

BIBLIOGRAPHY

- Agrawal, S. L. & A. Awadhia. 2004. "DSC And Conductivity Studies On PVA Based Proton Conducting Gel Electrolytes". *Bull. Mater. Sci.* Vol. 27. (6). December. pp. 523–527.
- Akbar, S. & A. A. Taimoor. 2009. "Functionalization of carbon nanotubes: manufacturing techniques and properties of customized nanocomponents for molecular-level technology". *Recent Pat Nanotechnol.* Vol. 3. (2): pp. 154-61.
- Aravinda, L.S., Bhat, K. U. & B. Badekai Ramachandra. 2013. "Nano CeO₂/Activated Carbon Based Composite Electrodes for High Performance Supercapacitor". *Materials Letters.* Vol. 112. December. pp. 158-161.
- Aravinda, L.S., Bhat, U. & B. Badekai Ramachandra. 2013. "Binder Free MoO₃/multiwalled Carbon Nanotube Thin Film Electrode for High Energy Density Supercapacitors". *Electrochimica Acta.* Vol. 112. December. pp. 663-669.
- Aravinda, L.S., Nagaraja, K.K., Nagaraja, H.S., Bhat, K. U. & B. Badekai Ramachandra. 2013. "ZnO/carbon Nanotube Nanocomposite for High Energy Density Supercapacitors". *Electrochimica Acta.* Vol. 95. April. pp. 119-124.
- Arbizzani, C., Beninati, S., Lazzari, M., Soavi, F. & M. Mastragostino. 2007. "Electrode Materials for Ionic Liquid-Based Supercapacitors". *Journal of Power Sources.* Vol. 174. (2): December. pp. 648-652.
- Arbizzani, C., Biso, M., Cericola, D., Lazzari, M., Soavi, F. & M. Mastragostino. 2008. "Safe, high-energy supercapacitors based on solvent-free ionic liquid electrolytes". *Journal of Power Sources.* Vol. 185 (2): December. pp. 1575–1579.
- Ayad, M.Y., Becherif, M. & A. Henni. 2011. "Vehicle Hybridization with Fuel Cell, Supercapacitors and Batteries by Sliding Mode Control". *Renewable Energy.* Vol. 36. (10): October. pp. 2627-2634.
- Azas, P., Duclaux, L., Florian, P., Massiot, D., Lillo-Rodenas, M., Linares-Solano, A., Peres, J., Jehoulet, C. & F. Beguin. 2007. "Causes of supercapacitors ageing in organic electrolyte". *Journal of Power Sources.* Vol. 171. (2): September. pp. 1046-1053.
- Bakhmatyuk, B.P., Venhryn, B.Y., Grygorchak, I.I., & M.M. Micov. 2008. "Influence of Chemical Modification of Activated Carbon Surface on Characteristics of Supercapacitors". *Journal of Power Sources.* Vol. 180. (2): June. pp. 890-895.

- Bakhmatyuk, B.P., Venhryn, B.Y., Grygorchak, I.I., Micov, M.M. & O. K. Yu. 2007. "On the Hierarchy of the Influences of Porous and Electronic Structures of Carbonaceous Materials on Parameters of Molecular Storage Devices". *Electrochimica Acta*. Vol. 52. (24): August. pp. 6604-6610.
- Balasubramanian, K., Burghard, M. & K Kern. 2004. "Carbon Nanotubes: Electrochemical Modification". *Encyclopedia of Nanoscience and nanotechnology*. pp. 507-517.
- Balducci, A., Henderson, W.A., Mastragostino, M., Passerini, S., Simon, P. & F. Soavi. 2005. "Cycling stability of a hybrid Activated Carbon/poly(3-methylthiophene) Supercapacitor with N-butyl-N-methylpyrrolidinium Bis(trifluoromethanesulfonyl)imide Ionic Liquid as Electrolyte". *Electrochimica Acta*. Vol. 50. (11): April. pp. 2233-2237.
- Barsali, S., Ceraolo, M., Marracci, M. & B. Tellini. 2010. "Frequency Dependent Parameter Model of Supercapacitor". *Measurement*. Vol. 43. (10): December. pp. 1683-1689.
- Bhat, K. D & M. S. Kumar. 2007. "n and p doped poly(3,4-ethylenedioxythiophene) electrode materials for symmetric redox supercapacitors". *Journal of Material Science*. Vol. 42. (19): October. pp. 8158-8162.
- Bittner, A.M., Zhu, M., Yang, Y., Waibel, H.F., Konuma, M., Starke, U. & C.J. 2012. "Weber, Ageing of Electrochemical Double Layer Capacitors". *Journal of Power Sources*. Vol. 203. April. pp. 262-273.
- Böckenfeld, N., Jeong, S.S., Winter, M., Passerini, S. & A. Balducci. 2013. "Natural, Cheap and Environmentally Friendly Binder for Supercapacitors". *Journal of Power Sources*. Vol. 221. January. pp. 14-20.
- Bonnefoi, L., Simon, P., Fauvarque, J.F., Sarrazin, C. & A. Dugast. 1999. "Electrode Optimisation for Carbon Power Supercapacitors". *Journal of Power Sources*. Vol. 79. (1): May. pp. 37-42.
- Bonnefoi, L., Simon, P., Fauvarque, J.F., Sarrazin, C., Sarrau, J.F. & A. Dugast. 1999. "Electrode Compositions for Carbon Power Supercapacitors". *Journal of Power Sources*. Vol. 80. (1-2): July. pp. 149-155.
- Brouji, H. E., Briat, O., Vinassa, J-M., Henry, H. & E. Woirdard. 2009. "Analysis of the Dynamic Behavior Changes of Supercapacitors during Calendar Life Test Under Several Voltages and Temperatures Conditions". *Microelectronics Reliability*. Vol. 49. (9-11): September-November. pp. 1391-1397.
- Brousse, T., Taberna, P., Crosnier, O., Dugasa, R., Guillemet, P., Scudeller, Y., Zhoud, Y., Favier, F., Belanger, D. & P. Simon. 2007. "Long-term Cycling Behavior of Asymmetric Activated Carbon/MnO₂ Aqueous Electrochemical Supercapacitor". *Journal of Power Sources*. Vol. 173. (1): November. pp. 633-641.

- Burke, A. 2009. "Capacitors|Application". *Encyclopedia of Electrochemical Power Sources*. Vol. 9. pp. 685-694.
- Carlson, T. & E. Asp Leif. 2013. "Structural Carbon Fibre Composite/PET capacitors – Effects of Dielectric Separator Thickness. *Composites Part B: Engineering*. Vol. 49. June. pp. 16-21.
- Chen, H., Di, J., Jin, Y., Chen, M., Tian, J. & L. Qingwen. 2013. "Active Carbon Wrapped Carbon Nanotube Buckypaper for the Electrode of Electrochemical Supercapacitors". *Journal of Power Sources*. Vol. 237. September. pp. 325-331.
- Chen, W.-C., Hu, C.-C., Wang, C.-C. & M. Chun-Kuo. 2004. "Electrochemical Characterization of Activated Carbon–Ruthenium Oxide Nanoparticles Composites for Supercapacitors". *Journal of Power Sources*. Vol. 125. (2): January. pp. 292-298.
- Choi, H.-J., Jung, S.-M., Seo, J.-M., Chang, D. W., Dai, L. & B. Jong-Beom. 2012. "Graphene for Energy Conversion and Storage in Fuel Cells and Supercapacitors. *Nano Energy*. Vol. 1. (4): July. pp. 534-551.
- Clemente, A., Panero, S., Spila, E. & B.Scrosati. 1996. "Solid-State, Polymer-Based, Redox Capacitors". *Solid State Ionics*. Vol. 85. (1-4): May. pp. 273-277.
- Conway, B. E., Pell, W.G. & T-C. Liu. 1997. "Diagnostic Analyses for Mechanisms of Self-Discharge of Electrochemical Capacitors and Batteries". *Journal of Power Sources*. Vol. 65. (1-2): March-April. pp.53-59.
- Conway, B.E., Birss, V., J. Wojtowicz. 1997. "The Role and Utilization of Pseudocapacitance for Energy Storage by Supercapacitors". *Journal of Power Sources*. Vol. 66. (1-2): May-June. pp. 1-14.
- Daenen, M., de Fouw, R.D., Hamers, B., Janssen, P.G.A., Schouteden, K. & M.A.J. Veld. 2003. "The Wondrous World of Carbon Nanotubes: A Review of Current Carbon Nanotube Technologies". Eindhoven University of Technology. February.
- Dai, H. 2002. "Carbon Nanotubes: Synthesis, Integration, and Properties". *Acc. Chem. Res.* Vol. 35. (12): December. pp. 1035-1044.
- Domingo-García, M., Fernández, J.A., Almazán-Almazána, M.C. López-Garzóna, F.J., Stoeklic F., & T.A. Centenob. 2010. "Poly(ethylene terephthalate)-based carbons as electrode material in supercapacitors". *Journal of Power Sources*. Vol. 195. (12): June. pp. 3810–3813.
- Dong, B., He, B., Xu, C. & H. Li. 2007. "Preparation and Electrochemical Characterization of Polyaniline/Multi-Walled Carbon Nanotubes Composites

For Supercapacitor". *Material Sci. and Engineering*. Vol. 143. (1-3): October. pp. 7-13.

