

DAFTAR PUSTAKA

1. Ellabban, O.; Abu Rub H.; Blaabjerg, F.: Renewable Energy Resources: Current Status, Future Prospects and Their Enabling Technology. *Renewable and Sustainable Energy Reviews* 2014, 39, 748-764.
2. Béguin, F.; Frąckowiak, E.: *Carbons for Electrochemical Energy Storage and Conversion Systems*, CRC Press, 2010.
3. David, L.: The Energy Storage Problem. *Nature* 2010, 463.
4. Kim, B.K.; Sy, S.; Yu, A.; Zhang, J.: Electrochemical Supercapacitors for Energy Storage and Conversion. *Handbook of Clean Energy Systems* 2015, 1-25.
5. Ping, Y.; Han, J.; Li, J.; Xiong, B.; Fang, P.; He, C.: N, S co-doped Porous Carbons from Natural Juncus effuses for High Performance Supercapacitors. *Diamond and Related Materials* 2019, 100.
6. Tumimomor, F.; Maddu, A.; Pari, G.: Pemanfaatan Karbon Aktif dari Bambu sebagai Elektroda Superkapasitor. *Jurnal Ilmiah Sains* 2017, 17(1).
7. Aziz, H.; Tetra, O.N.; Alif, A.; Syukri; Ramadhan, W.: Electrical Properties of Supercapacitor Electrode-based on Activated Carbon from Waste Palm Kernel Shells. *Der Pharma Chemica* 2016, 8(15), 227-232.
8. Meisrilestari, Y.; Khomaini, R.; Wijayanti, H.: Pembuatan Arang Aktif dari Cangkang Kelapa Sawit dengan Aktivasi secara Fisik, Kimia, dan Fisika-Kimia. *Konversi* 2013, 2(1), 46-51.
9. Farzana, R.; Rajarao, R.; Bhat, B.R.; Sahajwalla, V.: Performance of an Activated Carbon Supercapacitor Electrode Synthesised from Waste Compact Discs (CDs). *Journal of Industrial and Engineering Chemistry* 2018, 65, 387-396.
10. Ukkakimapan, P.; Sattayarut, V.; Wanchaem, T.: Preparation of Activated Carbon via Acidic Dehydration of Durian Husk for Supercapacitor Applications. *Diamond and Related Materials* 2020, 107.
11. Elaiyappillai, E.; Srinivasan, R.; Johnbosco, Y.: Low Cost Activated Carbon Derived from Cucumis melo Fruit Peel for Electrochemical Supercapacitor Application. *Applied Surface Science* 2019, 486, 527-538.
12. Sun, W.; Xiao, Y.; Ren, Q.; Yang, F.: Soybean Waste Derived Activated Porous Carbons for Electrochemical Double Layer Supercapacitors: Effects of Processing Parameters. *Journal of Energy Storage* 2020, 27.
13. Chen, H.; Guo, Y.C.; Wang, F.: An Activated Carbon Derived from Tobacco Waste for Use as a Supercapacitor Electrode Material. *Xinxing Tan Cailiao/New Carbon Materials* 2017, 32(6), 592-599.
14. Ahmed, S.; Ahmed, A.; Rafat, M.: Supercapacitor Performance of Activated Carbon Derived from Rotten Carrot in Aqueous, Organic and Ionic Liquid Based Electrolytes. *Journal of Saudi Chemical Society* 2018, 22(8), 993-1002.
15. Tetra, O.N.; Aziz, H.; Emriadi; Wahyuni, H.; Alif, A.: Performance of TiO₂-carbon on Ceramic Template with Sodium Hydroxide Activation as Supercapacitor Electrode Materials. *Der Pharma Chemica* 2016, 8(17), 26-30.
16. Chung, D.Y.; Son, Y.J.; Yoo J.M.: Coffee Waste Derived Hierarchical Porous Carbon as a Highly Active and Durable Electrocatalyst for Electrochemical Energy Applications. *ACS Appl Mater Interface* 9 2017, 41303–41313.
17. Chiang, C.H.; Chen, J.; Lin, J.H.: Preparation of Pore Size Tunable Activated Carbon Derived from Waste Coffee Grounds for High Adsorption Capacities of Organic Dyes. *Journal of Environmental Chemical Engineering* 2020, 8(4).
18. Wang, S.; Nam, H.: Preparation of Activated Carbon from Peanut Shell with KOH Activation and Its Application for H₂S Adsorption in Confined Space. *Journal of Environmental Chemical Engineering* 2020, 8(2).
