

DAFTAR PUSTAKA

- Al Fuady, M., Rochmadi, R., Prasetyo, I. and Ariyanto, T. (2021) 'Surface-Modified Carbon Synthesized from Palm Kernel Shell for Electric Double-Layer Capacitor Applications', *Key Engineering Materials*, 884, pp. 423–429. Available at: <https://doi.org/10.4028/www.scientific.net/KEM.884.423>.
- Al-Muhtaseb, S.A. and Ritter, J.A. (2003) 'Preparation and Properties of Resorcinol-Formaldehyde Organic and Carbon Gels', *Advanced Materials*, 15(2), pp. 101–114. Available at: <https://doi.org/10.1002/adma.200390020>.
- Ariyanto, T., Sarwendah, R., Amimmal, Y., Laksamana, W. and Prasetyo, I. (2019) 'Modifying nanoporous carbon through hydrogen peroxide oxidation for removal of metronidazole antibiotics from simulated wastewater', *Processes*, 7(11). Available at: <https://doi.org/10.3390/pr7110835>.
- Ariyanto, T., Prasetyo, I. and Rochmadi, R. (2012) 'Pengaruh Struktur Pori Terhadap Kapasitansi Elektroda Superkapasitor yang Dibuat Dari Karbon Nanopori', *REAKTOR*, 14(1). Available at: <https://doi.org/10.14710/reaktor.14.1.25-32>.
- Biswal, M., Banerjee, A., Deo, M. and Ogale, S. (2013) 'From dead leaves to high energy density supercapacitors', *Energy and Environmental Science*, 6(4), pp. 1249–1259. Available at: <https://doi.org/10.1039/c3ee22325f>.
- Cagnon, B., Py, X., Guillot, A. and Stoeckli, F. (2003) The effect of the carbonization/activation procedure on the microporous texture of the subsequent chars and active carbons. Available at: www.elsevier.com/locate/micromeso.
- Chan, C.C. (2002) 'The state of the art of electric and hybrid vehicles', *Proceedings of the IEEE*, 90(2), pp. 247–275. Available at: <https://doi.org/10.1109/5.989873>.
- Chen, H., Cong, T., Yang, W., Tan, C., Li, Y. and Ding, Y. (2009) 'Progress in electrical energy storage system: A critical review', *Progress in Natural Science*. Science Press, pp. 291–312. Available at: <https://doi.org/10.1016/j.pnsc.2008.07.014>.
- Chen, W.C., Wen, T.C. and Teng, H. (2003) 'Polyaniline-deposited porous carbon electrode for supercapacitor', *Electrochimica Acta*, 48(6), pp. 641–649. Available at: [https://doi.org/10.1016/S0013-4686\(02\)00734-X](https://doi.org/10.1016/S0013-4686(02)00734-X).
- Chuang, F.Y. and Yang, S.M. (2008) 'Cerium dioxide/polyaniline core-shell nanocomposites', *Journal of Colloid and Interface Science*, 320(1), pp. 194–201. Available at: <https://doi.org/10.1016/j.jcis.2008.01.015>.

