* **109**, 15168-15173, doi:10.1073/pnas.1208638109 (2012).

521 Vu, A., Qian, Y. Q. & Stein, A. Porous Electrode Materials for Lithium-Ion Batteries - How to Prepare Them and What Makes Them Special. *Advanced Energy Materials* **2**, 1056-1085, doi:10.1002/aenm.201200320 (2012).

522 Wan, D. Y. *et al.* Low-Temperature Aluminum Reduction of Graphene Oxide, Electrical Properties, Surface Wettability, and Energy Storage Applications. *ACS Nano* **6**, 9068-9078, doi:10.1021/nn303228r (2012).

523 Wang, B., Chen, J. S., Wang, Z. Y., Madhavi, S. & Lou, X. W. Green Synthesis of NiO Nanobelts with Exceptional Pseudo-Capacitive Properties. *Advanced Energy Materials* **2**, 1188-1192, doi:10.1002/aenm.201200008 (2012).

524 Wang, B., Cheng, J. L., Wu, Y. P., Wang, D. & He, D. N. Porous NiO fibers prepared by electrospinning as high performance anode materials for lithium ion batteries. *Electrochem. Commun.* **23**, 5-8, doi:10.1016/j.elecom.2012.07.003 (2012).

525 Wang, B., Su, D. W., Park, J., Ahn, H. & Wang, G. X. Graphene-supported SnO2 nanoparticles prepared by a solvothermal approach for an enhanced electrochemical performance in lithium-ion batteries. *Nanoscale Research Letters* **7**, doi:10.1186/1556-276x-7-215 (2012).

526 Wang, C., Liu, X. Q., Liu, H. J., Xiang, X. C. & Zhang, Z. Synthesis and Electrochemical Performances of Spinel LiMn2-xInxO4 (x=0, 0.01, 0.02, 0.05). *Chinese Journal of Inorganic Chemistry* **28**, 1835-1842 (2012).

527 Wang, D. N. *et al.* Defect-Rich Crystalline SnO2 Immobilized on Graphene Nanosheets with Enhanced Cycle Performance for Li Ion Batteries. *Journal of Physical Chemistry C* **116**, 22149-22156, doi:10.1021/jp306041y (2012).

528 Wang, F. Q., Chen, J., Zhang, F. & Yi, B. L. Polyanion-Type Cathode Materials for Li-Ion Batteries. *Progress in Chemistry* **24**, 1456-1465 (2012).

529 Wang, H., Imanishi, N., Hirano, A., Takeda, Y. & Yamamoto, O. Electrochemical properties of the polyethylene oxide-Li(CF3SO2)(2)N and ionic liquid composite electrolyte. *J. Power Sources* **219**, 22-28, doi:10.1016/j.jpowsour.2012.07.020 (2012).

530 Wang, H. *et al.* Rechargeable Li/O-2 Cell Based on a LiTFSI-DMMP/PFSA-Li Composite Electrolyte. *J. Electrochem. Soc.* **159**, A1874-A1879, doi:10.1149/2.012212jes (2012).

531 Wang, H., Xie, K., Wang, L. Y. & Han, Y. N-methyl-2-pyrrolidone as a solvent for the non-aqueous electrolyte of rechargeable Li-air batteries. *J. Power Sources* **219**, 263-271, doi:10.1016/j.jpowsour.2012.07.065 (2012).

532 Wang, H. G., Ma, D. L., Huang, X. L., Huang, Y. & Zhang, X. B. General and Controllable Synthesis Strategy of Metal Oxide/TiO2 Hierarchical Heterostructures with Improved Lithium-Ion Battery Performance. *Scientific Reports* **2**, doi:10.1038/srep00701 (2012).

533 Wang, H. M., Wu, Z. J., Kong, J., Wang, Z. Q. & Zhang, M. H. Synthesis of transition metal nitride by nitridation of metastable oxide precursor. *J. Solid State Chem.* **194**, 238-244, doi:10.1016/j.jssc.2012.05.028 (2012).

534 Wang, J., Qiu, B., Cao, H. L., Xia, Y. G. & Liu, Z. P. Electrochemical properties of 0.6Li Li1/3Mn2/3 O-2-0.4LiNi(x)Mn(y)Co(1-x-y)O(2) cathode materials for lithium-ion batteries. *J. Power Sources* **218**, 128-133, doi:10.1016/j.jpowsour.2012.06.067 (2012).

535 Wang, J., Zhang, M. H., Tang, C. L., Xia, Y. G. & Liu, Z. P. Microwave-irradiation synthesis of Li1.3NixCoyMn1-x-yO2.4 cathode materials for lithium ion batteries. *Electrochim. Acta* **80**, 15-21, doi:10.1016/j.electacta.2012.06.081 (2012).

536 Wang, J. H. & Chen, T. C. Surface composition and electrochemical behavior of LiNi1/3Co1/3Mn1/3O2 cathode material with copper additive. *Rare Metals* **31**, 397-401, doi:10.1007/s12598-012-0527-2 (2012).

537 Wang, J. W. *et al.* Sandwich-Lithiation and Longitudinal Crack in Amorphous Silicon Coated on Carbon Nanofibers. *ACS Nano* **6**, 9158-9167, doi:10.1021/nn3034343 (2012).

538 Wang, L. *et al.* Analysis of the synthesis process of sulphur-poly(acrylonitrile)-based cathode materials for lithium batteries. *Journal of Materials Chemistry* **22**, 22077-22081, doi:10.1039/c2jm30632h (2012).

539 Wang, L., Li, N., He, X. M., Wan, C. R. & Jiang, C. Y. In Situ Polymerization of Methoxy Polyethylene Glycol (350) Monoacrylate and Polyethyleneglycol (200) Dimethacrylate Based Solid-State Polymer Electrolyte for Li-Ion Batteries. *J. Electrochem. Soc.* **159**, A915-A919, doi:10.1149/2.003207jes (2012).

540 Wang, L. *et al.* Synthesis of Li4Ti5O12 fibers as a high-rate electrode material for lithium-ion batteries. *Journal of Solid State Electrochemistry* **16**, 3307-3313, doi:10.1007/s10008-012-1776-6 (2012).

541 Wang, L. J., Li, X. X., Tang, Z. Y. & Zhang, X. H. Research on Li3V2(PO4)(3)/Li4Ti5O12/C composite cathode material for lithium ion batteries. *Electrochem. Commun.* **22**, 73-76, doi:10.1016/j.elecom.2012.05.031 (2012).

542 Wang, L. Y. *et al.* Battery Cell Identification and SOC Estimation Using String Terminal Voltage Measurements. *Ieee Transactions on Vehicular Technology* **61**, 2925-2935, doi:10.1109/tvt.2012.2203160 (2012).

543 Wang, M. J., Li, C. F., Lai, W. J. & Yen, S. K. Characterization of TiO2 thin films prepared by electrolytic deposition for lithium ion battery anodes. *Thin Solid Films* **520**, 6744-6751, doi:10.1016/j.tsf.2012.07.029 (2012).

544 Wang, M. S., Fan, L. Z., Huang, M. A., Li, J. H. & Qu, X. H. Conversion of diatomite to porous Si/C composites as promising anode materials for lithium-ion batteries. *J. Power Sources* **219**, 29-35, doi:10.1016/j.jpowsour.2012.06.102 (2012).

545 Wang, Q. M., Wang, D. L. & Wang, B. Preparation and Electrochemical Performance of LiFePO4-based Electrode Using Three-Dimensional Porous Current Collector. *International Journal of Electrochemical Science* **7**, 8753-8760 (2012).

546 Wang, R. *et al.* Electrochemical decomposition of Li2CO3 in NiO-Li2CO3 nanocomposite thin film and powder electrodes. *J. Power Sources* **218**, 113-118, doi:10.1016/j.jpowsour.2012.06.082 (2012).

547 Wang, Y. *et al.* Study on wet-laid nonwoven separator of lithium-ion battery. *Textile Research Journal* **82**, 1659-1665, doi:10.1177/0040517511431314 (2012).

548 Wang, Y., Liu, L., Wu, D. P., Guo, Y. Z. & Wang, J. H. Electrochemical Study of Nano-Array and Nano-Crystalline Tin Anode. *Rare Metal Materials and Engineering* **41**, 1628-1632 (2012).

549 Wang, Y. *et al.* Phase-Controlled Synthesis of Cobalt Sulfides for Lithium Ion Batteries. *ACS Appl. Mater. Interfaces* **4**, 4246-4250, doi:10.1021/am300951f (2012).

550 Wang, Y. G. *et al.* Simple synthesis of metallic Sn nanocrystals embedded in graphitic ordered mesoporous carbon walls as superior anode materials for lithium ion batteries. *J. Power Sources* **219**, 89-93, doi:10.1016/j.jpowsour.2012.07.047 (2012).

551 Wang, Y. L. *et al.* Hierarchical SnO2-Fe2O3 heterostructures as lithium-ion battery anodes. *Journal of Materials Chemistry* **22**, 21923-21927, doi:10.1039/c2jm35255a (2012).

552 Wang, Y. R., Zhang, X. W., Chen, P., Liao, H. T. & Cheng, S. Q. In situ preparation of CuS cathode with unique stability and high rate performance for lithium ion batteries. *Electrochim. Acta* **80**, 264-268, doi:10.1016/j.electacta.2012.07.004 (2012).

553 Wang, Z. H. *et al.* Effects of titanium incorporation on phase and electrochemical performance in LiFePO4 cathode material. *Electrochim. Acta* **78**, 576-584, doi:10.1016/j.electacta.2012.06.067 (2012).

554 Wang, Z. L., Xu, D., Xu, J. J., Zhang, L. L. & Zhang, X. B. Graphene Oxide Gel-Derived, Free-Standing, Hierarchically Porous Carbon for High-Capacity and High-Rate Rechargeable Li-O2 Batteries. *Advanced Functional Materials* **22**, 3699-3705, doi:10.1002/adfm.201200403 (2012).

555 Wang, Z. P. *et al.* Synthesis and Characterization of Mg and Ti Ions Co-Doped Lithium Iron Phosphate and Its Lithium-Ion Batteries. *Acta Physico-Chimica Sinica* **28**, 2084-2090, doi:10.3866/pku.whxb201207043 (2012).

556 Wei, Z. K. *et al.* Two-Step Hydrothermal Method for Synthesis of Sulfur-Graphene Hybrid and its Application in Lithium Sulfur Batteries. *J. Electrochem. Soc.* **159**, A1236-A1239, doi:10.1149/2.048208jes (2012).

557 Wen, L. *et al.* Oxygen Deficient Li4Ti5O12 for High-rate Lithium Storage. *Journal of the Chinese Chemical Society* **59**, 1201-1205, doi:10.1002/jccs.201200106 (2012).

