

DAFTAR PUSTAKA

- A.Macías-García, Gómez-Serrano, V., Valenzuela-Calahorra, C., & Alexandre-Franco, M. F. (2003). Adsorption of cadmium by sulphur dioxide treated activated carbon. *Journal of Hazardous Materials*, 103(1–2), 141–152. [https://doi.org/10.1016/S0304-3894\(03\)00243-7](https://doi.org/10.1016/S0304-3894(03)00243-7)
- Abbas, Q., Mirzaeian, M., Ogwu, A. A., Mazur, M., & Gibson, D. (2018). Effect of physical activation/surface functional groups on wettability and electrochemical performance of carbon/activated carbon aerogels based electrode materials for electrochemical capacitors. *International Journal of Hydrogen Energy*, April. <https://doi.org/10.1016/j.ijhydene.2018.04.099>
- Aburub, A., & Wurster, D. E. (2006). Phenobarbital interactions with derivatized activated carbon surfaces. *Journal of Colloid and Interface Science*, 296(1), 79–85. <https://doi.org/10.1016/j.jcis.2005.08.035>
- Adhamash, E., Pathak, R., Qiao, Q., Zhou, Y., & McTaggart, R. (2020). Gamma-radiated biochar carbon for improved supercapacitor performance. *RSC Advances*, 10(50), 29910–29917. <https://doi.org/10.1039/d0ra05764a>
- Adhoum, N., & Monser, L. (2002). Removal of cyanide from aqueous solution using impregnated activated carbon. *Chemical Engineering and Processing*, 41(1), 17–21. [https://doi.org/10.1016/S0255-2701\(00\)00156-2](https://doi.org/10.1016/S0255-2701(00)00156-2)
- Aggarwal, D., Goyal, M., & Bansal, R. C. (1999). Adsorption of chromium by activated carbon from aqueous solution. *Carbon*, 37(12), 1989–1997. [https://doi.org/10.1016/S0008-6223\(99\)00072-X](https://doi.org/10.1016/S0008-6223(99)00072-X)
- Agustin, C., Romli, M., Butar-butur, S. L., Kusumastuti, R., Sriyono, S., & Sunaryo, G. R. (2018). Studi Radiolisis Air Ringan dan Pengukuran Laju Dosis Bahan Bakar Terhadap Jarak Sumber Radiasi Pada Kolam Penyimpanan Bahan Bakar Bekas (ISSF). *SIGMA EPSILON - Buletin Ilmiah Teknologi Keselamatan Reaktor Nuklir*, 22(2), 50. <https://doi.org/10.17146/sigma.2018.22.2.4488>
- Alatas, Z. (2004). Pengkajian Kasus Sindroma Radiasi Akut. *Buletin Alara*, 6(2), 241571.
- Allwar, A. (2012). Characteristics of Pore Structures and Surface Chemistry of Activated Carbons by Physisorption, Ftir And Boehm Methods. *IOSR Journal of Applied Chemistry*, 2(1), 09–15. <https://doi.org/10.9790/5736-0210915>
- Alothman, Z. A. (2012). A review: Fundamental aspects of silicate mesoporous materials.

Materials, 5(12), 2874–2902. <https://doi.org/10.3390/ma5122874>

Amiruddin, H. (2016). *Modifikasi Permukaan Karbon Aktif Tongkol Jagung (Zea mays) dengan HNO₃, H₂SO₄, dan H₂O₂ sebagai Bahan Elektroda Superkapasitor* (Nomor June).

Universitas Hasanuddin Makasar.

Arbizzani, C., Mastragostino, M., & Meneghello, L. (1996). Polymer-based redox supercapacitors: A comparative study. *Electrochimica Acta*, 41(1), 21–26.
[https://doi.org/10.1016/0013-4686\(95\)00289-Q](https://doi.org/10.1016/0013-4686(95)00289-Q)

Ardizzzone, S., Fregonara, G., & Trasatti, S. (1989). “INNER” AND “OUTER” ACTIVE SURFACE OF RuO₂, ELECTRODES. *Electrochim. Acta*, 35, 263.
<https://doi.org/10.1109/icdm.2002.1184004>

Ariyanto, T., Prasetyo, I., & Rochmadi, R. (2012). Pengaruh Struktur Pori Terhadap Kapasitansi Elektroda Superkapasitor Yang Dibuat Dari Karbon Nanopori. *Reaktor*, 14(1).
<https://doi.org/10.14710/reaktor.14.1.25-32>

Ariyanto, T., Sarwendah, R. A. G., Amimmal, Y. M. N., Laksmana, W. T., & Prasetyo, I. (2019). Modifying nanoporous carbon through hydrogen peroxide oxidation for removal of metronidazole antibiotics from simulated wastewater. *Processes*, 7(11), 1–9.
<https://doi.org/10.3390/pr7110835>