- Dubal, D. P. & H. Rudolf. 2013. "All-Solid-State Flexible Thin Film Supercapacitor Based On Mn₃O₄ Stacked Nanosheets with Gel Electrolyte". *Energy*. Vol. 51. March. pp. 407-412.
- Dubal, D. P. & H. Rudolf. 2013. "Self-Assembly of Stacked Layers of Mn₃O₄ Nanosheets Using a Scalable Chemical Strategy for Enhanced, Flexible, Electrochemical Energy Storage". *Journal of Power Sources*. Vol. 238. September. pp. 274-282.
- Dubal, D.P., Gund, G. S., Lokhande, C.D. & H. Rudolf. 2013. "CuO Cauliflowers for Supercapacitor Application: Novel Potentiodynamic Deposition". *Materials Research Bulletin*. Vol. 48. (2): February. pp. 923-928.
- Dubal, D.P., Gund, G. S., Lokhande, Holze, R. & D. L. Chandrakant. 2013. "Mild Chemical Strategy to Grow Micro-Roses and Micro-Woolen like Arranged CuO Nanosheets for High Performance Supercapacitors". *Journal of Power Sources*. Vol. 242. November. pp. 687-698.
- Dubal, D.P., Gund, G. S., Lokhande, Holze, R. & D. L. Chandrakant. 2014. "Enhancement in Supercapacitive Properties of CuO Thin Films due to the Surfactant Mediated Morphological Modulation". *Journal of Electroanalytical Chemistry*. Vol. 712. January. pp 40-46.
- Dubal, D.P., Gund, G. S., Lokhande, Holze, R., Jadhav, H.S., Lokhande C.D., & P. Chan-Jin, 2013. "Solution-Based Binder-Free Synthetic Approach of RuO₂ Thin Films for All Solid State Supercapacitors". *Electrochimica Acta*. Vol. 103. July. pp. 103-109.
- Dubal, D.P., Jagadale, A. D. & L. Chandrakant D. 2012. "Big as well as Light Weight PorTable, Mn₃O₄ Based Symmetric Supercapacitive Devices: Fabrication, Performance Evaluation and Demonstration". *Electrochimica Acta*. Vol. 80. October. pp. 160-170.
- Dubal, D.P., Patil, S.V., Gund, G.S. & D. L. Chandrakant. 2013. "Polyaniline-Polypyrrole Nanograined Composite via Electrostatic Adsorption for High Performance Electrochemical Supercapacitors". *Journal of Alloys and Compounds*. Vol. 552. March. pp. 240-247.
- Dumortier, H., Lacotte, S., Pastorin, G., Marega, R., Wu, W., Bonifazi, D., Briand, J., Prato, M., Muller, S. & A. Bianco . 2006. "Functionalized Carbon Nanotubes are Non-Cytotoxic and Preserve the Functionality of Primary Immune Cells". *Nano Lett*. Vol. 6 (7): June. pp. 1522-1528.
- Eskusson, J., Jänesa, A., Kikas, A., Matisen, L. & E. Lust. 2010. "Physical And Electrochemical Characteristics Of Supercapacitors Based On Carbide Derived

- Carbon Electrodes In Aqueous Electrolytes". *Journal of Power Sources*. Vol. 10. (10): pp. 100.
- Fang, B., Wei, Y.-Z. & M. Kumagai. 2006. "Modified Carbon Materials For High-Rate EDLCS Application". *Journal of Power Sources*. Vol. 155. pp. 487–491.
- Gamry Instrument: Application Note. Testing Supercapacitors, Part I, CV, EIS and Leakage. 2010. Current gamry instrument, Inc, USA; Vol. 215. pp. 682-9330.
- Ganesh, B., Kalpana, D. & N. G. 2008. Renganathan. "Acrylamide Based Proton Conducting Polymer Gel Electrolyte For Electric Double Layer Capacitors". *Ionics*. Vol. 14. (4): July. pp. 339–343.
- Ganesh, V. Pitchumani, S. & V. Lakshminarayanan. 2006. "New Symmetric And Asymmetric Supercapacitors Based On High Surface Area Porous Nickel And Activated Carbon". *Journal of Power Sources*. Vol. 158. (2): August. pp. 1523–1532.
- Gao, Y., Zhou, Y.S., Qian, M., He, X. N., Redepenning, J., Goodman, P., Li, H. M., Jiang, L. & L. Yong Feng. 2013. "Chemical Activation of Carbon Nano-Onions for High-Rate Supercapacitor Electrodes". *Carbon*. Vol. 51. January. pp. 52-58.
- Girija, T.C. & M.V. Sangaranarayanan. 2006. "Analysis of Polyaniline-Based Nickel Electrodes for Electrochemical Supercapacitors". *Journal of Power Sources*. Vol. 156. (2): June. pp. 705–711.
- Gogotsi, -L., Y. & S. Patrice. 2013. "Outstanding Performance of Activated Graphene Based Supercapacitors in Ionic Liquid Electrolyte from -50 to 80 °C". *Nano Energy*. Vol. 2. (3): May. pp. 403-411.
- Gu, H.-B., Kim, J.-U., Song, H.-W., Park, G.-C. & B.-K. Park. 2000. "Electrochemical Properties of Carbon Composite Electrode with Polymer Electrolyte for Electric Double-Layer Capacitor". *Electrochimica Acta*. Vol. 45. (8–9): January. pp. 1533-1536.
- Guirguis, O. W., & Moselhey, M. T. H. 2012. "Thermal And Structural Studies Of Poly(Vinyl Alcohol) and Hydroxypropyl Cellulose Blends". *Natural Science*. Vol.4. (1): September. pp. 57-67.
- Gund, G. S., Dubal, D.P., Patil, B.H., Shinde, S.S. & D.L. Chandrakant. 2013. "Enhanced Activity of Chemically Synthesized Hybrid Graphene oxide/Mn3O4 Composite for High Performance Supercapacitors". *Electrochimica Acta*. Vol. 92. March. pp. 205-215.
- Gund, G. S., Dubal, Jambure, S.B. & D.L. Chandrakant. 2014. "Morphological Modulation of Polypyrrole Thin Films through Oxidizing Agents and their Concurrent Effect on Supercapacitor Performance". *Electrochimica Acta*. Vol. 119. February. pp. 1-10.

- Halper, M. S. & J. C. Ellenbogen. *Supercapacitors: A Brief Overview*. 2006; MITRE: McLean, Virginia.
- Hashim, M. A., Sa'adu, L. & A. K. Dasuki. 2012. "Supercapacitor Based On Activated Carbon and Polymer Electrolyte". *International Journal of Sustainable Energy and Environmental Research*. Vol. 1. (1): pp. 1-6.
- Hashim, M. A., Sa'adu, L., Baharuddin, M. & A. K. Dasuki. 2014. "Using PVA, Methacrylate and Lauroyl Chitosan as Separator in Supercapacitors". *Journal of Materials Science Research*. Vol. 3. (1):
- Hashim, M. A. & A.S.A Khair. 2011. "Supercapacitor Based On Activated Carbon and Hybrid Polymer Electrolyte". *Material Research Innovations*. Vol. 15. (2): pp. s63-s66.
- Hashmi, S. A. 2013. "Characteristics of Conducting Polymers for their Supercapacitive Performance". (Paper). *Workshop on Advanced Energy Storage Materials & Devices (WAESD)*. Universiti Pertahanan Nasional Malaysia (National Defense University Malaysia). 4-5 July.
- Hashmi, S. A. 2013. "Electrical Double Layer Capacitor: Recent Development". (Paper). *Workshop on Advanced Energy Storage Materials & Devices (WAESD)*. Universiti Pertahanan Nasional Malaysia (National Defense University Malaysia). 4-5 July.
- Hashmi, S. A. 2013. "Polymer-Based Gel electrolytes for New Generation Supercapacitors". (Paper). *Workshop on Advanced Energy Storage Materials & Devices (WAESD)*. Universiti Pertahanan Nasional Malaysia (National Defense University Malaysia). 4-5 July.
- Hashmi, S.A., Suematsu, S. & K. Naoi. 2004. "All Solid-State Redox Supercapacitors Based on Supramolecular 1,5-Diaminoanthraquinone Oligomeric Electrode and Polymeric Electrolytes". *Journal of Power Sources*. Vol. 137. (1) October. pp. 145-151.
- He, X., Ling, P., Qiu, J., Yu, M., Zhang, X., Yu, C. & Z. Mingdong. 2013. "Efficient Preparation of Biomass-based Mesoporous Carbons for Supercapacitors with Both High Energy Density and High Power Density". *Journal of Power Sources*. Vol. 240. October, pp. 109-113.
- Ho, J., Jow, T.R. & S. Boggs, 2010. "Historical Introduction to Capacitor Technology". *IEEE Electrical Insulation Magazine*. Vol. 26. (1): January/February. pp. 20-25.
- Hsieh, T. -F., Chuang, C.-C., Chen, W.-J., Huang, J.-H., Chen, W.-T. & S. Chi-Min. 2012. "Hydrous Ruthenium Dioxide/Multi-walled Carbon-nanotube/titanium Electrodes for Supercapacitors", *Carbon*. Vol. 50. (5): April. pp. 740-1747.