558 Wen, W., Wu, J. M., Lai, L. L., Ling, G. P. & Cao, M. H. Hydrothermal synthesis of needle-like hyperbranched Ni(SO4)(0.3)(OH)(1.4) bundles and their morphology-retentive decompositions to NiO for lithium storage. *Crystengcomm* **14**, 6565-6572, doi:10.1039/c2ce26127h (2012).

559 Woo, J. H. *et al.* Nanoscale Interface Modification of LiCoO2 by Al2O3 Atomic Layer Deposition for Solid-State Li Batteries. *J. Electrochem. Soc.* **159**, A1120-A1124, doi:10.1149/2.085207jes (2012).

560 Woo, S. H., Park, J. H., Hwang, S. W. & Whang, D. Silicon Embedded Nanoporous Carbon Composite for the Anode of Li Ion Batteries. *J. Electrochem. Soc.* **159**, A1273-A1277, doi:10.1149/2.070208jes (2012).

561 Wu, F. X. *et al.* Characterization of spherical-shaped Li4Ti5O12 prepared by spray drying. *Electrochim. Acta* **78**, 331-339, doi:10.1016/j.electacta.2012.06.037 (2012).

562 Wu, H. *et al.* Aligned NiO nanoflake arrays grown on copper as high capacity lithium-ion battery anodes. *Journal of Materials Chemistry* **22**, 19821-19825, doi:10.1039/c2jm34496c (2012).

563 Wu, H. G. *et al.* Surface Treatment of Li(Li0.08Ni0.34Co0.08Mn0.5)O-2 Oxide for High Voltage Lithium Ion Battery. *Journal of the Chinese Chemical Society* **59**, 1264-1269, doi:10.1002/jccs.201200215 (2012).

564 Wu, J. *et al.* Influence of Hydrofluoric Acid Formation on Lithium Ion Insertion in Nanostructured V2O5. *Journal of Physical Chemistry C* **116**, 21208-21215, doi:10.1021/jp305937b (2012).

565 Wu, Q. L. *et al.* Aligned TiO2 Nanotube Arrays As Durable Lithium-Ion Battery Negative Electrodes. *Journal of Physical Chemistry C* **116**, 18669-18677, doi:10.1021/jp3072266 (2012).

566 Wu, S. H., Chen, M. S., Pang, W. K. & Liu, F. P. Preparation and Characterization of Fe-substituted Li3V2(PO4)(3) Cathodes for Li-ion Batteries. *Journal of the Chinese Chemical Society* **59**, 1238-1243, doi:10.1002/jccs.201200203 (2012).

567 Wu, X. B., Gong, Z. L., Tan, S. & Yang, Y. Sol-gel synthesis of Li2CoPO4F/C nanocomposite as a high power cathode material for lithium ion batteries. *J. Power Sources* **220**, 122-129, doi:10.1016/j.jpowsour.2012.07.099 (2012).

568 Wu, X. W., Li, X. H., Wang, Z. X., Guo, H. J. & Xiong, L. Z. Investigation on the storage performance of LiMn2O4 at elevated temperature with the mixture of electrolyte stabilizer. *Ionics* **18**, 907-911, doi:10.1007/s11581-012-0801-1 (2012).

569 Wu, X. Z., Jiang, X., Huo, Q. S. & Zhang, Y. X. Facile synthesis of Li2FeSiO4/C composites with triblock copolymer P123 and their application as cathode materials for lithium ion batteries. *Electrochim. Acta* **80**, 50-55, doi:10.1016/j.electacta.2012.06.122 (2012).

570 Xia, J. P., Deng, X. C. & Zhu, C. L. Effect of Amount of Lithium Element in Reactant on the Electrochemical Properties of LiFePO4/C. *Rare Metal Materials and Engineering* **41**, 1263-1266 (2012).

571 Xia, X. & Dahn, J. R. A Study of the Reactivity of De-Intercalated NaNi0.5Mn0.5O2 with Non-Aqueous Solvent and Electrolyte by Accelerating Rate Calorimetry. *J. Electrochem. Soc.* **159**, A1048-A1051, doi:10.1149/2.060207jes (2012).

572 Xia, X., Ping, P. & Dahn, J. R. Studies of the Effect of Triphenyl Phosphate on the Negative Electrode of Li-Ion Cells. *J. Electrochem. Soc.* **159**, A1460-A1466, doi:10.1149/2.052209jes (2012).

573 Xia, X., Ping, P. & Dahn, J. R. The Reactivity of Charged Electrode Materials with Electrolytes Containing the Flame Retardant, Triphenyl Phosphate. *J. Electrochem. Soc.* **159**, A1834-A1837, doi:10.1149/2.059211jes (2012).

574 Xia, X. H. *et al.* Porous Hydroxide Nanosheets on Preformed Nanowires by Electrodeposition: Branched Nanoarrays for Electrochemical Energy Storage. *Chem. Mat.* **24**, 3793-3799, doi:10.1021/cm302416d (2012).

575 Xiao, M. & Choe, S. Y. Dynamic modeling and analysis of a pouch type LiMn2O4/Carbon high power Li-polymer battery based on electrochemical-thermal principles. *J. Power Sources* **218**, 357-367, doi:10.1016/j.jpowsour.2012.05.103 (2012).

576 Xiao, W. *et al.* Performance of PVDF-HFP-based gel polymer electrolytes with different pore forming agents. *Iranian Polymer Journal* **21**, 755-761, doi:10.1007/s13726-012-0081-7 (2012).

577 Xiao, Z. *et al.* Facile synthesis of single-crystalline mesoporous alpha-Fe2O3 and Fe3O4 nanorods as anode materials for lithium-ion batteries. *Journal of Materials Chemistry* **22**, 20566-20573, doi:10.1039/c2jm34083f (2012).

578 Xie, L. L. *et al.* Co-3(PO4)(2)-Coated LiV3O8 as positive materials for rechargeable lithium batteries. *Electronic Materials Letters* **8**, 411-415, doi:10.1007/s13391-012-2082-2 (2012).

579 Xin, X. D., Li, H. J., Chang, Q. Q. & Wang, W. L. Preparation and Investigation on Lattice Distortion and Electrochemical Performances of Li0.95Na0.05FePO4/C. *Chinese Journal of Chemical Physics* **25**, 429-433, doi:10.1088/1674-0068/25/04/429-433 (2012).

580 Xing, L. D. & Borodin, O. Oxidation induced decomposition of ethylene carbonate from DFT calculations - importance of explicitly treating surrounding solvent. *Phys. Chem. Chem. Phys.* **14**, 12838-12843, doi:10.1039/c2cp41103b (2012).

581 Xiong, S. Z., Xie, K., Diao, Y. & Hong, X. B. Oxidation process of polysulfides in charge process for lithium-sulfur batteries. *Ionics* **18**, 867-872, doi:10.1007/s11581-012-0697-9 (2012).

582 Xu, H., Chang, J., Sun, J. & Gao, L. Graphene-encapsulated LiFePO4 nanoparticles with high electrochemical performance for lithium ion batteries. *Materials Letters* **83**, 27-30, doi:10.1016/j.matlet.2012.05.116 (2012).

583 Xu, H. Y. *et al.* A Comparative Study of Nanoparticles and Nanospheres ZnFe2O4 as Anode Material for Lithium Ion Batteries. *International Journal of Electrochemical Science* **7**, 7976-7983 (2012).

584 Xu, J. S. & Zhu, Y. J. Monodisperse Fe3O4 and gamma-Fe2O3 Magnetic Mesoporous Microspheres as Anode Materials for Lithium-Ion Batteries. *ACS Appl. Mater. Interfaces* **4**, 4752-4757, doi:10.1021/am301123f (2012).

585 Xu, K. & Cresce, A. V. Li+-solvation/desolvation dictates interphasial processes on graphitic anode in Li ion cells. *Journal of Materials Research* **27**, 2327-2341, doi:10.1557/jmr.2012.104 (2012).

586 Xu, Q., Yao, Y. Q., Ma, Z. J. & Xia, Z. H. Measurement of Interfacial Energy and Friction Between Carbon Nanotubes and Polymer Matrix by a Micro-Pullout Test. *Science of Advanced Materials* **4**, 888-892, doi:10.1166/sam.2012.1362 (2012).

587 Xu, X., Cao, R., Jeong, S. & Cho, J. Spindle-like Mesoporous alpha-Fe2O3 Anode Material Prepared from MOF Template for High-Rate Lithium Batteries. *Nano Lett.* **12**, 4988-4991, doi:10.1021/nl302618s (2012).

588 Xu, Y., Li, Y. J., Liu, S. Q., Li, H. L. & Liu, Y. N. Nanoparticle Li2FeSiO4 as anode material for lithium-ion batteries. *J. Power Sources* **220**, 103-107, doi:10.1016/j.jpowsour.2012.07.130 (2012).

589 Xue, H. R. *et al.* Emulsion Disperse Synthesis of High Scattered Nanotin-Based Mesoporous Carbon Composite and Its Electrochemical Performance. *Chinese Journal of Inorganic Chemistry* **28**, 1601-1608 (2012).

590 Xue, X. Y., Wang, S. H., Guo, W. X., Zhang, Y. & Wang, Z. L. Hybridizing Energy Conversion and Storage in a Mechanical-to-Electrochemical Process for Self-Charging Power Cell. *Nano Lett.* **12**, 5048-5054, doi:10.1021/nl302879t (2012).

591 Yan, H., Zhu, Z., Zhang, D., Li, W. & Qilu. A new hydrothermal synthesis of spherical Li4Ti5O12 anode material for lithium-ion secondary batteries. *J. Power Sources* **219**, 45-51, doi:10.1016/j.jpowsour.2012.07.023 (2012).

592 Yan, J. *et al.* Rechargeable hybrid aqueous batteries. *J. Power Sources* **216**, 222-226, doi:10.1016/j.jpowsour.2012.05.063 (2012).

593 Yan, J. *et al.* Preparation and electrochemical performance of Na-doped Li3V2(PO4)(3)/C cathode material. *Journal of Solid State Electrochemistry* **16**, 3201-3206, doi:10.1007/s10008-012-1764-x (2012).

594 Yan, Y., Yin, Y. X., Xin, S., Guo, Y. G. & Wan, L. J. Ionothermal synthesis of sulfur-doped porous carbons hybridized with graphene as superior anode materials for lithium-ion batteries. *Chemical Communications* **48**, 10663-10665, doi:10.1039/c2cc36234a (2012).

595 Yan, Y. *et al.* MnCO3 Microstructures Assembled with Nanoparticles: Shape-Controlled Synthesis and Their Application for Li-Ion Batteries. *Journal of Nanoscience and Nanotechnology* **12**, 7334-7338, doi:10.1166/jnn.2012.6496 (2012).

596 Yang, C. C., Chen, Y. C. & Liao, Y. C. Comparison of electrochemical performances of LiFePO4/C composite materials by two preparation routes. *Mater. Res. Bull.* **47**, 2616-2622, doi:10.1016/j.materresbull.2012.04.076 (2012).