- Deng, M., Yang, B. and Hu, Y. (2005) 'Polyaniline deposition to enhance the specific capacitance of carbon nanotubes for supercapacitors', *Journal of Materials Science*, 40(18). Available at: <https://doi.org/10.1007/s10853-005-1623-6>.
- Endo, M., Maeda, T., Takeda, T., Kim, Y., Koshiba, K., Hara, H. and Dresselhaus, M. (2001) 'Capacitance and Pore-Size Distribution in Aqueous and Nonaqueous Electrolytes Using Various Activated Carbon Electrodes', *Journal of The Electrochemical Society*, 148(8), p. A910. Available at: <https://doi.org/10.1149/1.1382589>.
- Górniak, A., Karolewicz, B. and Gładysz, O. (2016) *A physicochemical and dissolution study of ketoconazole-pluronic F127 solid dispersions*. Available at: <https://www.researchgate.net/publication/301541114>.
- Hu, Y., Tong, X., Zhuo, H., Zhong, L. and Peng, X. (2017) 'Biomass-Based Porous N-Self-Doped Carbon Framework/Polyaniline Composite with Outstanding Supercapacitance', *ACS Sustainable Chemistry and Engineering*, 5(10), pp. 8663–8674. Available at: <https://doi.org/10.1021/acssuschemeng.7b01380>.
- Inagaki, M., Kang, F., Toyoda, M. and Konno, H. (2014) 'Carbon Materials for Electrochemical Capacitors', in *Advanced Materials Science and Engineering of Carbon*. Elsevier, pp. 237–265. Available at: <https://doi.org/10.1016/b978-0-12-407789-8.00011-9>.
- Inal, I., Gokce, Y. and Aktas, Z. (2016) *Waste Tea Derived Activated Carbon/Polyaniline Composites as Supercapacitor Electrodes*.
- Jia-chang, Z., Chun-yan, L., Yang, D. and Jing-ying, X. (2005) *Synthesis of mesoporous carbon as electrode material for supercapacitor by modified template method*.
- Karacan, I. and Erzurumluoğlu, L. (2015) 'Formation of non-graphitizing carbon fibers prepared from poly(p-phenylene terephthalamide) precursor fibers', *Fibers and Polymers*, 16(5), pp. 961–974. Available at: <https://doi.org/10.1007/s12221-015-0961-5>.
- Khalili, S., Khoshandam, B. and Jahanshahi, M. (2016) 'Synthesis of activated carbon/polyaniline nanocomposites for enhanced CO₂ adsorption', *RSC Advances*, 6(42), pp. 35692–35704. Available at: <https://doi.org/10.1039/c6ra00884d>.
- Khomenko, V., Frackowiak, E. and Béguin, F. (2005) 'Determination of the specific capacitance of conducting polymer/nanotubes composite electrodes using different cell configurations', *Electrochimica Acta*, 50(12), pp. 2499–2506. Available at: <https://doi.org/10.1016/j.electacta.2004.10.078>.

- Kim, M.G., Seo, S., Kwak, C., Cho, J. and Im, J. (2021) 'The effect of oxidation on the physical activation of pitch: Crystal structure of carbonized pitch and textural properties of activated carbon after pitch oxidation', *Materials Chemistry and Physics*, 267, p. 124591. Available at: <https://doi.org/10.1016/j.matchemphys.2021.124591>.
- Kim, M.G., Amos, L.W. and Barnes, E.E. (1993) *Investigation of a Resorcinol-Formaldehyde Resin by ^{13}C NMR Spectroscopy and Intrinsic Viscosity Measurement*.
- Kusuma, H.D., Rochmadi, R., Prasetyo, I. and Ariyanto, T. (2021) 'Mesoporous manganese oxide/lignin-derived carbon for high performance of supercapacitor electrodes', *Molecules*, 26(23). Available at: <https://doi.org/10.3390/molecules26237104>.
- Le Van, K. and Luong Thi, T.T. (2014) 'Activated carbon derived from rice husk by NaOH activation and its application in supercapacitor', *Progress in Natural Science: Materials International*, 24(3), pp. 191–198. Available at: <https://doi.org/10.1016/J.PNSC.2014.05.012>.
- Lewicki, J.P., Fox, C.A. and Worsley, M.A. (2015) 'On the synthesis and structure of resorcinol-formaldehyde polymeric networks - Precursors to 3D-carbon macroassemblies', *Polymer*, 69(1), pp. 45–51. Available at: <https://doi.org/10.1016/j.polymer.2015.05.016>.
- Li, L., Song, H., Zhang, Q., Yao, J. and Chen, X. (2009) 'Effect of compounding process on the structure and electrochemical properties of ordered mesoporous carbon/polyaniline composites as electrodes for supercapacitors', *Journal of Power Sources*, 187(1), pp. 268–274. Available at: <https://doi.org/10.1016/j.jpowsour.2008.10.075>.
- Li, M., Huang, X., Wu, C., Xu, H., Jiang, P. and Tanaka, T. (2012) 'Fabrication of two-dimensional hybrid sheets by decorating insulating PANI on reduced graphene oxide for polymer nanocomposites with low dielectric loss and high dielectric constant', *Journal of Materials Chemistry*, 22(44), p. 23477. Available at: <https://doi.org/10.1039/c2jm34683d>.
- Li, M., Xiang, S., Chang, X. and Chang, C. (2017) 'Resorcinol-formaldehyde carbon spheres/polyaniline composite with excellent electrochemical performance for supercapacitors', *Journal of Solid State Electrochemistry*, 21(2), pp. 485–494. Available at: <https://doi.org/10.1007/s10008-016-3390-5>.