- Hu, C. & C. Wang. 2004. "Effects of Electrolytes and Electrochemical Pretreatments on The Capacitive Characteristics Of Activated Carbon Fabrics For Supercapacitors". *Journal of Power Sources*. Vol. 125. (2): January. pp. 299–308.
- Huang, C., Chuang, C., Ting, J. & H. Teng. 2008. "Significantly Enhanced Charge Conduction in Electric Double Layer Capacitors Using Carbon Nanotube-Grafted Activated Carbon Electrodes". *Journal of Power Sources*. Vol. 183. (1): August. pp. 406–410.
- Hung, K., Masarapu, C., Ko, T. & B. Wei. 2009. "Wide-Temperature Range Operation Supercapacitors from Nanostructured Activated Carbon Fabric". *Journal of Power Sources*. Vol. 193. (2): September. pp. 944–949.
- Hwang, S. & S. Hyun. 2007. "Synthesis and Characterization of Tin Oxide/Carbon Aerogel Composite Electrodes for Electrochemical Supercapacitors". *Journal of Power Sources*. Vol. 172. (1): October. pp. 451–459.
- Inagaki, M., Konno, H. & O. Tanaike. 2010. "Carbon Materials for Electrochemical Capacitors". *Journal of Power Sources*. Vol. 195. (24): December. pp. 7880–7903.
- Inagaki, M. 2012. "Carbon Coating For Enhancing the Functionalities Of Materials" *Carbon*. Vol. 50. (9): August. pp. 3247–3266
- Inagaki, M., Kang, F., Toyoda M., & H. Konno. 2014. "Chapter 11 - Carbon Materials for Electrochemical Capacitors, In *Advanced Materials Science and Engineering of Carbon*". Inagaki, M. Kang, F., Toyoda M., & H. Konno, Butterworth-Heinemann, Boston, (Comp. & ed.). *Advanced Materials Science and Engineering of Carbon*. pp. 237-265.
- Inagaki, M., Kang, F., Toyoda M., & H. Konno. 2014. "Chapter 1 - Introduction, In *Advanced Materials Science and Engineering of Carbon*". Inagaki, M. Kang, F., Toyoda M., & H. Konno, Butterworth-Heinemann, Boston, (Comp. & ed.). *Advanced Materials Science and Engineering of Carbon*. pp. 1-13.
- Inagaki, M., Kang, F., Toyoda M., & H. Konno. 2014. "Chapter 2 - Carbon Nanotubes: Synthesis and Formation, In *Advanced Materials Science and Engineering of Carbon*". Inagaki, M. Kang, F., Toyoda M., & H. Konno, Butterworth-Heinemann, Boston, (Comp. & ed.). *Advanced Materials Science and Engineering of Carbon*. pp. 15-40.
- Inagaki, M., Kang, F., Toyoda M., & H. Konno. 2014. "Chapter 9 - Carbon Foams, In *Advanced Materials Science and Engineering of Carbon*". Inagaki, M. Kang, F., Toyoda M., & H. Konno, Butterworth-Heinemann, Boston, (Comp. & ed.). *Advanced Materials Science and Engineering of Carbon*. pp. 189-214.
- Inagaki, M., Kang, F., Toyoda M., & H. Konno. 2014. "Chapter 10 - Nanoporous Carbon Membranes and Webs, In *Advanced Materials Science and Engineering*

of Carbon". Inagaki, M. Kang, F., Toyoda M., & H. Konno, Butterworth-Heinemann, Boston, (Comp. & ed.). *Advanced Materials Science and Engineering of Carbon*. pp. 215-236.

Inagaki, M., Kang, F., Toyoda M., & H. Konno. 2014. "Chapter 12 - Carbon Materials in Lithium-ion Rechargeable Batteries, In *Advanced Materials Science and Engineering of Carbon*". Inagaki, M. Kang, F., Toyoda M., & H. Konno, Butterworth-Heinemann, Boston, (Comp. & ed.). *Advanced Materials Science and Engineering of Carbon*. pp. 267-287.

Inagaki, M., Kang, F., Toyoda M., & H. Konno. 2014. "Chapter 15 - Carbon Materials for Adsorption of Molecules and Ions, In *Advanced Materials Science and Engineering of Carbon*". Inagaki, M. Kang, F., Toyoda M., & H. Konno, Butterworth-Heinemann, Boston, (Comp. & ed.). *Advanced Materials Science and Engineering of Carbon*. pp. 335-361.

Iwama, E., Taberna, P.L., Azais, P., Brégeon, L. & P. Simon. 2012. "Characterization of Commercial Supercapacitors for Low Temperature Applications". *Journal of Power Sources*. Vol. 219. December. pp. 235-239.

Jampani, P., Manivannan A., & P. N. Kumta. 2010. "Advancing the Supercapacitor and Technology Frontier for improving power quality". *Electrochemical society interface*. pp. 57-6.

Jänes, A., Kurig, H. & E. Lust. 2007. "Characterisation of Activated Nanoporous Carbon for Supercapacitor Electrode Materials". *Carbon*. Vol. 45. (6): May. pp. 1226-1233.

Jayalakshmi, M., & K Balasubramanian. 2008. "Simple Capacitors to Supercapacitors- An Overview". *Int. J. Electrochem. Sci*. Vol. 3. pp. 1196 – 1217.

Jayalakshmi, M., Venugopal, N., Raja, K. P. & M. M. Rao. 2006. "Nano SnO₂-Al₂O₃ Mixed Oxide and SnO₂-Al₂O₃-Carbon Composite Oxides as New and Novel Electrodes for Supercapacitor Applications". *Journal of Power Sources*. Vol. 158. (2): August. pp. 1538 -1543.

Jelinska, N., Kalnins, M., Tupureina, V. & A. Dzene. 2010. "Poly (Vinyl Alcohol)/Poly (Vinyl Acetate) Blend Films". *Scientific Journal of Riga Technical University*. Vol. 21. pp. 55-61.

Jiang, L., Vangari, M., Pryor, T., Xiao, Z. & N.S. Korivi. 2013. "Miniature Supercapacitors Based on Nanocomposite Thin Films". *Microelectronic Engineering*. Vol. 111. November. pp. 52-57.

Kalinathan, K., DesRoches, D. P., Liu, X. & P. G. Pickup. 2008. "Anthraquinone Modified Carbon Fabric Supercapacitors with Improved Energy and Power Densities". *Journal of Power Sources*. Vol. 181. (1): June. pp. 182-185.