597 Yang, G. *et al.* Influence of Mn content on the morphology and improved electrochemical properties of Mn3O4 vertical bar MnO@carbon nanofiber as anode material for lithium batteries. *J. Power Sources* **216**, 353-362, doi:10.1016/j.jpowsour.2012.05.092 (2012).

598 Yang, J., Zhou, X. Y., Li, J., Zou, Y. L. & Tang, J. J. Study of nano-porous hard carbons as anode materials for lithium ion batteries. *Materials Chemistry and Physics* **135**, 445-450, doi:10.1016/j.matchemphys.2012.05.006 (2012).

599 Yang, K. D., Tan, F. X., Wang, F., Long, Y. F. & Wen, Y. X. Response Surface Optimization for Process Parameters of LiFePO4/C Preparation by Carbothermal Reduction Technology. *Chinese Journal of Chemical Engineering* **20**, 793-802 (2012).

600 Yang, S., Cai, Y., Cheng, Y. W., Varanasi, C. V. & Liu, J. Monolithic co-aerogels of carbon/titanium dioxide as three dimensional nanostructured electrodes for energy storage. *J. Power Sources* **218**, 140-147, doi:10.1016/j.jpowsour.2012.06.070 (2012).

601 Yang, S. *et al.* A facile green strategy for rapid reduction of graphene oxide by metallic zinc. *Rsc Advances* **2**, 8827-8832, doi:10.1039/c2ra20746j (2012).

602 Yang, S. M. G. *et al.* Realizing the Performance of LiCoPO4 Cathodes by Fe Substitution with Off-Stoichiometry. *J. Electrochem. Soc.* **159**, A1013-A1018, doi:10.1149/2.051207jes (2012).

603 Yang, T. H., Sang, L., Ding, F., Zhang, J. & Liu, X. J. Three- and four-electrode EIS analysis of water stable lithium electrode with solid electrolyte plate. *Electrochim. Acta* **81**, 179-185, doi:10.1016/j.electacta.2012.07.103 (2012).

604 Yang, W. *et al.* Perovskite Sr0.95Ce0.05CoO3-delta loaded with copper nanoparticles as a bifunctional catalyst for lithium-air batteries. *Journal of Materials Chemistry* **22**, 18902-18907, doi:10.1039/c2jm33440b (2012).

605 Yang, X. K. *et al.* Synthesis and characterization of a Li-rich layered cathode material Li-1.15 (Mn1/3Ni1/3Co1/3)(0.5)(Ni1/4Mn3/4)(0.5) (0.85)O-2 with spherical core-shell structure. *Journal of Materials Chemistry* **22**, 19666-19672, doi:10.1039/c2jm34259f (2012).

606 Yang, Y. *et al.* High-Capacity Micrometer-Sized Li2S Particles as Cathode Materials for Advanced Rechargeable Lithium-Ion Batteries. *J. Am. Chem. Soc.* **134**, 15387-15394, doi:10.1021/ja3052206 (2012).

607 Yao, J. H., Shen, C. Q., Zhang, P. J., Gregory, D. H. & Wang, L. B. Enhanced cycle ability of spinel LiMn2O4 by controlling the phase purity and structural strain. *J. Phys. Chem. Solids* **73**, 1390-1395, doi:10.1016/j.jpcs.2012.07.006 (2012).

608 Yeon, J. T. *et al.* Raman Spectroscopic and X-ray Diffraction Studies of Sulfur Composite Electrodes during Discharge and Charge. *J. Electrochem. Soc.* **159**, A1308-A1314, doi:10.1149/2.080208jes (2012).

609 Yoo, J. K., Kim, J., Jung, Y. S. & Kang, K. Scalable Fabrication of Silicon Nanotubes and their Application to Energy Storage. *Advanced Materials* **24**, 5452-5456, doi:10.1002/adma.201201601 (2012).

610 Yoon, S., Jung, K. N., Yeon, S. H., Jin, C. S. & Shin, K. H. Electrochemical properties of LiNi0.8Co0.15Al0.05O2-graphene composite as cathode materials for lithium-ion batteries. *Journal of Electroanalytical Chemistry* **683**, 88-93, doi:10.1016/j.jelechem.2012.08.005 (2012).

611 Yoshida, K., Tsuchiya, M., Tachikawa, N., Dokko, K. & Watanabe, M. Correlation between Battery Performance and Lithium Ion Diffusion in Glyme-Lithium Bis(trifluoromethanesulfonyl)amide Equimolar Complexes. *J. Electrochem. Soc.* **159**, A1005-A1012, doi:10.1149/2.050207jes (2012).

612 Yoshinaga, M., Kijima, N., Wakahara, S. & Akimoto, J. Lithium Insertion-Deinsertion Reactions of Ultrafine SnO2 Nanoparticles Synthesized by Microwave Heating. *Chemistry Letters* **41**, 850-852, doi:10.1246/cl.2012.850 (2012).

613 Younesi, R. *et al.* Ether Based Electrolyte, LiB(CN)(4) Salt and Binder Degradation in the Li-O-2 Battery Studied by Hard X-ray Photoelectron Spectroscopy (HAXPES). *Journal of Physical Chemistry C* **116**, 18597-18604, doi:10.1021/jp303691m (2012).

614 Younesi, R., Urbonaite, S., Edstrom, K. & Hahlin, M. The Cathode Surface Composition of a Cycled Li-O-2 Battery: A Photoelectron Spectroscopy Study. *Journal of Physical Chemistry C* **116**, 20673-20680, doi:10.1021/jp302168h (2012).

615 Yu, C. *et al.* Composites Li2MnO3 center dot LiMn1/3N1/3CO1/3O2: Optimized synthesis and applications as advanced high-voltage cathode for batteries working at elevated temperatures. *Electrochim. Acta* **81**, 283-291, doi:10.1016/j.electacta.2012.06.084 (2012).

616 Yu, C. *et al.* The impact of upper cut-off voltages on the electrochemical behaviors of composite electrode 0.3Li(2)MnO(3)center dot 0.7LiMn(1/3)Ni(1/3)Co(1/3)O(2). *Phys. Chem. Chem. Phys.* **14**, 12368-12377, doi:10.1039/c2cp41881a (2012).

617 Yu, H. J. *et al.* Electrochemical kinetics of the 0.5Li(2)MnO(3)center dot 0.5LiMn(0.42)Ni(0.42)Co(0.16)O(2) 'composite' layered cathode material for lithium-ion batteries. *Rsc Advances* **2**, 8797-8807, doi:10.1039/c2ra20772a (2012).

618 Yu, J. G., Sushko, M. L., Kerisit, S., Rosso, K. M. & Liu, J. Kinetic Monte Carlo Study of Ambipolar Lithium Ion and Electron-Polaron Diffusion into Nanostructured TiO2. *J. Phys. Chem. Lett.* **3**, 2076-2081, doi:10.1021/jz300562v (2012).

619 Yu, W. Y. *et al.* Fabrication of porous platelike LiFePO4/C cathode materials via hydrothermal process. *Powder Technology* **230**, 219-224, doi:10.1016/j.powtec.2012.07.034 (2012).

620 Yuan, Z. Q., Wang, Y. & Qian, Y. T. A facile room-temperature route to flower-like CuO microspheres with greatly enhanced lithium storage capability. *Rsc Advances* **2**, 8602-8605, doi:10.1039/c2ra21267f (2012).

621 Yue, W. B., Lin, Z. Z., Jiang, S. H. & Yang, X. J. Preparation of graphene-encapsulated mesoporous metal oxides and their application as anode materials for lithium-ion batteries. *Journal of Materials Chemistry* **22**, 16318-16323, doi:10.1039/c2jm30805c (2012).

622 Zaghib, K. *et al.* An improved high-power battery with increased thermal operating range: C-LiFePO4//C-Li4Ti5O12. *J. Power Sources* **216**, 192-200, doi:10.1016/j.jpowsour.2012.05.025 (2012).

623 Zaghib, K. *et al.* Enhanced thermal safety and high power performance of carbon-coated LiFePO4 olivine cathode for Li-ion batteries. *J. Power Sources* **219**, 36-44, doi:10.1016/j.jpowsour.2012.05.018 (2012).

624 Zainol, F. D. *et al.* Atom Bottom-Up Manipulation Controlled by Light for Microbattery Use. *Ieee Transactions on Nanotechnology* **11**, 934-939, doi:10.1109/tnano.2012.2207125 (2012).

625 Zeb, G. *et al.* Decoration of Graphitic Surfaces with Sn Nanoparticles through Surface Functionalization Using Diazonium Chemistry. *Langmuir* **28**, 13042-13050, doi:10.1021/la302162c (2012).

626 Zhan, L., Wang, Y. L., Qiao, W. M., Ling, L. C. & Yang, S. B. Hollow carbon spheres with encapsulation of Co3O4 nanoparticles as anode material for lithium ion batteries. *Electrochim. Acta* **78**, 440-445, doi:10.1016/j.electacta.2012.06.017 (2012).

627 Zhang, D. A., Dong, Y. L., Li, M. G. & Wang, H. J. A Radio-Telemetry System for Navigation and Recording Neuronal Activity in Free-Roaming Rats. *Journal of Bionic Engineering* **9**, 402-410, doi:10.1016/s1672-6529(11)60137-6 (2012).

628 Zhang, G. H. *et al.* Synthesis of mesoporous NiO nanospheres as anode materials for lithium ion batteries. *Electrochim. Acta* **80**, 140-147, doi:10.1016/j.electacta.2012.06.107 (2012).

629 Zhang, J. J., Yao, Y., Huang, T. & Yu, A. S. Uniform hollow Fe3O4 spheres prepared by template-free solvothermal method as anode material for lithium-ion batteries. *Electrochim. Acta* **78**, 502-507, doi:10.1016/j.electacta.2012.06.045 (2012).

630 Zhang, J. W., Jin, Z. S., Wu, Z. S. & Zhang, Z. J. Electrochemical lithium storage capacity of nickel mono-oxide loaded anatase titanium dioxide nanotubes. *Ionics* **18**, 861-866, doi:10.1007/s11581-012-0691-2 (2012).

631 Zhang, L. *et al.* Electronic structure and chemical bonding of a graphene oxide-sulfur nanocomposite for use in superior performance lithium-sulfur cells. *Phys. Chem. Chem. Phys.* **14**, 13670-13675, doi:10.1039/c2cp42866k (2012).

632 Zhang, L. P. *et al.* Effects of the phase constitution and microstructure on the electrochemical properties of melt-spun Al88-XSi12MnX anode materials for lithium-ion batteries. *Journal of Applied Electrochemistry* **42**, 843-850, doi:10.1007/s10800-012-0449-6 (2012).