19. Sania, G.: Pemanfaatan Karbon Aktif Dari Ampas Kopi Aceh Dengan Aktivator

- NaOH Sebagai Bahan Elektroda Superkapasitor.* Skripsi FMIPA: Universitas Adalas 2018.
- 20. Yudhiarta P.: *Superkapasitor Berbahan Dasar Karbon Aktif Limbah Kulit Kacang Tanah (Arachis hypogaea).* Skripsi FMIPA: Universitas Adalas 2018.
 - 21. Chao, P.; Xing-bin, Y.; Ru-tao, W.; Jun-wei L.; Yu-jing, O.; Qun-ji X.: Promising Activated Carbons Derived from Waste Tea Leaves and Their Application in High Performance Supercapacitors Electrodes. *Electrochimica Acta* 2013, 401-408.
 - 22. Liu, C.; Liu, Y.; Yi, T.; Hu, C.: Carbon Materials for High Voltage Supercapacitors. *Carbon* 2019, 148, 529-548.
 - 23. Khawaja, M.K.; Khanfar, M.F.; Oghlenian, T.; Alnahar, W.: Fabrication and Electrochemical Characterization of Graphene Oxide Supercapacitor Electrodes with Activated Carbon Current Collectors on Graphite Substrates. *Computers and Electrical Engineering* 2020, 85.
 - 24. Fitriana, Vinda N.: *Sintesis dan Karakterisasi Superkapasitor berbasis Nanokomposit TiO₂/C.* Skripsi Universitas Negeri Malang 2014.
 - 25. Diao, Y.L.; Walawender, W.P.; Fan, L.T.: Activated Carbons Prepared from Phosphoric Acid Activation of Grain Sorghum. *Bioresource Technology* 2002, 81, 45-52.
 - 26. Rasdiansyah; Darmadi; Supardan; Dani, M.: Optimasi Proses Pembuatan Karbon Aktif dari Ampas Bubuk Kopi Menggunakan Aktivator ZnCl₂. *Jurnal Teknologi Dan Industri Pertanian Indonesia* 2014, 3, 1196-1217.
 - 27. Yongfu, T.; Shunji, C.; Wenfeng, G.: Synthesis of Peanut Like Hierarchical Manganese Carbonate Microcrystals via Magnetically Driven Self Assembly for High Performance Asymmetric Supercapacitors. *Journal of Materials Chemistry A* 2017, 8.
 - 28. Al-Othman, Z.A.; Ali, R.; Naushad, M.: Hexavalent Chromium Removal from Aqueous Medium by Activated Carbon Prepared from Peanut Shell: Adsorption Kinetics, Equilibrium and Thermodynamic Studies. *Chemical Engineering Journal* 2012, 184, 238-247.
 - 29. Girão, A.V.; Caputo, G.; Ferro, M.C.: Application of Scanning Electron Microscopy-Energy Dispersive X-Ray Spectroscopy (SEM-EDS). *Comprehensive Analytical Chemistry* 2017, 75, 153-168.
 - 30. Gunawan, B.; Azhari, C.: Karakterisasi Spektrofotometri IR dan Scanning Elektron Microscopy (SEM) Sensor Gas dari Bahan Polimer Poly Ethylen Glicol (PEG). *Jurnal Sains dan Teknologi* 2010, 3, 1-17.
 - 31. Daud, T.: Pengaruh Arus Listrik dan Waktu Proses Terhadap Ketebalan dan Massa Lapisan yang Terbentuk pada Proses Elektroplating Pelat Baja. *Jurnal Ilmiah Sains* 2011, 1, 97-101.
 - 32. Ulva, M.: Analisis Mikroporositas pada Karbon Berpori dari Gelatin (Kpg) Menggunakan Adsorpsi-Desorpsi N₂ Model Dubinin-Radushkevich(D-R). *Alchemy Jurnal* 2017, 13, 103-108.
 - 33. Hindrayawati, M.: *Jenis-Jenis dan Sifat-sifat Bambu, Silika, Ekstraksi Silika, Keramik Silika, dan Karakterisasinya.* Universitas Lampung 2010.
 - 34. Marsh, H.; Rodríguez-Reinoso, F.: Activated Carbon (Origins). *Act Carbon* 2006, 13-86.
 - 35. Rouquerol, J.; Rouquerol, F.; Llewellyn, P.; Maurin, G.; Sing, K.S.W.: *Adsorption by Powders and Porous Solids: Principles, Methodology and Applications.* Academic Press 2013.
 - 36. Halsey, G.: Physical Adsorption on Non-Uniform Surfaces. *Journal Chemist Physic* 1948, 10, 931-937.