- Kalhammer, F. R. 2000. "Polymer Electrolytes and the Electric Vehicle". *Solid State Ionics*. Vol. 135. (1-4): November. pp. 315-323.
- Karabelli D, Leprêtre J.-C., Alloin F. & J.-Y. Sanchez. 2011. "Poly(vinylidene fluoride)-Based Macroporous Separators for Supercapacitors", *Electrochimica Acta*. Vol. 57. December. pp. 98-103.
- Kaus, M., Kowal, J. & D. U. Sauer. 2010. "Modelling The Effects of Charge Redistribution During Self-Discharge of Supercapacitors". *Electrochimica Acta*. Vol. 55. (25): October. pp. 7516-7523.
- Khlar, A. S. A. & A. K. Arof. 2010. "Conductivity Studies of Starched-Based Polymer Electrolytes". *Ionics*. Vol. 16. pp. 123-129.
- Khomenko, V., Raymundo-Piñero, E. & F. Béguin. 2010. "A new type of high energy asymmetric capacitor with nanoporous carbon electrodes in aqueous electrolyte". *Journal of Power Sources*. Vol. 195. (13): July. pp. 4234-4241.
- Kim, I.-J., Yang, S., Moon, S.-I. & H. -S. Kim. 2007. "Electrochemical characteristics of electric double layer capacitor with sheet type polarizable electrode". *Journal of Power Sources*. Vol. 164. (2): February. pp. 964-967.
- Kim, J -K., Niedzicki, L., Scheers, J., Shin, C.-R., Lim, D.-H., Wierzchok, W., Johansson, P., Ahn, J.-H., Matic, A. & J. Per. 2013. "Characterization Of N-Butyl-N-Methyl-Pyrrolidinium Bis(Trifluoromethanesulfonyl)Imide-Based Polymer Electrolytes For High Safety Lithium Batteries". *Journal of Power Sources*. Vol. 224. February. pp. 93-98.
- Kim, N. D., Kim, W., Joo, J. B., Oh, S., Kim, P., Kim, Y. & J.Yi., 2008. "Electrochemical Capacitor Performance of N-Doped Mesoporous Carbons Prepared By Ammoxidation". *Journal of Power Sources*. Vol. 180. (1): May. pp. 671-675.
- Ko, J. M. & K.M. Kwang. 2009. "Electrochemical Properties of MnO₂/Activated Carbon Nanotube Composite as an Electrode Material for Supercapacitor". *Materials Chemistry and Physics*. Vol. 114. (2-3): April. pp. 837-841.
- Konno, H., Ito, T., Ushiro, M., Fushimi, K. & K. Azumi. 2010. "High Capacitance B/C/N Composites for Capacitor Electrodes Synthesized by a Simple Method". *Journal of Power Sources*. Vol. 195. (6): March. pp.1739-1746.
- Konno, H., Kasashima, T. & K. Azumi. 2009. "Application of Si-C-O Glass-Like Compounds as Negative Electrode Materials for Lithium Hybrid Capacitors". *Journal of Power Sources*. Vol. 191. (2): June. pp. 623-627.
- Kossyrev, P. 2012. "Carbon Black Supercapacitors Employing Thin Electrodes". *Journal Of Power Sources*. Vol. 201. March. Pp. 347-352.

- Kuilla, T., Bhadra, S., Yao, D., Kim, N.H., Bose, S. & J.H. Lee. 2010. "Recent Advances in Graphene Based Polymer Composites". *Progress in Polymer Science*. Vol. 35. (11): November. pp.1350-1375.
- Kumar, K. V. & G. Suneeta Sundar. 2010. "Conductivity Studies Of (PEO +KHCO₃) Solid Electrolyte System and its Application as an Electrochemical Cell". *Journal of Engineering Science and Technology*. Vol. 5. (2): pp. 130 – 139.
- Kuo, C.-W., Huang, C.-W., Chen, B.-K., Li, W.-B., Chen, P.-R., Ho, T.-H., Tseng C.-G. & W. Tzi-Yi. 2013. "Enhanced Ionic Conductivity in PAN-PEGME-LiClO₄-PC Composite Polymer Electrolytes". *Int. J. Electrochem. Sci.* Vol. 8. pp. March. 3834 – 3850.
- Kurzweil, P. 2009. "History | Electrochemical Capacitors". In *Encyclopedia of Electrochemical Power Sources*. J. Garche, Elsevier, Amsterdam, (Ed.). pp. 596-606.
- Kurzweil, P. 2009. "CAPACITORS | Electrochemical Double-Layer Capacitors". In *Encyclopedia of Electrochemical Power Sources*. J. Garche, Elsevier, Amsterdam, (Ed.). pp. 607-633.
- Kurzweil, P. 2009. "CAPACITORS | Electrochemical Double-Layer Capacitors: Carbon Materials". In *Encyclopedia of Electrochemical Power Sources*. J. Garche, Elsevier, Amsterdam, (Ed.). pp. 634-648.
- Kurzweil, P. 2009. "CAPACITORS | Electrostatic Solid-State Capacitors". In *Encyclopedia of Electrochemical Power Sources*. J. Garche, Elsevier, Amsterdam, (Ed.). pp. 600-606.
- Kurzweil, P. 2009. "CAPACITORS | Electrochemical Hybrid Capacitors". In *Encyclopedia of Electrochemical Power Sources*. J. Garche, Elsevier, Amsterdam, (Ed.). pp. 658-664.
- Kurzweil, P. 2009. "CAPACITORS | Electrochemical Polymer Capacitors". In *Encyclopedia of Electrochemical Power Sources*. J. Garche, Elsevier, Amsterdam, (Ed.). pp. 679-684.
- Kurzweil, P. 2009. "CAPACITORS | Electrochemical Metal Oxides Capacitors". In *Encyclopedia of Electrochemical Power Sources*. J. Garche, Elsevier, Amsterdam, (Ed.). pp. 665-678.
- Kurzweil, P. 2009. "Precious Metal Oxides For Electrochemical Energy Converters: Pseudocapacitance and pH Dependence of Redox Processes". *Journal of Power Sources*. Vol. 190. (1): May. pp. 189-200.
- Lai, L., Wang, L., Yang, H., Sahoo, N. G., Tam, Q. X., Liu, J., Kok Poh, C., Lim, S. H., Shen, Z. & L. Jianyi. 2012. "Tuning Graphene Surface Chemistry to Prepare Graphene/polypyrrole Supercapacitors with Improved Performance". *Nano Energy*. Vol. 1. (5): September. pp. 723-731.

- Lavall, R.L., Raquel, S. Borges, R.S., Calado, H.D.R., Welter, C., Trigueiro, J.P.C., Rieumont, J., Neves, B.R.A. & G.G. Silva. 2008. "Solid State Double Layer Capacitor Based On A Polyether Polymer Electrolyte Blend And Nanostructured Carbon Black Electrode Composites". *Journal of Power Sources*. Vol. 177. (2): March. pp. 652–659.
- Lazzari, M., Mastragostino, M. & F. Soavi. 2007. "Capacitance Response of Carbons in Solvent-Free Ionic Liquid Electrolytes". *Electrochemistry Communications*. Vol. 9. (7): July. pp. 1567-1572.
- Lazzari, M., Soavi, F. & M. Mastragostino. 2008. "High voltage, asymmetric EDLCs based on xerogel carbon and hydrophobic IL electrolytes". *Journal of Power Sources*. Vol. 178. (1): March. pp. 490–496.
- Lee, S.G., Park, K. H., Shim, W. G., Balathanigaimani, M.S. & H. Moon. 2011. "Performance of Electrochemical Double Layer Capacitors Using Highly Porous Activated Carbons Prepared from Beer Lees". *Journal of Industrial and Engineering Chemistry*. Vol. 17. (3): May. pp. 450-454.
- Lei, C., Markoulidis, F., Ashitaka, Z. & L. Constantina. 2013. "Reduction of Porous Carbon/Al Contact Resistance for an Electric Double-Layer Capacitor (EDLC)". *Electrochimica Acta*. Vol.92. March. pp. 183–187.
- Lewandowski, A. & M. Galinski. 2007. "Practical and Theoretical Limits for Electrochemical Double-Layer Capacitors". *Journal of Power Sources*. Vol. 173. (2): November. pp. 822–828.
- Lewandowski, A., Olejniczak, A., Galinski, M. & I. Stepniak. 2010. "Performance of Carbon–Carbon Supercapacitors Based on Organic, Aqueous and Ionic Liquid Electrolytes". *Journal of Power Sources*, Vol. 195. (17): September. pp. 5814-5819.
- Li, H.-Q., Wang, Y.-G., Wang, C.-X. & Y.-Y. Xia. 2008. "A Competitive Candidate Material for Aqueous Supercapacitors: High Surface-Area Graphite". *Journal of Power Sources*. Vol. 185. (2): December. pp. 1557-1562.
- Li, L., Liu, E., Li, J., Yang, Y., Shen, H., Huang, Z., Xiang, X. & W. Li. 2010. "A Doped Activated Carbon Prepared From Polyaniline For High Performance Supercapacitors". *Journal of Power Sources*. Vol. 195. pp. 1516–1521.
- Li, Q., Li, Z., Lin, L., Wang, X.Y., Wang, Y., Zhang, C., & H. Wang. 2010. "Facile Synthesis of Activated Carbon/Carbon Nanotubes Compound for Supercapacitor Application". *Chemical Engineering Journal*. Vol. 156. pp. 500–504.
- Li, X. & W. Bingqing. 2013. "Supercapacitors Based on Nanostructured Carbon". *Nano Energy*. Vol. 2. (2): March. pp. 159-173.