633 Zhang, M. *et al.* Preparation and Electrochemical Properties of Li1+xAlxGe2-x(PO4)(3) Synthesized by a Sol-Gel Method. *J. Electrochem. Soc.* **159**, A1114-A1119, doi:10.1149/2.080207jes (2012).

634 Zhang, N. X. & Tang, H. Q. Dissecting anode swelling in commercial lithium-ion batteries. *J. Power Sources* **218**, 52-55, doi:10.1016/j.jpowsour.2012.06.071 (2012).

635 Zhang, P. X. *et al.* First-principles study on the electronic structure of a LiFePO4 (010) surface adsorbed with carbon. *J. Alloy. Compd.* **540**, 121-126, doi:10.1016/j.jallcom.2012.06.049 (2012).

636 Zhang, R. G. *et al.* alpha-MnO2 as a cathode material for rechargeable Mg batteries. *Electrochem. Commun.* **23**, 110-113, doi:10.1016/j.elecom.2012.07.021 (2012).

637 Zhang, R. L. *et al.* Catalytic Activity of Binuclear Transition Metal Phthalocyanines in Electrolyte Operation of Lithium/Thionyl Chloride Battery. *J. Electrochem. Soc.* **159**, H704-H710, doi:10.1149/2.046208jes (2012).

638 Zhang, S., Lu, Y., Xu, G. J., Li, Y. & Zhang, X. W. LiF/Fe/C nanofibres as a high-capacity cathode material for Li-ion batteries. *Journal of Physics D-Applied Physics* **45**, doi:10.1088/0022-3727/45/39/395301 (2012).

639 Zhang, S. *et al.* Synthesis and characterization of Ti-Mn and Ti-Fe codoped Li3V2(PO4)(3) as cathode material for lithium ion batteries. *J. Power Sources* **218**, 56-64, doi:10.1016/j.jpowsour.2012.06.002 (2012).

640 Zhang, S. S. Binder Based on Polyelectrolyte for High Capacity Density Lithium/Sulfur Battery. *J. Electrochem. Soc.* **159**, A1226-A1229, doi:10.1149/2.039208jes (2012).

641 Zhang, S. S. Effect of Discharge Cutoff Voltage on Reversibility of Lithium/Sulfur Batteries with LiNO3-Contained Electrolyte. *J. Electrochem. Soc.* **159**, A920-A923, doi:10.1149/2.002207jes (2012).

642 Zhang, X. D. *et al.* Bio-synthesis participated mechanism of mesoporous LiFePO4/C nanocomposite microspheres for lithium ion battery. *Journal of Materials Chemistry* **22**, 19948-19956, doi:10.1039/c2jm33425a (2012).

643 Zhang, X. G. *et al.* Biocarbon-coated LiFePO4 nucleus nanoparticles enhancing electrochemical performances. *Chemical Communications* **48**, 10093-10095, doi:10.1039/c2cc34207c (2012).

644 Zhang, X. H. *et al.* Novel composites Li LixNi0.34-xMn0.47Co0.19 O-2 (0.18 <= x <= 0.21): Synthesis and application as high-voltage cathode with improved electrochemical performance for lithium ion batteries. *Electrochim. Acta* **81**, 233-238, doi:10.1016/j.electacta.2012.07.069 (2012).

645 Zhang, X. M. *et al.* The Structure-Property Investigation of Bi1-xCexFeO3 (x=0, 0.05)-Li Battery: In Situ XRD and XANES Studies. *Journal of Physical Chemistry C* **116**, 20230-20238, doi:10.1021/jp3065745 (2012).

646 Zhang, Y. *et al.* Effects of nickel-doped lithium vanadium phosphate on the performance of lithium-ion batteries. *J. Alloy. Compd.* **542**, 187-191, doi:10.1016/j.jallcom.2012.07.066 (2012).

647 Zhang, Y. Q. *et al.* Silicon/graphene-sheet hybrid film as anode for lithium ion batteries. *Electrochem. Commun.* **23**, 17-20, doi:10.1016/j.elecom.2012.07.001 (2012).

648 Zhang, Z. A. *et al.* Cycle performance improvement of LiFePO4 cathode with polyacrylic acid as binder. *Electrochim. Acta* **80**, 440-444, doi:10.1016/j.electacta.2012.07.054 (2012).

649 Zhao, H. *et al.* A novel two-step preparation of spinel LiMn2O4 nanowires and its electrochemical performance charaterization. *Journal of Materials Research* **27**, 1750-1754, doi:10.1557/jmr.2012.152 (2012).

650 Zhao, K. J., Pharr, M., Hartle, L., Vlassak, J. J. & Suo, Z. G. Fracture and debonding in lithium-ion batteries with electrodes of hollow core-shell nanostructures. *J. Power Sources* **218**, 6-14, doi:10.1016/j.jpowsour.2012.06.074 (2012).

651 Zhao, K. J. *et al.* Reactive Flow in Silicon Electrodes Assisted by the Insertion of Lithium. *Nano Lett.* **12**, 4397-4403, doi:10.1021/nl302261w (2012).

652 Zhao, R. R., Lan, B. Y., Chen, H. Y. & Ma, G. Z. Hydrothermal synthesis and properties of manganese-doped LiFePO4. *Ionics* **18**, 873-879, doi:10.1007/s11581-012-0700-5 (2012).

653 Zhao, Y. *et al.* In situ generation of Li2FeSiO4 coating on MWNT as a high rate cathode material for lithium ion batteries. *Journal of Materials Chemistry* **22**, 18797-18800, doi:10.1039/c2jm33855f (2012).

654 Zhao, Y. *et al.* Fully Reversible Conversion between SnO2 and Sn in SWNTs@SnO2@PPy Coaxial Nanocable As High Performance Anode Material for Lithium Ion Batteries. *Journal of Physical Chemistry C* **116**, 18612-18617, doi:10.1021/jp304095y (2012).

655 Zhao, Y., Li, J. X., Wu, C. X., Ding, Y. H. & Guan, L. H. A Yolk-Shell Fe3O4@C Composite as an Anode Material for High-Rate Lithium Batteries. *Chempluschem* **77**, 748-751, doi:10.1002/cplu.201200134 (2012).

656 Zhao, Y. C., Song, X. Y., Song, Q. S. & Yin, Z. L. A facile route to the synthesis copper oxide/reduced graphene oxide nanocomposites and electrochemical detection of catechol organic pollutant. *Crystengcomm* **14**, 6710-6719, doi:10.1039/c2ce25509j (2012).

657 Zhao, Y. S. & Daemen, L. L. Superionic Conductivity in Lithium-Rich Anti-Perovskites. *J. Am. Chem. Soc.* **134**, 15042-15047, doi:10.1021/3a305709z (2012).

658 Zheng, J., Yang, R., Lou, Y., Li, W. & Li, X. G. Low temperature growth of nanoblade In2O3 thin films by plasma enhanced chemical vapor deposition: Morphology control and lithium storage properties. *Thin Solid Films* **521**, 137-140, doi:10.1016/j.tsf.2012.02.018 (2012).

659 Zheng, J. M. *et al.* Enhanced Li+ ion transport in LiNi0.5Mn1.5O4 through control of site disorder. *Phys. Chem. Chem. Phys.* **14**, 13515-13521, doi:10.1039/c2cp43007j (2012).

660 Zheng, Z. F. & Wang, Y. 3D Structure of Electrode with Inorganic Solid Electrolyte. *J. Electrochem. Soc.* **159**, A1278-A1282, doi:10.1149/2.072208jes (2012).

661 Zhong, G. B. *et al.* Structural, electrochemical and thermal stability investigations on LiNi0.5-xAl2xMn1.5-xO4 (0 <= 2x <= 1.0) as 5 V cathode materials. *J. Power Sources* **216**, 368-375, doi:10.1016/j.jpowsour.2012.05.108 (2012).

662 Zhong, H., Kong, C., Zhan, H., Zhan, C. M. & Zhou, Y. H. Safe positive temperature coefficient composite cathode for lithium ion battery. *J. Power Sources* **216**, 273-280, doi:10.1016/j.jpowsour.2012.05.015 (2012).

663 Zhong, S. K. *et al.* Synthesis and electrochemical performance of LiMnPO4/C composites cathode materials. *Rare Metals* **31**, 474-478, doi:10.1007/s12598-012-0542-3 (2012).

664 Zhong, Z., Cao, Q., Jing, B., Li, S. & Wang, X. Y. Novel electrospun PAN-PVC composite fibrous membranes as polymer electrolytes for polymer lithium-ion batteries. *Ionics* **18**, 853-859, doi:10.1007/s11581-012-0682-3 (2012).

665 Zhou, G. M. *et al.* A flexible nanostructured sulphur-carbon nanotube cathode with high rate performance for Li-S batteries. *Energy & Environmental Science* **5**, 8901-8906, doi:10.1039/c2ee22294a (2012).

666 Zhou, H. M., Liu, F. R. & Li, J. Preparation, Thermal Stability and Electrochemical Properties of LiODFB. *Journal of Materials Science & Technology* **28**, 723-727 (2012).

667 Zhou, L. J., Hou, Z. F. & Wu, L. M. First-Principles Study of Lithium Adsorption and Diffusion on Graphene with Point Defects. *Journal of Physical Chemistry C* **116**, 21780-21787, doi:10.1021/jp304861d (2012).

668 Zhou, S., Simpson, Z. I., Yang, X. G. & Wang, D. W. Layered Titanium Disilicide Stabilized by Oxide Coating for Highly Reversible Lithium Insertion and Extraction. *ACS Nano* **6**, 8114-8119, doi:10.1021/nn302734j (2012).

669 Zhou, S. S. *et al.* Improving the High-Temperature Resilience of LiMn2O4 Based Batteries: LiFNFSI an Effective Salt. *J. Electrochem. Soc.* **159**, A1158-A1164, doi:10.1149/2.026208jes (2012).

670 Zhou, W. H. *et al.* Solvothermal synthesis of flower-like Cu2ZnSnS4 nanostructures and their application as anode materials for lithium-ion batteries. *Chemical Physics Letters* **546**, 115-119, doi:10.1016/j.cplett.2012.07.060 (2012).

671 Zhou, X. S., Wan, L. J. & Guo, Y. G. Facile synthesis of MoS2@CMK-3 nanocomposite as an improved anode material for lithium-ion batteries. *Nanoscale* **4**, 5868-5871, doi:10.1039/c2nr31822a (2012).

672 Zhou, X. S., Yin, Y. X., Wan, L. J. & Guo, Y. G. Self-Assembled Nanocomposite of Silicon Nanoparticles Encapsulated in Graphene through Electrostatic Attraction for Lithium-Ion Batteries. *Advanced Energy Materials* **2**, 1086-1090, doi:10.1002/aenm.201200158 (2012).

673 Zhou, X. W. *et al.* Electrochemical Performance Improvement of Vanadium Oxide Nanotubes as Cathode Materials for Lithium Ion Batteries through Ferric Ion Exchange Technique. *Journal of Physical Chemistry C* **116**, 21685-21692, doi:10.1021/jp306098q (2012).