- Li, S., Yang, C., Sarwar, S., Nautiyal, A., Zhang, P., Du, H., Liu, N., Yin, J., Deng, K. and Zhang, X. (2019) 'Facile synthesis of nanostructured polyaniline in ionic liquids for high solubility and enhanced electrochemical properties', *Advanced Composites and Hybrid Materials*, 2(2), pp. 279–288. Available at: <https://doi.org/10.1007/s42114-019-00103-w>.
- Li, Z. and Gong, L. (2020) 'Research progress on applications of polyaniline (PANI) for electrochemical energy storage and conversion', *Materials*. MDPI AG. Available at: <https://doi.org/10.3390/ma13030548>.
- Liu, Q., Jing, S., Wang, S., Zhuo, H., Zhong, L., Peng, X. and Sun, R. (2016) 'Flexible nanocomposites with ultrahigh specific areal capacitance and tunable properties based on a cellulose derived nanofiber-carbon sheet framework coated with polyaniline', *Journal of Materials Chemistry A*, 4(34), pp. 13352–13362. Available at: <https://doi.org/10.1039/c6ta05131f>.
- Luo, X., Wang, J., Dooner, M. and Clarke, J. (2015) 'Overview of current development in electrical energy storage technologies and the application potential in power system operation', *Applied Energy*, 137, pp. 511–536. Available at: <https://doi.org/10.1016/j.apenergy.2014.09.081>.
- Luo, Z., Zhu, L., Huang, Y. and Tang, H. (2013) 'Effects of graphene reduction degree on capacitive performances of graphene/PANI composites', *Synthetic Metals*, 175, pp. 88–96. Available at: <https://doi.org/10.1016/j.synthmet.2013.05.008>.
- Malik, R., Zhang, L., McConnell, C., Schott, M., Hsieh, Y., Noga, R., Alvarez, N. and Shanov, V. (2017) 'Three-dimensional, free-standing polyaniline/carbon nanotube composite-based electrode for high-performance supercapacitors', *Carbon*, 116, pp. 579–590. Available at: <https://doi.org/10.1016/j.carbon.2017.02.036>.
- Manocha, S.M. (2003) 'Porous carbons', *Sadhana*, 28(1–2), pp. 335–348. Available at: <https://doi.org/10.1007/BF02717142>.
- Meyer, R.T., Decarlo, R.A. and Pekarek, S. (2016) 'Hybrid Model Predictive Power Management of a Battery-Supercapacitor Electric Vehicle', *Asian Journal of Control*, 18(1), pp. 150–165. Available at: <https://doi.org/10.1002/asjc.1259>.
- Mezgebe, M., Xu, K., Wei, G., Guang, S. and Xu, H. (2019) 'Polyaniline wrapped manganese dioxide nanorods: Facile synthesis and as an electrode material for supercapacitors with remarkable electrochemical properties', *Journal of Alloys and Compounds*, 794. Available at: <https://doi.org/10.1016/j.jallcom.2019.04.295>.