- Li, Z., & J. Chen. 2008. "An Impedance-Based Approach to Predict the State-of-Charge for Carbon-Based Supercapacitors". *Microelectronic Engineering*. Vol. 85. (7): July. pp. 1549-1554.
- Lim, D.-H., Manuel, J., Ahn, J.-H., Kim, J.-K., Jacobsson, P., Matic, A., Ha, J.K., Cho, K.K. & K.W. Kim. 2012. "Polymer Electrolytes Based on Poly(Vinylidene Fluoride-Co-Hexafluoropropylene) Nanofibrous Membranes Containing Polymer Plasticizers for Lithium Batteries" *Solid State Ionics*. Vol. 225. October. pp.631-635.
- Liu, M., He, S., Fan, W., Miao, Y. & T Liu. 2014. "Filter Paper-Derived Carbon Fiber/Polyaniline Composite Paper for High Energy Storage Applications". *Composites Science and Technology*. Vol. 101. September. Pp. 152-158.
- Liu, C.-G., Lee, Y.-S., Kim, Y.-J., Song, I.-C. & K. Jong-Huy. 2009. "Electrochemical Characteristics of Hydrothermally Deposited Nickel Hydroxide on Multi-walled Carbon Nanotube for Supercapacitor Electrode", *Synthetic Metals*. Vol. 159. (19-20): October. pp. 2009-2012.
- Liu, Q., Nayfeh, M.H. & S. Yau. 2010. "Brushed-On Flexible Supercapacitor Sheets Using A Nanocomposite Of Polyaniline and Carbon Nanotubes. *Journal of Power Sources*. Vol. 195. pp. 7480-7483.
- Livshits, E., Kovarsky, R., Lavie, N., Hayashi, Y., Golodnitsky, D. & E. Peled. 2005. "New Insights into Structural and Electrochemical Properties of Anisotropic Polymer Electrolytes". *Electrochimica Acta*. Vol. 50. (19): June. pp. 3805-3814.
- Lota, G., Lota K. & E. Frackowiak. 2007. "Nanotubes Based Composites Rich in Nitrogen For Supercapacitor Application. *Electrochemistry Communications*. Vol. 9. pp. 1828-1832.
- Ma, S., Nam, K., Yoon, W., Yang, X., Ahn, K., Oh, K. & K. Kim. 2008 "Electrochemical Properties of Manganese Oxide Coated onto Carbon Nanotubes for Energy-Storage Applications". *Journal of Power Sources*. Vol. 178. pp. 483-489.
- Mahon, P. J., Paul, G.L., Keshishian, S. M. & A. M. Vassallo. 2000. "Measurement and Modelling of the High-Power Performance of Carbon-Based Supercapacitors". *Journal of Power Sources*. Vol. 91. (1): November. pp. 68-76.
- Mahon, P.J., Paul, G.L., Keshishian, S.M., & A. M. Vassallo. 2000. "Measurement and Modeling of the High-Power Performance of Carbon-Based Supercapacitors". *Journal of Power Sources*. Vol. 91. pp. 68-76.
- Marie-Francoise, J.N., Gualous, H., Outbib, R. & A. Berthon. 2005. "Power Net With Supercapacitor and Battery for Automotive Applications". *Journal of Power Sources*. Vol. 143. (1-2): April 2005. pp.275-283.

- Markoulidis, F., Lei, C., Lekakou, C., Duff, D., Khalil, S., Martorana, B. & I. Cannavaro. 2014. "A Method to Increase the Energy Density of Supercapacitor Cells by the Addition of Multiwall Carbon Nanotubes into Activated Carbon Electrodes". *Carbon*. Vol. 68. March. pp. 58-66.
- Marashdeh, M. W., Hashim, R., Tajuddin, A., Bauk, S. & O. Sulaiman. 2011. "Effect Of Particle Size On Characterization Of Binderless Particleboard Made From *RHIZOPHORA SPP.* Mangrove Wood For Use As Phantom Material. *Bioresources*. Vol. 6. (4). Pp. 4028-4044.
- Mastragostino, M. & F. Soavi. 2007. "Strategies for High-Performance Supercapacitors For HEV. *Journal of Power Sources*. Vol. 174. pp. 89-93.
- Mateyshina, Y., Ulihin, A., Samarov, A., Barnakov, C. & U. Nikolai. 2013. "Nanoporous Carbon-Based Electrode Materials for Supercapacitors". *Solid State Ionics*. Vol. 251. November. pp 59-61.
- Mittal, V. 2011. "Surface Modification of Nanotube Fillers" *Wiley-VCH Verlag GmbH & Co. KGaA*. Vol. 1. pp. 1-23.
- McDonough, J. K., Frolov, A.I., Presser, V., Niu, J., Miller, C.H., Ubierto, T., Fedorov, M.V. & Y. Gogotsi. 2012. "Influence of the Structure of Carbon Onions on Their Electrochemical Performance in Supercapacitor Electrodes". *Carbon*. Vol. 50. (9): August. pp. 3298-3309.
- Morimoto, T., Hiratsuka, K., Sanada, Y. & K. Kurihara. 1996. "Electric Double-Layer Capacitor Using Organic Electrolyte". *Journal of Power Sources*. Vol. 60. (2): June. pp.239-247.
- Mudigoudra B.S., Masti, S.P. & R.B. Chougale 2012. "Thermal Behavior of Poly (Vinyl Alcohol)/ Poly (Vinyl Pyrrolidone)/Chitosan Ternary Polymer Blend Films". *Research Journal of Recent Sciences*. Vol. 1. (9): September. pp. 83-86.
- Muthulakshmi, B., Kalpana, D., Pitchumani, S. & N.G. Renganathan. 2006. "Electrochemical Deposition of Polypyrrole for Symmetric Supercapacitors". *Journal of Power Sources*. Vol. 158. (2): August. pp. 1533-1537.
- Nakashima, N. 2005. "Soluble Carbon Nanotubes: Fundamentals and Applications". *International Journal of Nanoscience*. Vol. 4. (1). pp. 119-137.
- Niu, J., Pell, W.G., & B.E. Conway. 2006. "Requirements for Performance Characterization of C Double-Layer Supercapacitors: Applications to a High Specific-Area C-Cloth Material". *Journal of Power Sources*. Vol. 156. pp. 725-740.
- Noor, S.A.B.M.A., Rahman, M.Y.B.A. & T. Ibrahim Abu Talib. 2010. "Solid Polymeric Electrolyte of Poly(ethylene)oxide-50% Epoxidized Natural Rubber-

- lithium triflate (PEO-ENR50-LiCF₃SO₃)". *Natural Science*. Vol.2. (3): 190-196.
- Noto, V.D., Lavina, S., Giffin, G.A., Negro, E. & B. Scrosati. 2011. "Polymer Electrolytes: Present, Past and Future". *Electrochimica Acta*. Vol. 57. (4-13): December. pp. 4-13.
- Orita, A., Kamijima, K. & M. Yoshida. 2010. "Allyl-Functionalized Ionic Liquids as Electrolytes for Electric Double-Layer Capacitors". *Journal of Power Sources*. Vol. 195. pp. 7471-7479.
- Othman, N., Azahari, N. A. & H. Ismail. 2011. "Thermal Properties of Polyvinyl Alcohol (PVOH)/Corn Starch Blend Film". *Malaysian Polymer Journal*. Vol. 6. (6): pp. 147-154.
- Pan, H., Li., J. & Y. P Feng. 2010. "Carbon Nanotubes for Supercapacitor". *Nanoscale Research Letters*. Vol. 5. January. Pp. 654-668.
- Pandey, K., & D. Mrigank Mauli. 2004. "Proton Transport Studies in Dehydrated Salts: AINH₄ (SO₄)₂ and FeSO₄". *Asian Journal of Chemistry*. Vol.16. (3-4): pp 1274-1286.
- Panero, S., Clemente A. & E. Spila. 1996. "Solid State Supercapacitors Using Gel Membranes as Electrolytes". *Solid State Ionics*. Vol. 86-88. (2). July. pp. 1285-1289.
- Paul, S., Choi, K.S., Lee, D.J., Sudhagar, P. & K. Yong Soo. 2012. "Factors Affecting the Performance of Supercapacitors Assembled with Polypyrrole/multi-walled Carbon Nanotube Composite Electrodes". *Electrochimica Acta*. Vol. 78. September. pp. 649-655.
- Pavel, K. 2012. "Carbon Black Supercapacitors Employing Thin Electrodes". *Journal of Power Sources*. Vol. 201. March. pp. 347-352.
- Payman, A., Pierfederici, S. & F. Meibody-Tabar. 2008. "Energy Control of Supercapacitor/Fuel Cell Hybrid Power Source". *Energy Conversion and Management*. Vol.49. (6). June. pp.1637-1644.
- Peng, C., Zhang, S., Jewell, D. & G. Z. Chen. 2008. "Carbon Nanotube and Conducting Polymer Composites for Supercapacitors". *Progress in Natural Science*. Vol. 18. (7): July. pp. 777-788.
- Perera, S.D., Liyanage, A. D., Nijem, N., Ferraris, J. P., Chabal, Y. J., J. Kenneth J. Balkus. 2013. "Vanadium Oxide Nanowire – Graphene Binder Free Nanocomposite Paper Electrodes for Supercapacitors: A facile Green Approach". *Journal of Power Sources*. Vol. 230. May. pp. 130-137.
- Pint, C. L., Nicholas, N.W., Xu, S., Sun, Z., Tour, J. M., Schmidt, H. K., Gordon, R. G. & R.H. Hauge. 2011. "Three Dimensional Solid-State Supercapacitors from