 - 37. Walton, K.S.; Snurr, R.Q.: Applicability of The BET Method for Determining Surface Areas of Microporous Metal-Organic Frameworks. *Jornal American*

- Chemistry Society* 2007, 27, 8552-8556.
- 38. McMillan, W.G.; Teller, E.: The Assumptions of The BET Theory. *Journal Physic Chemistry* 1951, 1, 17-20.
 - 39. Dollimore, D.; Spooner, P.; Turner, A.: The BET Method of Analysis of Gas Adsorption Data and Its Relevance to The Calculation of Surface Areas. *Surface Technology* 1976, 2, 121-160.
 - 40. Thommes, M.; Kaneko, K.; Neimark, A.V.: Physisorption of Gases, with Special Reference to the Evaluation of Surface Area and Pore Size Distribution (IUPAC Technical Report). *Pure Applied Chemistry* 2015, 87, 1051–1069.
 - 41. Shaji, A.; Zachariah, A.K.: *Surface Area Analysis of Nanomaterials*. Vol 3. Elsevier Inc. 2017.
 - 42. Saifudin, M.; Melania, S.M.: Perancangan Sensor Kelembaban Beras Berbasis Kapasitor. *Jurnal Sains dan Seni Pomits* 2013, 1, 1-6.
 - 43. Miller, J.R.; Simon, P.: Electrochemical Capacitors for Energy Management. *Science* 2008, 321, 651-652.
 - 44. Mandasari, T.: *Superkapasitor Berbahan Dasar Karbon Aktif Ampas Biji Kopi Aceh dengan Aktivator KOH*. Skripsi FMIPA: Universitas Adalas 2018.
 - 45. Resa, D.N.: *Kinerja Elektroda Superkapasitor Berbahan Dasar Campuran Karbon Aktif dari Limbah Cangkang Kelapa Sawit dan Kulit Kacang Tanah*. Skripsi FMIPA: Universitas Adalas 2018.
 - 46. Ahmed, S.; Ahmed, A.; Rafat, M.: Investigation on Activated Carbon Derived from Biomass Butnea monosperma and Its Application as a High Performance Supercapacitor Electrode. *Journal of Energy Storage* 2019, 26.
 - 47. Chen, H.; Wang; Wei, C.; Hsin, C, Bing, Y.: High Capacitance KOH Activated Nitrogen Containing Porous Carbon Material from Waste Coffee Grounds in Supercapacitor. *Advanced Powder Technology* 2016, 1387-1395.
 - 48. Palisoc, S.; Dungo, J.M.; Natividad, M.: Low Cost Supercapacitor Based on Multiwalled Carbon Nanotubes and Activated Carbon Derived from *Moringa oleifera* Fruit Shells. *Heliyon* 2020, 6(1).
 - 49. Gurten, Inal I.; Aktas, Z.: Enhancing the Performance of Activated Carbon Based Scalable Supercapacitors by Heat Treatment. *Applied Surface Science* 2020, 514.
 - 50. Sotomayor, F.J.; Cybosz, K.A.; Thommes M.; Characterization of Micro/Mesoporous Materials by Physisorption: Concepts and Case Studies. *Material and Surface* 2018, 3(2), 34-50.
 - 51. Sutrisno, A.; Bambang, S.C.; Widodo; Saroja, G.: *Studi Pengukuran Kapasitansi dan Konstanta Dielektrik pada Cabe Merah (Capsicum Annum L.) Giling*. FMIPA Universitas Brawijaya Malang.
 - 52. Pradana, H.Y.: *Sintesis Rgo/Glukosa dengan Variasi Perbandingan Massa dan Proses Eksfoliasi secara Kimia untuk Bahan Elektroda Superkapasitor*. Skripsi Fak MIPA, Institut Teknologi Sepuluh November, Surabaya, 2017.
 - 53. Qu, D.Y.; Shi, H.: Studies of Activated Carbons Used in Doublelayer Capacitors. *Journal of Power Sources* 1998, 74, 99-107.
 - 54. Rosdianty, A.: *Pengaruh Suhu Pembakaran terhadap Performance TiO₂/C Berpendukung Keramik sebagai Elektroda Superkapasitor*. Skripsi FMIPA: Universitas Adalas 2015.
 - 55. Figueira, M.M.; Volesky, B.; Mathieu, H.J.: Instrumental Analysis Study of Iron Species Biosorption by Sargassum Biomass. *Environmental Science & Technology* 1999, 33(11), 1840-1846.
 - 56. Permatasari, N.R.; Prisma, M: *Kapasitansi dan Karakteristik Superkapasitor*. Universitas Gadjah Mada, Yogyakarta 2015.