674 Zhu, L. M. *et al.* n-Type redox behaviors of polybithiophene and its implications for anodic Li and Na storage materials. *Electrochim. Acta* **78**, 27-31, doi:10.1016/j.electacta.2012.05.152 (2012).

675 Zhu, Q. Y. *et al.* Research on the electrochemical performance of nanocomposites of vanadium oxide and carbon nanotubes as cathode materials. *Electrochim. Acta* **81**, 25-30, doi:10.1016/j.electacta.2012.07.096 (2012).

676 Zhu, Y. S. *et al.* A single-ion polymer electrolyte based on boronate for lithium ion batteries. *Electrochem. Commun.* **22**, 29-32, doi:10.1016/j.elecom.2012.05.022 (2012).

677 Zuo, X. *et al.* A novel all-solid electrolyte based on a co-polymer of poly-(methoxy/hexadecal-poly(ethylene glycol) methacrylate) for lithium-ion cell. *Journal of Materials Chemistry* **22**, 22265-22271, doi:10.1039/c2jm34270g (2012).

678 Zuo, X. X., Fan, C. J., Xiao, X., Liu, J. S. & Nan, J. M. High-voltage performance of LiCoO2/graphite batteries with methylene methanedisulfonate as electrolyte additive. *J. Power Sources* **219**, 94-99, doi:10.1016/j.jpowsour.2012.07.026 (2012).

679 Aravindan, V., Vickraman, P., Sivashanmugam, A., Thirunakaran, R. & Gopukumar, S. Comparison among the performance of LiBOB, LiDFOB and LiFAP impregnated polyvinylidenefluoride-hexafluoropropylene nanocomposite membranes by phase inversion for lithium batteries. *Current Applied Physics* **13**, 293-297, doi:10.1016/j.cap.2012.08.002 (2013).

680 Channu, V. S. R., Holze, R. & Rambabu, B. Synthesis and characterization of H2V3O8 nanorods for electrochemical devices. *Current Applied Physics* **13**, 237-240, doi:10.1016/j.cap.2012.07.013 (2013).

681 Chopra, S. & Bauer, P. Driving Range Extension of EV With On-Road Contactless Power Transfer-A Case Study. *Ieee Transactions on Industrial Electronics* **60**, 329-338, doi:10.1109/tie.2011.2182015 (2013).

682 Kelley, J., Simonsen, J. & Ding, J. Poly(vinylidene fluoride-co-hexafluoropropylene) nanocomposites incorporating cellulose nanocrystals with potential applications in lithium ion batteries. *Journal of Applied Polymer Science* **127**, 487-493, doi:10.1002/app.37790 (2013).

683 Shahriari, M. & Farrokhi, M. Online State-of-Health Estimation of VRLA Batteries Using State of Charge. *Ieee Transactions on Industrial Electronics* **60**, 191-202, doi:10.1109/tie.2012.2186771 (2013).

684 Zhang, Y. F. *et al.* Fabrication of belt-like VO2(M)@C core-shell structured composite to improve the electrochemical properties of VO2(M). *Current Applied Physics* **13**, 47-52, doi:10.1016/j.cap.2012.06.013 (2013).

685 Advanced Positive Materials for Lithium-Ion-Batteries: Oxides and Phosphates. *Zeitschrift Fur Anorganische Und Allgemeine Chemie* **638**, 1547-1641, doi:10.1002/zaac.201202001 (2012).

686 Ahmad, M., Shi, Y. Y., Sun, H. Y., Shen, W. C. & Zhu, J. SnO2/ZnO composite structure for the lithium-ion battery electrode. *J. Solid State Chem.* **196**, 326-331, doi:10.1016/j.jssc.2012.06.032 (2012).

687 Allen, C. J., Mukerjee, S. & Abraham, K. M. Li2-xFe0.5(VO)(0.5)(PO4)F-0.5, a New Mixed Metal Phosphate Cathode Material. *J. Electrochem. Soc.* **159**, A1659-A1663, doi:10.1149/2.030210jes (2012).

688 Applestone, D. & Manthiram, A. Symmetric cell evaluation of the effects of electrolyte additives on Cu2Sb-Al2O3-C nanocomposite anodes. *J. Power Sources* **217**, 1-5, doi:10.1016/j.jpowsour.2012.05.119 (2012).

689 Azib, T. *et al.* Crystallinity of nano C-LiFePO4 prepared by the polyol process. *J. Power Sources* **217**, 220-228, doi:10.1016/j.jpowsour.2012.05.106 (2012).

690 Bae, J. & Park, J. Fabrication of Carbon Microcapsules Containing Silicon Nanoparticles-Carbon Nanotubes Nanocomposite for Anode in Lithium Ion Battery. *Bulletin of the Korean Chemical Society* **33**, 3025-3032, doi:10.5012/bkcs.2012.33.9.3025 (2012).

691 Bhandavat, R. & Singh, G. Improved Electrochemical Capacity of Precursor-Derived Si(B)CN-Carbon Nanotube Composite as Li-Ion Battery Anode. *ACS Appl. Mater. Interfaces* **4**, 5092-5097, doi:10.1021/am3015795 (2012).

692 Bhaskar, A., Bramnik, N. N., Trots, D. M., Fuess, H. & Ehrenberg, H. In situ synchrotron diffraction study of charge-discharge mechanism of sol gel synthesized LiM0.5Mn1.5O4 (M = Fe, Co). *J. Power Sources* **217**, 464-469, doi:10.1016/j.jpowsour.2012.06.032 (2012).

693 Bhuvaneswari, D., Gangulibabu & Kalaiselvi, N. Surfactant-coassisted sol-gel synthesis to prepare LiNiyMnyCo1-2yO2 with improved electrochemical behavior. *Journal of Solid State Electrochemistry* **16**, 3667-3674, doi:10.1007/s10008-012-1810-8 (2012).

694 Bodenes, L. *et al.* Lithium-Ion Batteries Working at 85 degrees C: Aging Phenomena and Electrode/Electrolyte Interfaces Studied by XPS. *J. Electrochem. Soc.* **159**, A1739-A1746, doi:10.1149/2.061210jes (2012).

695 Brutti, S. *et al.* A high power Sn-C/C-LiFePO4 lithium ion battery. *J. Power Sources* **217**, 72-76, doi:10.1016/j.jpowsour.2012.05.102 (2012).

696 Cai, L. & White, R. E. Lithium ion cell modeling using orthogonal collocation on finite elements. *J. Power Sources* **217**, 248-255, doi:10.1016/j.jpowsour.2012.06.043 (2012).

697 Chang, C. C., Lee, K. Y., Lee, H. Y., Su, Y. H. & Her, L. J. Trimethyl borate and triphenyl borate as electrolyte additives for LiFePO4 cathode with enhanced high temperature performance. *J. Power Sources* **217**, 524-529, doi:10.1016/j.jpowsour.2012.05.083 (2012).

698 Chen, D. H., Huang, F. Z., Cao, L., Cheng, Y. B. & Caruso, R. A. Spiky Mesoporous Anatase Titania Beads: A Metastable Ammonium Titanate-Mediated Synthesis. *Chemistry-a European Journal* **18**, 13762-13769, doi:10.1002/chem.201202539 (2012).

699 Chen, J. H., He, L. M. & Wang, R. L. Correlation between the Stability of Redox Shuttles in Li Ion Cells and the Reactivity Defined by the Binding Energy of Redox Shuttle Cations with Ethyl Radical. *J. Electrochem. Soc.* **159**, A1636-A1645, doi:10.1149/2.034210jes (2012).

700 Clement, R. J. *et al.* Spin-Transfer Pathways in Paramagnetic Lithium Transition-Metal Phosphates from Combined Broadband Isotropic Solid-State MAS NMR Spectroscopy and DFT Calculations. *J. Am. Chem. Soc.* **134**, 17178-17185, doi:10.1021/ja306876u (2012).

701 Crowther, O. *et al.* Effect of conductive carbon on capacity of iron phthalocyanine cathodes in primary lithium batteries. *J. Power Sources* **217**, 92-97, doi:10.1016/j.jpowsour.2012.06.003 (2012).

702 Cui, W. J., Yi, J., Chen, L., Wang, C. X. & Xia, Y. Y. Synthesis and electrochemical characteristics of NASICON-structured LiSn2(PO4)(3) anode material for lithium-ion batteries. *J. Power Sources* **217**, 77-84, doi:10.1016/j.jpowsour.2012.05.117 (2012).

703 Deng, J. Q. *et al.* Electrochemical performance of LiNi1/3Co1/3Mn1/3O2 thin film electrodes prepared by pulsed laser deposition. *J. Power Sources* **217**, 491-497, doi:10.1016/j.jpowsour.2012.06.006 (2012).

704 Deshpande, R., Verbrugge, M., Cheng, Y. T., Wang, J. & Liu, P. Battery Cycle Life Prediction with Coupled Chemical Degradation and Fatigue Mechanics. *J. Electrochem. Soc.* **159**, A1730-A1738, doi:10.1149/2.049210jes (2012).

705 Dimesso, L., Spanheimer, C. & Jaegermann, W. Investigation on graphitic carbon foams - LiNiyPO4 (y=0.8-1.0) composites. *Solid State Sci.* **14**, 1372-1377, doi:10.1016/j.solidstatesciences.2012.07.023 (2012).

706 Dippel, C. *et al.* Carbene Adduct as Overcharge Protecting Agent in Lithium Ion Batteries. *J. Electrochem. Soc.* **159**, A1587-A1590, doi:10.1149/2.006210jes (2012).

707 Dou, Z. F. *et al.* Synthesis, Self-Assembly, and High Performance in Gas Sensing of X-Shaped Iron Oxide Crystals. *ACS Appl. Mater. Interfaces* **4**, 5698-5703, doi:10.1021/am3016944 (2012).

708 Du, Z. J., Zhang, S. C., Li, F., Jiang, T. & Bai, Z. M. Chemical bath deposition of three-dimensional ternary Sn-Zn-Ni film and its application as anode for Li ion battery. *Transactions of the Institute of Metal Finishing* **90**, 197-202, doi:10.1179/0020296712z.00000000033 (2012).

709 Ebert, T. *et al.* Carbon/carbon nanocomposites fabricated by base catalyzed twin polymerization of a Si-spiro compound on graphite sheets. *Chemical Communications* **48**, 9867-9869, doi:10.1039/c2cc34775j (2012).

710 Ferrese, A., Albertus, P., Christensen, J. & Newman, J. Lithium Redistribution in Lithium-Metal Batteries. *J. Electrochem. Soc.* **159**, A1615-A1623, doi:10.1149/2.027210jes (2012).