- Miller, J.M. (2007) 'Energy Storage Technology Markets and Application's: Ultracapacitors in Combination with Lithium-ion', in *2007 7th International Conference on Power Electronics*. IEEE, pp. 16–22. Available at: <https://doi.org/10.1109/ICPE.2007.4692343>.
- Mishra, N., Shinde, S., Vishwakarma, R., Kadam, S., Sharon, M. and Sharon, M. (2013) 'MWCNTs synthesized from waste polypropylene plastics and its application in supercapacitors', in *AIP Conference Proceedings*, pp. 228–236. Available at: <https://doi.org/10.1063/1.4810063>.
- Mitali, J., Dhinakaran, S. and Mohamad, A.A. (2022) 'Energy storage systems: a review', *Energy Storage and Saving*, 1(3), pp. 166–216. Available at: <https://doi.org/10.1016/j.enss.2022.07.002>.
- Mitome, T., Hirota, Y., Uchida, Y. and Nishiyama, N. (2016) 'Porous structure and pore size control of mesoporous carbons using a combination of a soft-templating method and a solvent evaporation technique', *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 494, pp. 180–185. Available at: <https://doi.org/10.1016/j.colsurfa.2016.01.009>.
- Mohd Zawawi, N., Hamzah, F., Veny, H., Mohd Rodhi, M. and Sarif, M. (2021) 'Chemical and Electrochemical Properties of Bamboo Activated Carbon Activate Using Potassium Hydroxide Assisted by Microwave-Ultrasonic Irradiation', *ASEAN Journal of Chemical Engineering*, 21(2), p. 211. Available at: <https://doi.org/10.22146/ajche.64617>.
- Morávková, Z., Šedenková, I. and Bober, P. (2020) 'The first stages of chemical and electrochemical aniline oxidation-spectroscopic comparative study', *Applied Sciences (Switzerland)*, 10(6). Available at: <https://doi.org/10.3390/app10062091>.
- Mutia, A.S., Ariyanto, T. and Prasetyo, I. (2022) 'Ciprofloxacin Removal from Simulated Wastewater Through a Combined Process of Adsorption and Oxidation Processes Using Fe/C Adsorbent', *Water, Air, and Soil Pollution*, 233(4). Available at: <https://doi.org/10.1007/s11270-022-05618-5>.
- Najib, S. and Erdem, E. (2019) 'Current progress achieved in novel materials for supercapacitor electrodes: Mini review', *Nanoscale Advances*. Royal Society of Chemistry, pp. 2817–2827. Available at: <https://doi.org/10.1039/c9na00345b>.

- Park, H., Seo, J., Kim, M., Baeck, S. and Shim, S. (2015) 'Development of a carbon foam supercapacitor electrode from resorcinol-formaldehyde using a double templating method', *Synthetic Metals*, 199, pp. 121–127. Available at: <https://doi.org/10.1016/j.synthmet.2014.11.008>.
- Pourreza, K., Bahrami Adeg, N. and Mohammadi, N. (2020) 'In-situ grown of polyaniline on defective mesoporous carbon as a high performance supercapacitor electrode material', *Journal of Energy Storage*, 30, p. 101429. Available at: <https://doi.org/10.1016/j.est.2020.101429>.
- Prasetyo, I., Rochmadi, R., Ariyanto, T. and Yunanto, R. (2013) 'Simple Method To Produce Nanoporous Carbon For Various Applications By Pyrolysis Of Specially Synthesized Phenolic Resin'.
- Raza, W., Ali, F., Raza, N., Luo, Y., Kim, K., Yang, J., Kumar, S., Mehmood, A. and Kwon, E. (2018) 'Recent advancements in supercapacitor technology', *Nano Energy*. Elsevier Ltd, pp. 441–473. Available at: <https://doi.org/10.1016/j.nanoen.2018.08.013>.
- Roussak, O. V and Gesser, H.D. (2013) 'Carbon-Based Polymers, Activated Carbons', in O. V Roussak and H.D. Gesser (eds) *Applied Chemistry: A Textbook for Engineers and Technologists*. Boston, MA: Springer US, pp. 279–290. Available at: https://doi.org/10.1007/978-1-4614-4262-2_16.
- Shao, W., Jamal, R., Xu, F., Ubul, A. and Abdiryim, T. (2012) 'The effect of a small amount of water on the structure and electrochemical properties of solid-state synthesized polyaniline', *Materials*, 5(10), pp. 1811–1825. Available at: <https://doi.org/10.3390/ma5101811>.
- Shao, Y., Chen, H., Li, Y., Xie, S. and Li, B. (2017) 'Sintered metal fibers@carbon molecular sieve membrane (SMFs@CMSM) composites for the adsorptive removal of low concentration isopropanol', *RSC Advances*, 7(60), pp. 37604–37611. Available at: <https://doi.org/10.1039/c7ra04984f>.
- Stejskal, J., Hlavatá, D., Holler, P., Trchová, M., Prokeš, J. and Sapurina, I. (2004) 'Polyaniline prepared in the presence of various acids: A conductivity study', *Polymer International*, 53(3), pp. 294–300. Available at: <https://doi.org/10.1002/pi.1406>.
- Stejskal J and Gilbert R.G (2002) 'Polyaniline. Preparation Of A Conducting Polymer (IUPAC Technical Report)'.