- Aligned Single-Walled Carbon Nanotube Array Templates”. *Carbon*. Vol. 49. (14): November. pp.4890-4897.
- Pradhan, D. K., Choudhary, R.N.P. & B.K. Samantaray. 2009. “Studies of Dielectric and Electrical Properties of Plasticized Polymer Nanocomposite Electrolytes”. *Materials Chemistry and Physics*. Vol. 115. (2-3): June. pp. 557-561.
- Pradhan, D.K., Choudhary, R.N.P. & B.K. Samantaray. 2008. “Studies of Dielectric Relaxation and AC Conductivity Behavior of Plasticized Polymer Nanocomposite Electrolytes”. *Int. J. Electrochemical Science*. (3): pp.597-608.
- Prato, M., Kostarelos, K. & A. Bianco. 2008. “Functionalized Carbon Nanotubes In Drug Design And Discovery”. *Accounts of Chemical Research*. Vol. 41. (1): January. pp. 60-68.
- Probstle, H., Schmitt, C. & J. Fricke. 2002 “Button Cell Supercapacitors with Monolithic Carbon aerogels”. *Journal of Power Source*. 105. pp. 189-194.
- Qian, H., Diao, H., Shirshova, N., Greenhalgh, E.S., Steinke, J.G.H., Shaffer, M.S.P. & B. Alexander. 2013. “Activation of Structural Carbon Fibres for Potential Applications in Multifunctional Structural Supercapacitors”. *Journal of Colloid and Interface Science*. Vol. 395. April. pp. 241-248.
- Qiu, X., Sasaki, K., Hirajima, T., Ideta, K. & J. Miyawaki. “Sorption Of Borate Onto Layered Double Hydroxides Assembled On Filter Paper Through In Situ Hydrothermal Crystallization”. *Applied Clay Science*. Vol. 88-89. February. Pp. 134-143.
- Qiu, W.-L., Ma, X.-H., Yang, Q.-H., Fu, Y.-B & X.-F Zong. 2004. “Novel Preparation of Nanocomposite Polymer Electrolyte and its Application to Lithium Polymer Batteries”. *Journal of Power Sources*. Vol. 138. (1-2): November. pp.245-252.
- Qu, D. & H. Shi . 1998. “Studies of activated carbons used in double-layer capacitors”. *Journal of Power Sources*. Vol. 74. pp. 99-107.
- Rafik, F., Gualous, H., Gallay, R., Crausaz, A. & A. Berthon. 2007. “Frequency, Thermal and Voltage Supercapacitor Characterization and Modeling”. *Journal of Power Sources*. Vol. 165. (2): March. pp. 928-934.
- Ragavendran, K., Kalyani, P., Veluchamy, A., Banumathi, S., Thirunakaran, R. & T.J. Benedict. 2004. “Characterization of Plasticized PEO Based Solid Polymer Electrolyte by XRD and AC Impedance Methods”. *Portugaliae Electrochimica Acta*. Vol. 22. pp. 149-159.
- Rakhi, R.B., & H.N. Alshareef. 2011. “Enhancement of The Energy Storage Properties of Supercapacitors using Graphene Nanosheets Dispersed with Metal Oxide-Loaded Carbon Nanotubes”. *Journal of Power Sources*. Vol. 196. (20): October. pp. 8858-8865.

- Ramya, R., Sivasubramanian, R. & M.V. Sangaranarayanan. 2013. "Conducting polymers-based electrochemical supercapacitors—Progress and prospects". *Electrochimica Acta*. Vol. 101. July. pp. 109-129.
- Rathod, D., Vijay, M., Islam, N., Kannan, R., Kharul, U., Kurungot, S. & V. Pillai. 2009. "Design Of An "All Solid-State" Supercapacitor Based on Phosphoric Acid Doped Polybenzimidazole (PBI) Electrolyte". *J Appl Electrochem*. Vol. 39. pp. 1097–1103.
- Robinson, D.B. 2010. "Optimization of Power and Energy Densities in Supercapacitor". *Journal of Power Sources*. Vol. 195. pp. 3748–3756.
- Sa'adu, L., Hashim, M. A. & BB Masbudi. 2014. "Conductivity Studies and Characterizations of PVA-Orthophosphoric Electrolytes". *Journal of Materials Science Research*. Vol. 3 (3). July. Pp. 48-58.
- Sa'adu, L., Hashim, M. A. & BB Masbudi. 2014. "A Noble Conductivity Studies and Characterizations of PVA-Orthophosphoric-Filter Paper Electrolytes". *Journal of Materials Science Research*. Vol. 3. (4). July. Pp. 1-12.
- Sakka, M.A., Gualous, H., Mierlo, J.V. & H. Culcu. 2009. "Thermal Modeling and Heat Management of Supercapacitor Modules for Vehicle Applications". *Journal of Power Sources*. Vol. 194. (2): December. pp.581-587.
- Sharma, P. & T.S. Bhatti. 2010. "A Review on Electrochemical Double-Layer Capacitors". *Energy Conversion and Management*. Vol. 51. (12): December. pp. 2901-2912.
- Shi, S., Xu, C., Yang, C., Li, J., Du, H., Li, B. & K. Feiyu. 2013. "Flexible Supercapacitors". *Particology*. Vol. 11. (4): August. pp. 371-377.
- Shirshova, N., Qian, H., Shaffer, M. S.P., Steinke, J.H.G., Greenhalgh, E.S., Curtis, P.T., Kucernak, A. & B. Alexander. 2013. "Structural Composite Supercapacitors". *Composites Part A: Applied Science and Manufacturing*. Vol. 46. March. pp. 96-107.
- Shu, D., Lv, C., Cheng, F., He, C., Yang, K., Nan, J. & L Long. 2013. "Enhanced Capacitance and Rate Capability of Nanocrystalline VN as Electrode Materials for Supercapacitors". *Int. J. Electrochem. Sci*. Vol. 8. January. pp. 1209 – 1225.
- Signorelli, R. 2010. *High Energy and Higher Power Density Nanotube-Enhanced Ultracapacitor Design, Modeling, Testing and Predicted Performance*. (Doctoral Thesis). Massachusetts Institute of Technology USA.
- Snook, A. G., Gregory, J. W. & G. P. Anthony. 2009. "Mathematical Functions for Optimisation Of Conducting Polymer/Activated Carbon Asymmetric Supercapacitors". *Journal of Power Sources*. Vol. 186. pp. 216–223.