711 Flora, X. H., Ulaganathan, M., Babu, R. S. & Rajendran, S. Evaluation of lithium ion conduction in PAN/PMMA-based polymer blend electrolytes for Li-ion battery applications. *Ionics* **18**, 731-736, doi:10.1007/s11581-012-0690-3 (2012).

712 Gmitter, A. J., Gural, J. & Amatucci, G. G. Electrolyte development for improved cycling performance of bismuth fluoride nanocomposite positive electrodes. *J. Power Sources* **217**, 21-28, doi:10.1016/j.jpowsour.2012.05.104 (2012).

713 Gong, J. *et al.* Investigation of the free volume and ionic conducting mechanism of poly(ethylene oxide)-LiClO4 polymeric electrolyte by positron annihilating lifetime spectroscopy. *Chinese Physics B* **21**, doi:10.1088/1674-1056/21/10/107803 (2012).

714 Han, S. W., Shin, J. W. & Yoon, D. H. Synthesis of pure nano-sized Li4Ti5O12 powder via solid-state reaction using very fine grinding media. *Ceramics International* **38**, 6963-6968, doi:10.1016/j.ceramint.2012.05.072 (2012).

715 Hassoun, J., Pfanzelt, M., Kubiak, P., Wohlfahrt-Mehrens, M. & Scrosati, B. An advanced configuration TiO2/LiFePO4 polymer lithium ion battery. *J. Power Sources* **217**, 459-463, doi:10.1016/j.jpowsour.2012.05.071 (2012).

716 Hosono, E. *et al.* High power Na-ion rechargeable battery with single-crystalline Na0.44MnO2 nanowire electrode. *J. Power Sources* **217**, 43-46, doi:10.1016/j.jpowsour.2012.05.100 (2012).

717 Jena, A., Munichandraiah, N. & Shivashankar, S. A. Morphology Controlled Growth of Meso-Porous Co3O4 Nanostructures and Study of Their Electrochemical Capacitive Behavior. *J. Electrochem. Soc.* **159**, A1682-A1689, doi:10.1149/2.002210jes (2012).

718 Karuppasamy, K., Thanikaikarasan, S., Antony, R., Balakumar, S. & Shajan, X. S. Effect of nanochitosan on electrochemical, interfacial and thermal properties of composite solid polymer electrolytes. *Ionics* **18**, 737-745, doi:10.1007/s11581-012-0678-z (2012).

719 Kim, D., Lee, D., Kim, J. & Moon, J. Electrospun Ni-Added SnO2-Carbon Nanofiber Composite Anode for High-Performance Lithium-Ion Batteries. *ACS Appl. Mater. Interfaces* **4**, 5408-5415, doi:10.1021/am301328u (2012).

720 Kokai, F. *et al.* Ultrasonication fabrication of high quality multilayer graphene flakes and their characterization as anodes for lithium ion batteries. *Diamond and Related Materials* **29**, 63-68, doi:10.1016/j.diamond.2012.07.011 (2012).

721 Lajunen, A. & Suomela, J. Evaluation of Energy Storage System Requirements for Hybrid Mining Loaders. *Ieee Transactions on Vehicular Technology* **61**, 3387-3393, doi:10.1109/tvt.2012.2208485 (2012).

722 Lee, G. H., Seo, S. D., Shim, H. W., Park, K. S. & Kim, D. W. Synthesis and Li electroactivity of Fe2P2O7 microspheres composed of self-assembled nanorods. *Ceramics International* **38**, 6927-6930, doi:10.1016/j.ceramint.2012.05.032 (2012).

723 Lee, J. M., Kim, I. Y., Han, S. Y., Kim, T. W. & Hwang, S. J. Graphene Nanosheets as a Platform for the 2D Ordering of Metal Oxide Nanoparticles: Mesoporous 2D Aggregate of Anatase TiO2 Nanoparticles with Improved Electrode Performance. *Chemistry-a European Journal* **18**, 13800-13809, doi:10.1002/chem.201200551 (2012).

724 Lee, J. W., Kim, J. I. & Roh, K. C. Lithium manganese oxide with excellent electrochemical performance prepared from chemical manganese dioxide for lithium ion batteries. *Solid State Sci.* **14**, 1251-1255, doi:10.1016/j.solidstatesciences.2012.07.017 (2012).

725 Lee, S. W. *et al.* The Nature of Lithium Battery Materials under Oxygen Evolution Reaction Conditions. *J. Am. Chem. Soc.* **134**, 16959-16962, doi:10.1021/ja307814 (2012).

726 Levi, M. D. *et al.* Ultrafast anode for high voltage aqueous Li-ion batteries. *Journal of Solid State Electrochemistry* **16**, 3443-3448, doi:10.1007/s10008-012-1841-1 (2012).

727 Li, H. X., Bai, H. M., Tao, Z. L. & Chen, J. Si-Y multi-layer thin films as anode materials of high-capacity lithium-ion batteries. *J. Power Sources* **217**, 102-107, doi:10.1016/j.jpowsour.2012.05.080 (2012).

728 Li, J. *et al.* Tin disulfide nanoflakes decorated with gold nanoparticles for direct electrochemistry of glucose oxidase and glucose biosensing. *Microchimica Acta* **179**, 265-272, doi:10.1007/s00604-012-0889-z (2012).

729 Li, J. Z., Tian, Y. W. & Xu, C. Q. Influence of Nb5+ Doping on Structure and Electrochemical Properties of Spinel Li1.02Mn2O4. *Journal of Materials Science & Technology* **28**, 817-822 (2012).

730 Li, L. *et al.* TEA-assisted synthesis of single-crystalline Mn3O4 octahedrons and their magnetic properties. *Applied Surface Science* **261**, 717-721, doi:10.1016/j.apsusc.2012.08.086 (2012).

731 Li, M. J. *et al.* Synthesis of nano-LiFePO4 particles with excellent electrochemical performance by electrospinning-assisted method. *Journal of Solid State Electrochemistry* **16**, 3581-3586, doi:10.1007/s10008-012-1790-8 (2012).

732 Li, S. Y. *et al.* Composition analysis of the solid electrolyte interphase film on carbon electrode of lithium-ion battery based on lithium difluoro(oxalate)borate and sulfolane. *J. Power Sources* **217**, 503-508, doi:10.1016/j.jpowsour.2012.05.114 (2012).

733 Li, T., Chen, Z. X., Ai, X. R., Cao, Y. L. & Yang, H. X. LiF/Fe nanocomposite as a lithium-rich and high capacity conversion cathode material for Li-ion batteries. *J. Power Sources* **217**, 54-58, doi:10.1016/j.jpowsour.2012.05.111 (2012).

734 Li, X. L. & Faghri, A. Optimization of the Cathode Structure of Lithium-Air Batteries Based on a Two-Dimensional, Transient, Non-Isothermal Model. *J. Electrochem. Soc.* **159**, A1747-A1754, doi:10.1149/2.043210jes (2012).

735 Li, Y. H. *et al.* Electrochemical performance and safety features of high-safety lithium ion battery using novel branched additive for internal short protection. *Applied Surface Science* **261**, 306-311, doi:10.1016/j.apsusc.2012.08.005 (2012).

736 Li, Z., Smith, G. D. & Bedrov, D. Li+ Salvation and Transport Properties in Ionic Liquid/Lithium Salt Mixtures: A Molecular Dynamics Simulation Study. *Journal of Physical Chemistry B* **116**, 12801-12809, doi:10.1021/jp3052246 (2012).

737 Lim, J. M. *et al.* Polyimide nonwoven fabric-reinforced, flexible phosphosilicate glass composite membranes for high-temperature/low-humidity proton exchange membrane fuel cells. *Journal of Materials Chemistry* **22**, 18550-18557, doi:10.1039/c2jm33406b (2012).

738 Liu, D. *et al.* Synthesis of pure phase disordered LiMn1.45Cr0.1Ni0.45O4 by a post-annealing method. *J. Power Sources* **217**, 400-406, doi:10.1016/j.jpowsour.2012.06.063 (2012).

739 Liu, F. L. *et al.* Cobalt Content Optimization of Layered 0.6Li Li1/3Mn2/3 O-2-0.4LiNi(0.5-x)Mn(0.5-x)Co(2x)O(2) (0 <= x <= 0.5) Cathode Materials Prepared by the Carbonate Coprecipitation. *J. Electrochem. Soc.* **159**, A1591-A1597, doi:10.1149/2.012210jes (2012).

740 Liu, G. C., Shen, X. X., Ui, K., Wang, L. D. & Kumagai, N. Influence of the binder types on the electrochemical characteristics of tin nanoparticle negative electrode for lithium secondary batteries. *J. Power Sources* **217**, 108-113, doi:10.1016/j.jpowsour.2012.05.116 (2012).

741 Liu, Y. B., Tan, L. & Li, L. Ion exchange membranes as electrolyte to improve high temperature capacity retention of LiMn2O4 cathode lithium-ion batteries. *Chemical Communications* **48**, 9858-9860, doi:10.1039/c2cc34529c (2012).

742 Luo, H., Liang, L. Y., Cao, H. T., Liu, Z. M. & Zhuge, F. Structural, Chemical, Optical, and Electrical Evolution of SnOx Films Deposited by Reactive rf Magnetron Sputtering. *ACS Appl. Mater. Interfaces* **4**, 5673-5677, doi:10.1021/am301601s (2012).

743 Ma, R. G. *et al.* Large-scale fabrication of hierarchical alpha-Fe2O3 assemblies as high performance anode materials for lithium-ion batteries. *Crystengcomm* **14**, 7882-7887, doi:10.1039/c2ce26041g (2012).

744 Ma, R. G. *et al.* Facile synthesis and electrochemical characterization of Sn4Ni3/C nanocomposites as anode materials for lithium ion batteries. *J. Solid State Chem.* **196**, 536-542, doi:10.1016/j.jssc.2012.07.015 (2012).

745 Mahesh, K. C., Suresh, G. S. & Venkatesha, T. V. Electrochemical behavior of Li Li0.2Co0.3Mn0.5 O-2 as cathode material in Li2SO4 aqueous electrolyte. *Journal of Solid State Electrochemistry* **16**, 3559-3571, doi:10.1007/s10008-012-1787-3 (2012).

746 Maheshkumar, J., Sreedhar, B., Nair, B. U. & Dhathathreyan, A. Supported lipid bilayers as templates to design manganese oxide nanoparticles. *Journal of Chemical Sciences* **124**, 979-984, doi:10.1007/s12039-012-0295-4 (2012).

747 Marschilok, A. C., Kim, Y. J., Takeuchi, K. J. & Takeuchi, E. S. Silver Vanadium Phosphorous Oxide, Ag0.48VOPO4: Exploration as a Cathode Material in Primary and Secondary Battery Applications. *J. Electrochem. Soc.* **159**, A1690-A1695, doi:10.1149/2.062210jes (2012).