- Teng, S., Siegel, F., Wang, W. and Tiwari, A. (2014) 'Carbonized wood for supercapacitor electrodes', *ECS Solid State Letters*, 3(5), pp. M25–M28. Available at: <https://doi.org/10.1149/2.005405ssl>.
- Thommes, M. and Cychosz, K.A. (2014) 'Physical adsorption characterization of nanoporous materials: Progress and challenges', *Adsorption*, 20(2–3), pp. 233–250. Available at: <https://doi.org/10.1007/s10450-014-9606-z>.
- Wang, Z., Zhang, Q., Long, S., Luo, Y., Yu, P., Tan, Z., Bai, J., Qu, B., Yang, Y., Shi, J., Zhuo, H., Xiao, Z., Hong, W. and Bai, H. (2018) 'Three-Dimensional Printing of Polyaniline/Reduced Graphene Oxide Composite for High-Performance Planar Supercapacitor', *ACS Applied Materials and Interfaces*, 10(12), pp. 10437–10444. Available at: <https://doi.org/10.1021/acsami.7b19635>.
- Xu, J., Wang, A. and Zhang, T. (2012) 'A two-step synthesis of ordered mesoporous resorcinol-formaldehyde polymer and carbon', *Carbon*, 50(5), pp. 1807–1816. Available at: <https://doi.org/10.1016/j.carbon.2011.12.028>.
- Zhang, Y., Zhang, J., Hua, Q., Zhao, Y., Yin, H., Yuan, J., Dai, Z., Zheng, L. and Tang, J. (2019) 'Synergistically reinforced capacitive performance from a hierarchically structured composite of polyaniline and cellulose-derived highly porous carbons', *Materials Letters*, 244, pp. 62–65. Available at: <https://doi.org/10.1016/j.matlet.2019.02.045>.
- Zhang, Y., Xing, Z., Duan, Z., Li, M. and Wang, Y. (2014) 'Effects of steam activation on the pore structure and surface chemistry of activated carbon derived from bamboo waste', *Applied Surface Science*, 315(1), pp. 279–286. Available at: <https://doi.org/10.1016/j.apsusc.2014.07.126>.
- Zheng, L., Wang, Y., Wang, X., Li, N., An, H., Chen, H. and Guo, J. (2010) 'The preparation and performance of calcium carbide-derived carbon/polyaniline composite electrode material for supercapacitors', *Journal of Power Sources*, 195(6), pp. 1747–1752. Available at: <https://doi.org/10.1016/j.jpowsour.2009.09.057>.
- Zhong, C., Deng, Y., Hu, W., Qiao, J., Zhang, L. and Zhang, J. (2015) *A Review of Electrolyte Materials and Compositions for electrochemical supercapacitors Chemical Society Reviews A review of electrolyte materials and compositions for electrochemical supercapacitors*.
- Zhou, H., Zhi, X. and Zhai, H.J. (2018) 'A facile approach to improve the electrochemical properties of polyaniline-carbon nanotube composite electrodes for highly flexible

solid-state supercapacitors', *International Journal of Hydrogen Energy*, 43(39), pp. 18339–18348. Available at: <https://doi.org/10.1016/j.ijhydene.2018.07.168>.

Zhu, D., Wang, Y., Lu, W., Zhang, H., Song, Z., Luo, D., Gan, L., Liu, M. and Sun, D. (2017) 'A novel synthesis of hierarchical porous carbons from interpenetrating polymer networks for high performance supercapacitor electrodes', *Carbon*, 111. Available at: <https://doi.org/10.1016/j.carbon.2016.10.016>.

Zhu, Y., Hu, H., Li, W. and Zhang, X. (2007) 'Resorcinol-formaldehyde based porous carbon as an electrode material for supercapacitors', *Carbon*, 45(1), pp. 160–165. Available at: <https://doi.org/10.1016/j.carbon.2006.07.010>.