- Snook, G. A., Kao, P. & Adam S. 2011. "Best, Conducting-Polymer-Based Supercapacitor Devices and Electrodes". *Journal of Power Sources*. Vol. 196. (1): January. pp. 1-12.
- Staiti, P., Minutoli, M. & F. Lufrano. 2002. "All Solid Electric Double Layer Capacitors Based on Nafion Ionomer". *Electrochimica Acta*. Vol. 47. (17): July. pp. 2795-2800.
- Stepniak, I. & A. Ciszewski. 2010. "New Design of Electric Double Layer Capacitors with Aqueous Lith Electrolyte as Alternative to Capacitor with KOH Solution". *Journal of Power Sources*. Vol. 195. pp. 2564-2569.
- Steve, D.W., Wakeham, J., Ng, T.W., Thwaites, M.J., Brown, H. & B. Paul. 2009. "Transparent, Flexible and Solid-State Supercapacitors Based on Room Temperature Ionic Liquid Gel". *Electrochemistry Communications*. Vol. 11. (12): December. pp. 2285-228.
- Stolarska, M., Niedzicki, L., Borkowska, R., Zalewska, A. & W. Wiczołek. 2007. "Structure, transport properties and interfacial stability of PVdF/HFP electrolytes containing modified inorganic filler". *Electrochimica Acta*. Vol. 53. (4). December. pp. 1512-1517.
- Stoller, M. D. & R. S. Ruoff. 2010. "Best Practice Methods for Determining an Electrode Material's Performance for Ultracapacitors". *Energy & Environmental Science*. Vol. 3. June. Pp. 1294-1301.
- Subramanian, V., Zhu, H & B. Wei. 2006. "Synthesis and Electrochemical Characterizations Of Amorphous Manganese Oxide and Single Walled Carbon Nanotube Composites as Supercapacitor Electrode Materials". *Electrochemistry Communications*. Vol. 8. pp. 827-832.
- Taleb, M. 19 October 2013. "Supercapacitors". <<http://www.antiessays.com/free-essays/453758.html>>
- Tamilarasan, P., & S. Ramaprabhu. 2013. "Graphene Based All-Solid-State Supercapacitors with Ionic Liquid Incorporated Polyacrylonitrile Electrolyte". *Energy*. Vol. 5. March. pp. 374-381.
- Tassin, N., Bronoel, G., Fauvarque, J.-F. & I. Bispo-Fonseca. 1997. "Effects of Three-Dimensional Current Collectors on Supercapacitors' Characteristics". *Journal of Power Sources*. Vol. 65. (1-2): March-April. pp. 61-64.
- Tennakone, K. & R.C. Buchanan. 2011. "Matrix Circuit Model for an Electric Double Layer Capacitor". *Journal of Power Sources*. Vol.196. (2): January. pp. 865-867.
- Terinte, N., Ibbett, R., & K. C. Schuster. 2011. "Overview on Native Cellulose And Microcrystalline Cellulose I Structure Studied By X-Ray Diffraction (Waxd):

- Comparison Between measurement Techniques. *Lenzinger Berichte*. Vol. 89. Pp. 118-131.
- Toney, M. F. 1992. X-Ray diffraction. *In Encyclopedia of Material characterization*. Fitzpatrick, L. E., Brundle, C. R., Evans Jr, C. A. & S. Wilson, (Comp. & Ed.). pp. 198-213.
- Tönurist, K., Thomberg, T., Jänes, A., Romann, T., Sammelselg, V. & E. Lust. 2013. "Influence of Separator Properties on Electrochemical Performance of Electrical Double-Layer Capacitors. *Journal of Electroanalytical Chemistry*. Vol. 689. January. pp. 8-20.
- Tönurist, K., Thomberg, T., Jänes, A., Kink, I. & E. Lust. 2012. "Specific Performance of Electrical Double Layer Capacitors Based on Different Separator Materials in Room Temperature Ionic Liquid". *Electrochemistry Communications*. Vol. 22. August. pp. 77-80.
- Tran, C. & K. Vibha. 2013. "Fabrication of Porous Carbon Nanofibers with Adjustable Pore Sizes as Electrodes for Supercapacitors". *Journal of Power Sources*. Vol. 235. August. pp. 289-296.
- Trigueiro, J.P.C., Borges, R.S., Lavall, R.L., Calado, H.D.R., & G.G. Silva. 2009. "Polymeric Nanomaterials as Electrolyte and Electrodes in Supercapacitors". *Nano Res.* Vol. 2. pp 733-739.
- Tripathi, S.K., Gupta, A., & K. Manju. "Studies on Electrical Conductivity and Dielectric Behaviour of PVdF-HFP-PMMA-NaI Polymer Blend Electrolyte". 2012. *Bull. Mater. Sci.* Vol. 35. (6): November. pp. 969-975.
- Tsai, W.-Y., Lin, R., Murali, S., Zhang, L. L., McDonough, J. K., Ruoff, R. S., Taberna, P., Tunckol, M., Durand, J. & P. Serp. 2012. "Carbon Nanomaterial-Ionic Liquid Hybrids". *Carbon*. Vol. 50. (12): October. pp. 4303-4334.
- Ulaganathan, M., Nithya, R. & S. Rajendran. 2012. "Surface Analysis Studies on Polymer Electrolyte Membranes Using Scanning Electron Microscope and Atomic Force Microscope". *Intech*. Vol. 38. pp. 671-694.
- Van Hooijdonk, E., Bittencourt, C., Snyders, R. & J.F. Colomer. 2013. "Functionalization of vertically aligned carbon nanotubes". *Beilstein J Nanotechnol.* Vol. 4. February. pp. 129-52.
- Venhryn, B.Y., Stotsko, Z.A., Grygorchak, I.I., Bakhmatyuk, B.P. & S.I. Mudry. 2013. "The Effect of Ultrasonic and HNO₃ Treatment of Activated Carbon from Fruit Stones on Capacitive and Pseudocapacitive Energy Storage in Electrochemical Supercapacitors". *Ultrasonics Sonochemistry*. Vol. 20. (5): September. pp. 1302-1307.
- Wang, H., Li, Z., Tak, J.K., Holt, C.M.B., Tan, X., Xu, Z., Amirkhiz, B.S., Harfield, D., Anyia, A., Stephenson, T. & M. David. 2013. "Supercapacitors Based on

Carbons with Tuned Porosity Derived from Paper Pulp Mill Sludge Biowaste". *Carbon*. Vol. 57. June. pp. 317-328.

- Wang, Q., Yan, J., Wang, Y., Ning, G., Fan, Zhuangjun, Wei, T., Cheng, J., Zhang, M. & J. Xiaoyan. 2013. "Template synthesis of Hollow Carbon Spheres Anchored on Carbon Nanotubes for High Rate Performance Supercapacitors". *Carbon*. Vol. 52. February. pp. 209-218.
- Wang, S., Pei, B., Zhao, X. & D. A.W. Robert. 2013. "Highly Porous Graphene on Carbon Cloth as Advanced Electrodes for Flexible All-solid-state Supercapacitors". *Nano Energy*. Vol. 2. (4): pp. 530-536.
- Wang, W., Guo, S., Penchev, M., Ruiz, I., Bozhilov, K.N., Yan, D., Ozkan, M. & O. Cengiz S. 2013. "Three Dimensional Few Layer Graphene and Carbon Nanotube Foam Architectures for High Fidelity Supercapacitors". *Nano Energy*. Vol.2. (2): March. pp. 294-303.
- Wang, Y., Wang, Z. & X., Yong-Yao. 2005. "An Asymmetric Supercapacitor Using RuO₂/TiO₂ Nanotube Composite and Activated Carbon Electrodes". *Electrochimica Acta*. Vol. 50. pp. 5641-5646.
- Wei, W., Cui, X., Chen, W. & D. G. Ivey. 2009. "Electrochemical Cyclability Mechanism for MnO₂ Electrodes Utilized as Electrochemical Supercapacitors". *Journal of Power Sources*. Vol. 186. (2): January. pp. 543-550.
- Wu, M., Gao, J., Zhang, S. & A. Chen. 2006. "Comparative Studies of Nickel Oxide Films on Different Substrates for Electrochemical Supercapacitors". *Journal of Power Sources*. Vol. 159. (1): September. pp. 365-369.
- Wu, N.-L., Wang, S.-Y., Han, C.-Y., Wu, D.-S. & L.-R. Shue. 2003. "Electrochemical Capacitor of Magnetite in Aqueous Electrolytes". *Journal of Power Sources*. Vol. 113. (1): January. pp.173-178.
- Wu, T.-H., Chu, Y.-H., Hu, C.-C. & J.H. Laurence. 2013. "Criteria Appointing the Highest Acceptable Cell Voltage of Asymmetric Supercapacitors". *Electrochemistry Communications*. Vol. 27. February. pp. 81-84.
- Wu, Y., Zhang, T., Zhang, F., Wang, Y., Ma, Y., Huang, Y., Liu, Y. & C. Yongsheng. 2012. "In Situ Synthesis of Graphene/Single-walled Carbon Nanotube Hybrid Material by Arc-Discharge and Its Application in Supercapacitors". *Nano Energy*. Vol. 1. (6): November. pp. 820-827.
- Xiao, Q. & X. Zhou. 2003. "The Study of Multiwalled Carbon Nanotube Deposited with Conducting Polymer for Supercapacitor". *Electrochimica Acta*. Vol. 48. pp. 575-580.
- Xu, B., Chen, Y., Wei, G., Cao, G., Zhang, H. & Y. Yang. 2010. "Activated Carbon with High Capacitance Prepared by NaOH Activation for Supercapacitors". *Materials Chemistry and Physics*. Vol. 124. (1): November. pp. 504-509.