748 Martha, S. K., Dudney, N. J., Kiggans, J. O. & Nanda, J. Electrochemical Stability of Carbon Fibers Compared to Aluminum as Current Collectors for Lithium-Ion Batteries. *J. Electrochem. Soc.* **159**, A1652-A1658, doi:10.1149/2.041210jes (2012).

749 Mayer, T., Kreyenberg, D., Wind, J. & Braun, F. Feasibility study of 2020 target costs for PEM fuel cells and lithium-ion batteries: A two-factor experience curve approach. *International Journal of Hydrogen Energy* **37**, 14463-14474, doi:10.1016/j.ijhydene.2012.07.022 (2012).

750 Moritomo, Y., Zhu, X. H., Takachi, M. & Matsuda, T. Fast Discharge Process of Thin Film Electrode of Prussian Blue Analogue. *Japanese Journal of Applied Physics* **51**, doi:10.1143/jjap.51.107301 (2012).

751 Mousty, C. & Leroux, F. LDHs as Electrode Materials for Electrochemical Detection and Energy Storage: Supercapacitor, Battery and (Bio)-Sensor. *Recent Patents on Nanotechnology* **6**, 174-192 (2012).

752 Munakata, H., Takemura, B., Saito, T. & Kanamura, K. Evaluation of real performance of LiFePO4 by using single particle technique. *J. Power Sources* **217**, 444-448, doi:10.1016/j.jpowsour.2012.06.037 (2012).

753 Nathan, A. *et al.* Flexible Electronics: The Next Ubiquitous Platform. *Proceedings of the Ieee* **100**, 1486-1517, doi:10.1109/jproc.2012.2190168 (2012).

754 Nithya, V. D., Selvan, R. K., Vediappan, K., Sharmila, S. & Lee, C. W. Molten salt synthesis and characterization of Li4Ti5-xMnxO12 (x=0.0, 0.05 and 0.1) as anodes for Li-ion batteries. *Applied Surface Science* **261**, 515-519, doi:10.1016/j.apsusc.2012.08.047 (2012).

755 Pei, L. Z. *et al.* Electrochemical Behaviors of Ascorbic Acid at CuGeO3/Polyaniline Nanowire Modified Glassy Carbon Electrode. *J. Electrochem. Soc.* **159**, G107-G111, doi:10.1149/2.005210jes (2012).

756 Pol, V. G., Calderon-Moreno, J. M. & Thackeray, M. M. Autogenic synthesis of SnO2 materials and their structural, electrochemical, and optical properties. *J. Solid State Chem.* **196**, 21-28, doi:10.1016/j.jssc.2012.07.047 (2012).

757 Qie, L., Yuan, L. X., Zhang, W. X., Chen, W. M. & Huang, Y. H. Revisit of Polypyrrole as Cathode Material for Lithium-Ion Battery. *J. Electrochem. Soc.* **159**, A1624-A1629, doi:10.1149/2.042210jes (2012).

758 Qu, L., Fang, S. H., Yang, L. & Hirano, S. Li2FeSiO4/C cathode material synthesized by template-assisted sol-gel process with Fe2O3 microsphere. *J. Power Sources* **217**, 243-247, doi:10.1016/j.jpowsour.2012.05.093 (2012).

759 Sathish, M., Tomai, T. & Honma, I. Graphene anchored with Fe3O4 nanoparticles as anode for enhanced Li-ion storage. *J. Power Sources* **217**, 85-91, doi:10.1016/j.jpowsour.2012.05.099 (2012).

760 Schmitz, R. *et al.* Investigation of lithium carbide contamination in battery grade lithium metal. *J. Power Sources* **217**, 98-101, doi:10.1016/j.jpowsour.2012.05.038 (2012).

761 Shiga, T., Katoh, Y., Inoeu, M. & Takechi, K. Reduction of iodine complexed with sulfoxides and organophosphorus esters near 4.0 V vs. Li/Li+. *J. Power Sources* **217**, 538-542, doi:10.1016/j.jpowsour.2012.05.113 (2012).

762 Shiva, K., Kiran, M., Ramamurty, U., Asokan, S. & Bhattacharyya, A. J. A broad pore size distribution mesoporous SnO2 as anode for lithium-ion batteries. *Journal of Solid State Electrochemistry* **16**, 3643-3649, doi:10.1007/s10008-012-1797-1 (2012).

763 Siddique, N., Salehi, A. & Liu, F. Q. Stochastic reconstruction and electrical transport studies of porous cathode of Li-ion batteries. *J. Power Sources* **217**, 437-443, doi:10.1016/j.jpowsour.2012.05.121 (2012).

764 Sinha, N. N. *et al.* The Rate of Active Lithium Loss from a Soft Carbon Negative Electrode as a Function of Temperature, Time and Electrode Potential. *J. Electrochem. Soc.* **159**, A1672-A1681, doi:10.1149/2.048210jes (2012).

765 Slepski, P., Darowicki, K., Janicka, E. & Lentka, G. A complete impedance analysis of electrochemical cells used as energy sources. *Journal of Solid State Electrochemistry* **16**, 3539-3549, doi:10.1007/s10008-012-1825-1 (2012).

766 Somasundaram, K., Birgersson, E. & Mujumdar, A. S. Model for a bipolar Li-ion battery module: Automated model generation, validation and verification. *Applied Mathematics and Computation* **219**, 2231-2245, doi:10.1016/j.amc.2012.08.070 (2012).

767 Song, M. Y., Rim, H. & Park, H. R. Electrochemical characteristics of cobalt-substituted lithium nickel oxides synthesized from lithium hydro-oxide and nickel and cobalt oxides. *Ceramics International* **38**, 6591-6597, doi:10.1016/j.ceramint.2012.05.044 (2012).

768 Song, S. A., Park, S. B. & Han, J. Synthesis of Zirconium-Based Material-Coated LiNi0.8Co0.2O2 Cathode Using a New Coating Method. *Japanese Journal of Applied Physics* **51**, doi:10.1143/jjap.51.105202 (2012).

769 Sun, Y. K. *et al.* Nanostructured high-energy cathode materials for advanced lithium batteries. *Nat. Mater.* **11**, 942-947, doi:10.1038/nmat3435 (2012).

770 Tang, J., Feng, C. Q., Jiang, X. Y., Dan, M. Y. & Zheng, H. Synthesis and the Electrochemical Performance for Non-stoichiometric Spinel Li4-xTi5SnyO12. *Chinese Journal of Inorganic Chemistry* **28**, 2193-2197 (2012).

771 Tang, Y. H. *et al.* One-Step Electrodeposition to Layer-by-Layer Graphene-Conducting-Polymer Hybrid Films. *Macromolecular Rapid Communications* **33**, 1780-1786, doi:10.1002/marc.201200328 (2012).

772 Tani, A., Camara, M. B. & Dakyo, B. Energy Management Based on Frequency Approach for Hybrid Electric Vehicle Applications: Fuel-Cell/Lithium-Battery and Ultracapacitors. *Ieee Transactions on Vehicular Technology* **61**, 3375-3386, doi:10.1109/tvt.2012.2206415 (2012).

773 Uematsu, S., Quan, Z., Suganuma, Y. & Sonoyama, N. Reversible lithium charge-discharge property of bi-capped Keggin-type polyoxovanadates. *J. Power Sources* **217**, 13-20, doi:10.1016/j.jpowsour.2012.05.096 (2012).

774 Vidal-Abarca, C., Mba, J. M. A., Masquelier, C., Tirado, J. L. & Lavela, P. In Situ X-ray Diffraction Study of Electrochemical Insertion in Mg0.5Ti2(PO4)(3): An Electrode Material for Lithium or Sodium Batteries. *J. Electrochem. Soc.* **159**, A1716-A1721, doi:10.1149/2.060210jes (2012).

775 Wang, J. F. *et al.* Novel synthesis and formation process of uniform Mn2O3 cubes. *Crystengcomm* **14**, 8253-8260, doi:10.1039/c2ce26176f (2012).

776 Wang, L. N. *et al.* Capacity Fading of Lithium-Ion Cells Having Li Li1/3Ti5/3 O-4 (LTO)-Negative Electrodes for the First- and Second-Generation 12 V Lead-Free Batteries. *J. Electrochem. Soc.* **159**, A1710-A1715, doi:10.1149/2.059210jes (2012).

777 Wang, X. L. *et al.* Visualizing the chemistry and structure dynamics in lithium-ion batteries by in-situ neutron diffraction. *Scientific Reports* **2**, doi:10.1038/srep00747 (2012).

778 Wang, X. W. *et al.* Facile and green synthesis of Co3O4 nanoplates/graphene nanosheets composite for supercapacitor. *Journal of Solid State Electrochemistry* **16**, 3593-3602, doi:10.1007/s10008-012-1744-1 (2012).

779 Watrin, N., Roche, R., Ostermann, H., Blunier, B. & Miraoui, A. Multiphysical Lithium-Based Battery Model for Use in State-of-Charge Determination. *Ieee Transactions on Vehicular Technology* **61**, 3420-3429, doi:10.1109/tvt.2012.2205169 (2012).

780 Wei, Q. L. *et al.* The effects of crystal structure of the precursor MnO2 on electrochemical properties of spinel LiMn2O4. *Journal of Solid State Electrochemistry* **16**, 3651-3659, doi:10.1007/s10008-012-1809-1 (2012).

781 Wen, C. Y., Jhu, C. Y., Wang, Y. W., Chiang, C. C. & Shu, C. M. Thermal runaway features of 18650 lithium-ion batteries for LiFePO4 cathode material by DSC and VSP2. *Journal of Thermal Analysis and Calorimetry* **109**, 1297-1302, doi:10.1007/s10973-012-2573-2 (2012).

782 Whittingham, M. S. History, Evolution, and Future Status of Energy Storage. *Proceedings of the Ieee* **100**, 1518-1534, doi:10.1109/jproc.2012.2190170 (2012).

783 Wu, B. R., Chen, X. H., Zhang, C. Z., Mu, D. B. & Wu, F. Lithium-air and lithium-copper batteries based on a polymer stabilized interface between two immiscible electrolytic solutions (ITIES). *New Journal of Chemistry* **36**, 2140-2145, doi:10.1039/c2nj40517b (2012).

784 Wu, C. H., Lui, T. S., Hung, F. Y. & Chen, L. H. Effects of Vacuum Annealing on the Charge-Discharge Characteristics of Eutectic Al-Si/Al Thin Film as Anode Material for Li-Ion Batteries. *Materials Transactions* **53**, 1669-1673, doi:10.2320/matertrans.M2012086 (2012).

785 Wu, Y. S. *et al.* Synthesis and characterization of multi-wall carbon nanotubes supported-hydrated iron phosphate cathode material for lithium-ion cells by a novel homogeneous precipitation method. *Ionics* **18**, 721-729, doi:10.1007/s11581-012-0681-4 (2012).