- Xu, B., Wu, F., Chen, R., Cao, G., Chen, S., Wang, G., & Y. Yang. 2006. "Room Temperature Molten Salt as Electrolyte for Carbon Nanotube-Based Electric Double Layer Capacitors". *Journal of Power Sources*. Vol. 158. pp. 773–778.
- Xu, B., Wu, F., Chen, R., Cao, G., Chen, S., Zhou, Z. & Y. Yang. 2008. "Highly Mesoporous and High Surface Area Carbon: A High Capacitance Electrode Material for EDLCS with Various Electrolytes". *Electrochemistry Communications*. Vol. 10. (5): May. pp. 795-797.
- Xu, B., Wu, F., Chen, S., Zhou, Z., Cao, G. & Y. Yang. 2009. "High-Capacitance Carbon Electrode Prepared by PVDC Carbonization for Aqueous EDLCS". *Electrochimica Acta*. Vol. 54. (8): March. pp. 2185-2189.
- Xu, B., Wu, F., Mu, D., Dai, L., Cao, G., Zhang, H., Chen, S. & Y. Yang. 2010. "Activated Carbon Prepared from PVDC by Naoh Activation as Electrode Materials for High Performance EDLCS with Non-Aqueous Electrolyte". *International Journal of Hydrogen Energy*. Vol. 35. (2): January. pp. 632-637.
- Yamada, H., Moriguchi, I. & T. Kudo. 2008. "Electric double layer capacitance on hierarchical porous carbons in an organic electrolyte". *Journal of Power Sources*. Vol. 175. pp. 651–656.
- Yahya, M.Z.A. 2013. "Supercapacitors: An Introduction and Future Perspectives". (Paper). *Workshop on Advanced Energy Storage Materials & Devices (WAESD)*. Universiti Pertahanan Nasional Malaysia (National Defense University Malaysia). 4-5 July.
- Yamagata, M., Soeda, K., Ikebe, S., Yamazaki, S. & T. Masashi. 2013. "Chitosan-Based Gel Electrolyte Containing an Ionic Liquid for High-Performance Nonaqueous Supercapacitors". *Electrochimica Acta*. Vol. 100. June. pp. 275-280.
- Yan, J., Fan, Z., Wei, T., Cheng, J., Shao, B., Wang, K., Song, L. & M. Zhanga. 2009. "Carbon Nanotube/MnO₂ Composites Synthesized by Microwave-Assisted Method for Supercapacitors with High Power and Energy Densities". *Journal of Power Sources*. Vol. 194. pp. 1202–1207.
- Yan, S., Wang, H., Qu, P., Zhang, Y., & Z. Xiao. 2009. "RuO₂/Carbon Nanotubes Composites Synthesized by Microwave-Assisted Method for Electrochemical Supercapacitor". *Synthetic Metals*. Vol. 159. pp. 158–161.
- Yang, C.-C., Hsu, S.-T. & W.-C. Chien. 2005. "All Solid-State Electric Double-Layer Capacitors Based on Alkaline Polyvinyl Alcohol Polymer Electrolytes". *Journal of Power Sources*. Vol. 152. December. pp. 303-310.
- Yang, H. & Y. Zhang. 2011. "Self-Discharge Analysis and Characterization of Supercapacitors for Environmentally Powered Wireless Sensor Network Applications". *Journal of Power Sources*. Vol. 196.(20): October. pp. 8866-8873.

- Yang, J. M., Chiang, C. Y., Wang, H. Z. & Y. Chun Chen. 2009. "Two Step Modification of Poly(vinyl alcohol) by UV Radiation with 2-hydroxy ethyl methacrylate and Sol-gel Process for the Application of Polymer Electrolyte Membrane". *Journal of Membrane Science*. Vol. 341. (1-2): September. pp. 186-194.
- Yang, R., Zhang, S., Zhang, L., & L. Wenbo. 2013. "Electrical Properties of Composite Polymer Electrolytes Based on PEO-SN-LiCF₃SO₃". *Int. J. Electrochem. Sci.* Vol. 8. August. pp. 10163 – 10169.
- Yata, S., Okamoto, E., Satake, H., Kubota, H., Fujii, M., Taguchi, T. & H. Kinoshita. 1996. "Polyacene Capacitors". *Journal of Power Sources*. Vol. 60. (2): June. pp. 207-212.
- Yi, B., Chen, X., Guo, K., Xu, L., Chen, C., Yan & C. Jianghua. 2011. "High-Performance Carbon Nanotube-Implanted Mesoporous Carbon Spheres for Supercapacitors with Low Series Resistance". *Materials Research Bulletin*. Vol. 46. (11): November. pp. 2168-2172.
- Yu, H., Tang, Q., Wu, J., Lin, Y., Fan, L., Huang, M., g Lin, J., Li, Y., Y. Fuda. 2012. "Using Eggshell Membrane as a Separator in Supercapacitor". *Journal of Power Sources*. Vol. 206. May. pp. 463-468.
- Yu, Z., Zinger, D. & A. Bose. 2011. "An Innovative Optimal Power Allocation Strategy for Fuel Cell, Battery and Supercapacitor Hybrid Electric Vehicle". *Journal of Power Sources*. Vol. 196. (4): February. pp. 2351-2359.
- Zhang, H., Cao, G. & Y. Yang. 2007. "Electrochemical properties of ultra-long, aligned, carbon nanotube array electrode in organic electrolyte". *Journal of Power Sources*. Vol. 172. pp. 476-480.
- Zhang, X., Wang, X., Jiang, L., Wu, H., Wu, C. & S. Jingcang. 2012. "Effect of Aqueous Electrolytes on the Electrochemical Behaviors of Supercapacitors Based on Hierarchically Porous Carbons". *Journal of Power Sources*. Vol. 216. October. pp. 290-296.
- Zhang, Y. & H. Yang. 2011. "Modeling and Characterization of Supercapacitors for Wireless Sensor Network Applications". *Journal of Power Sources*. Vol. 196. (8): April. pp. 4128-4135.
- Zhang, Y.-J., Huang Y.-D. & W. Lei. 2006. "Study of EVOH Based Single Ion Polymer Electrolyte: Composition and Microstructure Effects on the Proton Conductivity". *Solid State Ionics*. Vol. 177. (1-2): January. pp. 65-71.
- Zhao, H., Pan, L., Xing, Siyi., Luo, J. & X. Jiaqiang. 2013. "Vanadium oxides-Reduced Graphene Oxide Composite for Lithium-Ion Batteries and Supercapacitors with

- Improved Electrochemical Performance”. *Journal of Power Sources*. Vol. 222. January. pp. 21-31.
- Zhao, T., Jiang, H. & J. Ma. 2011. “Surfactant-Assisted Electrochemical Deposition of -Cobalt Hydroxide for Supercapacitors”. *Journal of Power Sources*. Vol. 196. pp. 860–864.
- Zhao, Y., Ling, L., Xu, J., Yang, J., Yang, M. & Z. Jiang. 2007. “High-performance Supercapacitors of Hydrous Ruthenium Oxide/Mesoporous Carbon Composite”. *Journal of solid state Electrochem*. Vol. 11. pp. 283-290.
- Zhao, X., Tian, H., Zhub M., Tian, K., Wang, J.J., Kang, F. & R.A. Outlaw. 2009. “Carbon nanosheets as the electrode material in supercapacitors”. *Journal of Power Sources*. Vol. 194. pp. 1208–1212.
- Zheng, C., Qian, W., Cui, C., Zhang, Q., Jin, Y., Zhao, M., Tan, P. & W. Fei. 2012. “Hierarchical Carbon Nanotube Membrane with High Packing Density and Tunable Porous Structure for High Voltage Supercapacitors”. *Carbon*. Vol. 50. (14): November. pp. 5167-5175.
- Zhou, J., Cai, J., Cai, S., Zhou, X. & A.N. Mansour. 2011. “Development of All-Solid-State Mediator-Enhanced Supercapacitors with Polyvinylidene Fluoride/Lithium Trifluoromethanesulfonate Separators”. *Journal of Power Sources*. Vol. 196. (23): December. pp. 10479-10483.
- Zhou, S.Y., Li, X.-Y., Wang, Z.-X, Guo, H.J. & W.J. Peng. 2007. “Effect of Activated Carbon and Electrolyte on Properties of Supercapacitor”. *Transactions of Nonferrous Metals Society of China*. Vol. 17. (6): December. pp. 1328-13.
- Zhou, Y., Qin, Z., Li, L., Zhang, Y., Wei, Y., Wang, L. & M. Zhu. 2010. “Polyaniline/Multi-Walled Carbon Nanotube Composites with Core-Shell Structures as Supercapacitor Electrode Materials”. *Electrochimica Acta*. Vol. 55. pp. 3904–3908.