786 Xia, W. W. *et al.* Facile approach to synthesize SnO2 nanoparticles@carbon nanofibers as anode materials for lithium-ion battery. *J. Power Sources* **217**, 351-357, doi:10.1016/j.jpowsour.2012.05.072 (2012).

787 Xiong, Q. Q. *et al.* Three-dimensional porous nano-Ni/Fe3O4 composite film: enhanced electrochemical performance for lithium-ion batteries. *Journal of Materials Chemistry* **22**, 18639-18645, doi:10.1039/c2jm33770c (2012).

788 Xu, J., Yang, X., Wong, T. L. & Lee, C. S. Large-scale synthesis of Cu2SnS3 and Cu1.8S hierarchical microspheres as efficient counter electrode materials for quantum dot sensitized solar cells. *Nanoscale* **4**, 6537-6542, doi:10.1039/c2nr31724a (2012).

789 Yamada, M. *et al.* Reaction Mechanism of "SiO"-Carbon Composite-Negative Electrode for High-Capacity Lithium-Ion Batteries. *J. Electrochem. Soc.* **159**, A1630-A1635, doi:10.1149/2.018210jes (2012).

790 Yan, B., Lim, C., Yin, L. L. & Zhu, L. K. Three Dimensional Simulation of Galvanostatic Discharge of LiCoO2 Cathode Based on X-ray Nano-CT Images. *J. Electrochem. Soc.* **159**, A1604-A1614, doi:10.1149/2.024210jes (2012).

791 Yang, Z. *et al.* Preparation of Nano-structured LiFexMn1-xPO4 (x=0, 0.2, 0.4) by Reflux Method and Research on the Influences of Fe(II) Substitution. *Journal of Materials Science & Technology* **28**, 823-827 (2012).

792 Ye, Y. H., Shi, Y. X. & Tay, A. A. O. Electro-thermal cycle life model for lithium iron phosphate battery. *J. Power Sources* **217**, 509-518, doi:10.1016/j.jpowsour.2012.06.055 (2012).

793 Yim, H., Kong, W. Y., Kim, Y. C., Yoon, S. J. & Choi, J. W. Electrochemical properties of Li Li0.2Mn0.54Co0.13Ni0.13 O-2 cathode thin film by RF sputtering for all-solid-state lithium battery. *J. Solid State Chem.* **196**, 288-292, doi:10.1016/j.jssc.2012.06.006 (2012).

794 Yoon, W. S. *et al.* Structural study of the coating effect on the thermal stability of charged MgO-coated LiNi0.8Co0.2O2 cathodes investigated by in situ XRD. *J. Power Sources* **217**, 128-134, doi:10.1016/j.jpowsour.2012.05.028 (2012).

795 Zhang, D. *et al.* FeS2/C composite as an anode for lithium ion batteries with enhanced reversible capacity. *J. Power Sources* **217**, 229-235, doi:10.1016/j.jpowsour.2012.05.112 (2012).

796 Zhang, F., Cao, H. Q., Yue, D. M., Zhang, J. X. & Qu, M. Z. Enhanced Anode Performances of Polyaniline-TiO2-Reduced Graphene Oxide Nanocomposites for Lithium Ion Batteries. *Inorg. Chem.* **51**, 9544-9551, doi:10.1021/ic301378j (2012).

797 Zhang, H., Lu, Y., Gu, C. D., Wang, X. L. & Tu, J. P. Ionothermal synthesis and lithium storage performance of core/shell structured amorphous@crystalline Ni-P nanoparticles. *Crystengcomm* **14**, 7942-7950, doi:10.1039/c2ce25939g (2012).

798 Zhang, L. L. *et al.* Insight into Fe Incorporation in Li3V2(PO4)(3)/C Cathode Material. *J. Electrochem. Soc.* **159**, A1573-A1578, doi:10.1149/2.001210jes (2012).

799 Zhang, M., Jia, M. Q. & Jin, Y. H. Fe3O4/reduced graphene oxide nanocomposite as high performance anode for lithium ion batteries. *Applied Surface Science* **261**, 298-305, doi:10.1016/j.apsusc.2012.08.004 (2012).

800 Zhang, T. & Zhou, H. S. From Li-O-2 to Li-Air Batteries: Carbon Nanotubes/Ionic Liquid Gels with a Tricontinuous Passage of Electrons, Ions, and Oxygen. *Angew. Chem.-Int. Edit.* **51**, 11062-11067, doi:10.1002/anie.201204983 (2012).

801 Zhang, Z. L. *et al.* Synthesis of mesoporous copper oxide microspheres with different surface areas and their lithium storage properties. *J. Power Sources* **217**, 336-344, doi:10.1016/j.jpowsour.2012.05.088 (2012).

802 Zhao, X., Hayner, C. M., Kung, M. C. & Kung, H. H. Photothermal-assisted fabrication of iron fluoride-graphene composite paper cathodes for high-energy lithium-ion batteries. *Chemical Communications* **48**, 9909-9911, doi:10.1039/c2cc33973k (2012).

803 Zheng, H. H., Zhang, L., Liu, G., Song, X. Y. & Battaglia, V. S. Correlationship between electrode mechanics and long-term cycling performance for graphite anode in lithium ion cells. *J. Power Sources* **217**, 530-537, doi:10.1016/j.jpowsour.2012.06.045 (2012).

804 Brassart, L. & Suo, Z. G. Reactive flow in solids. *Journal of the Mechanics and Physics of Solids* **61**, 61-77, doi:10.1016/j.jmps.2012.09.007 (2013).

805 Cai, L. *et al.* Life modeling of a lithium ion cell with a spinel-based cathode. *J. Power Sources* **221**, 191-200, doi:10.1016/j.jpowsour.2012.08.046 (2013).

806 Dose, W. M. & Donne, S. W. Optimizing Li/MnO2 batteries: Relating manganese dioxide properties and electrochemical performance. *J. Power Sources* **221**, 261-265, doi:10.1016/j.jpowsour.2012.08.043 (2013).

807 Guo, M. & White, R. E. A distributed thermal model for a Li-ion electrode plate pair. *J. Power Sources* **221**, 334-344, doi:10.1016/j.jpowsour.2012.08.012 (2013).

808 Hanyu, Y., Ganbe, Y. & Honma, I. Application of quinonic cathode compounds for quasi-solid lithium batteries. *J. Power Sources* **221**, 186-190, doi:10.1016/j.jpowsour.2012.08.040 (2013).

809 Howe, J. Y. *et al.* Improving microstructure of silicon/carbon nanofiber composites as a Li battery anode. *J. Power Sources* **221**, 455-461, doi:10.1016/j.jpowsour.2012.08.026 (2013).

810 Jung, H. G., Venugopal, N., Scrosati, B. & Sun, Y. K. A high energy and power density hybrid supercapacitor based on an advanced carbon-coated Li4Ti5O12 electrode. *J. Power Sources* **221**, 266-271, doi:10.1016/j.jpowsour.2012.08.039 (2013).

811 Kim, W. T. *et al.* Structures and electrochemical properties of Li1.075V0.925-xMxO2 (M = Cr or Fe, 0 <= x <= 0.025) as new anode materials for secondary lithium batteries. *J. Power Sources* **221**, 366-371, doi:10.1016/j.jpowsour.2012.07.134 (2013).

812 Li, H. S. *et al.* Nitrogen-doped carbon coated Li4Ti5O12 nanocomposite: Superior anode materials for rechargeable lithium ion batteries. *J. Power Sources* **221**, 122-127, doi:10.1016/j.jpowsour.2012.08.032 (2013).

813 Li, W. *et al.* Intercalated Si/C films as the anode for Li-ion batteries with near theoretical stable capacity prepared by dual plasma deposition. *J. Power Sources* **221**, 242-246, doi:10.1016/j.jpowsour.2012.08.042 (2013).

814 Liu, L. C. *et al.* Synthesis of sandwich-like TiO2@C composite hollow spheres with high rate capability and stability for lithium-ion batteries. *J. Power Sources* **221**, 141-148, doi:10.1016/j.jpowsour.2012.07.105 (2013).

815 Liu, Y. B., Tan, L. & Li, L. Tris(trimethylsilyl) borate as an electrolyte additive to improve the cyclability of LiMn2O4 cathode for lithium-ion battery. *J. Power Sources* **221**, 90-96, doi:10.1016/j.jpowsour.2012.08.028 (2013).

816 Low, W. Y., Aziz, J. A., Idris, N. R. N. & Saidur, R. Electrical model to predict current-voltage behaviours of lithium ferro phosphate batteries using a transient response correction method. *J. Power Sources* **221**, 201-209, doi:10.1016/j.jpowsour.2012.07.140 (2013).

817 Moretti, A. *et al.* Investigation of different binding agents for nanocrystalline anatase TiO2 anodes and its application in a novel, green lithium-ion battery. *J. Power Sources* **221**, 419-426, doi:10.1016/j.jpowsour.2012.07.142 (2013).

818 Ni, J. F., Gao, L. J. & Lu, L. Carbon coated lithium cobalt phosphate for Li-ion batteries: Comparison of three coating techniques. *J. Power Sources* **221**, 35-41, doi:10.1016/j.jpowsour.2012.07.107 (2013).

819 Ohmi, N. *et al.* Effect of organo-fluorine compounds on the thermal stability and electrochemical properties of electrolyte solutions for lithium ion batteries. *J. Power Sources* **221**, 6-13, doi:10.1016/j.jpowsour.2012.07.121 (2013).

820 Schmidt, J. P., Berg, P., Schonleber, M., Weber, A. & Ivers-Tiffee, E. The distribution of relaxation times as basis for generalized time-domain models for Li-ion batteries. *J. Power Sources* **221**, 70-77, doi:10.1016/j.jpowsour.2012.07.100 (2013).

821 Shi, S. J. *et al.* Synthesis and electrochemical performance of Li1.131Mn0.504Ni0.243Co0.122O2 cathode materials for lithium ion batteries via freeze drying. *J. Power Sources* **221**, 300-307, doi:10.1016/j.jpowsour.2012.08.031 (2013).

822 Tabuchi, M. *et al.* Synthesis of high-capacity Ti- and/or Fe-substituted Li2MnO3 positive electrode materials with high initial cycle efficiency by application of the carbothermal reduction method. *J. Power Sources* **221**, 427-434, doi:10.1016/j.jpowsour.2012.08.055 (2013).

823 Trinh, N. D., Saulnier, M., Lepage, D. & Schougaard, S. B. Conductive polymer film supporting LiFePO4 as composite cathode for lithium ion batteries. *J. Power Sources* **221**, 284-289, doi:10.1016/j.jpowsour.2012.08.006 (2013).

824 Zheng, J. *et al.* The effects of persulfate treatment on the electrochemical properties of Li Li0.2Mn0.54Ni0.13Co0.13 O-2 cathode material. *J. Power Sources* **221**, 108-113, doi:10.1016/j.jpowsour.2012.06.084 (2013).