Bazula, P. A., Lu, A. H., Nitz, J. J., & Schuth, F. (2008). Surface and pore structure modification of ordered mesoporous carbons via a chemical oxidation approach. *Microporous and Mesoporous Materials*, 108(1–3), 266–275.
<https://doi.org/10.1016/j.micromeso.2007.04.008>

Bedia, J., Rosas, J. M., Márquez, J., Rodríguez-Mirasol, J., & Cordero, T. (2009). Preparation and characterization of carbon based acid catalysts for the dehydration of 2-propanol. *Carbon*, 47(1), 286–294. <https://doi.org/10.1016/j.carbon.2008.10.008>

Béguin, F., Presser, V., Balducci, A., & Frackowiak, E. (2014). Carbons and electrolytes for advanced supercapacitors. *Advanced Materials*, 26(14), 2219–2251.
<https://doi.org/10.1002/adma.201304137>

Bhatnagar, A., Hogland, W., Marques, M., & Sillanpää, M. (2013). An overview of the modification methods of activated carbon for its water treatment applications. *Chemical Engineering Journal*, 219(March 2013), 499–511. <https://doi.org/10.1016/j.cej.2012.12.038>

Boehm, H. P., Mair, G., Stoeck, T., De Rincón, A. R., & Tereczki, B. (1984). Carbon as a

- catalyst in oxidation reactions and hydrogen halide elimination reactions. *Fuel*, 63(8), 1061–1063. [https://doi.org/10.1016/0016-2361\(84\)90188-1](https://doi.org/10.1016/0016-2361(84)90188-1)
- BPPT, B. P. dan P. T. (2018). *Outlook Energi Indonesia 2018* (Yudiartono, Anindhita, A. Sugiyono, L. M. A. Wahid, & Adiarso (ed.)). Pusat Pengkajian Industri Proses dan Energi (PPIPE).
- Butarbutar, S. L., Sriyono, S., & Sunaryo, G. R. (2017). Temperature Dependence of Primary Species G(values) Formed from Radiolysis of Water by Interaction of Tritium β -Particles. *Jurnal Pengembangan Energi Nuklir*, 19(1), 17. <https://doi.org/10.17146/jpen.2017.19.1.3134>
- Chen, B., Wu, W., Li, C., Wang, Y., Zhang, Y., Fu, L., Zhu, Y., Zhang, L., & Wu, Y. (2019). Oxygen/phosphorus co-doped porous carbon from cicada slough as high-performance electrode material for supercapacitors. *Scientific Reports*, 9(1), 1–8. <https://doi.org/10.1038/s41598-019-41769-y>
- Chen, Weifang, Cannon, F. S., & Rangel-Mendez, J. R. (2005). Ammonia-tailoring of GAC to enhance perchlorate removal. I: Characterization of NH₃ thermally tailored GACs. *Carbon*, 43(3), 573–580. <https://doi.org/10.1016/j.carbon.2004.10.024>
- Chiang, H. L., Huang, C. P., & Chiang, P. C. (2002). The surface characteristics of activated carbon as affected by ozone and alkaline treatment. *Chemosphere*, 47(3), 257–265. [https://doi.org/10.1016/S0045-6535\(01\)00215-6](https://doi.org/10.1016/S0045-6535(01)00215-6)
- Choudhary, Y. S., Jothi, L., & Nageswaran, G. (2017). Electrochemical Characterization. In *Spectroscopic Methods for Nanomaterials Characterization* (Vol. 2). Elsevier Inc. <https://doi.org/10.1016/B978-0-323-46140-5.00002-9>
- Cui, Y., Wang, H., Xu, X., Lv, Y., Shi, J., Liu, W., Chen, S., & Wang, X. (2018). Nitrogen-doped porous carbons derived from a natural polysaccharide for multiple energy storage devices. *Sustainable Energy and Fuels*, 2(2), 381–391. <https://doi.org/10.1039/c7se00443e>
- Dastgheib, S. A., Karanfil, T., & Cheng, W. (2004). Tailoring activated carbons for enhanced removal of natural organic matter from natural waters. *Carbon*, 42(3), 547–557. <https://doi.org/10.1016/j.carbon.2003.12.062>
- Deraman, M., Omar, R., Zakaria, S., Mustapa, I. R., Talib, M., Alias, N., & Jaafar, R. (2002). Electrical and mechanical properties of carbon pellets from acid (HNO₃) treated self-adhesive carbon grain from oil palm empty fruit bunch. *Journal of Materials Science*,

37(16), 3329–3335. <https://doi.org/10.1023/A:1016525106663>

dos Santos, V., de Jesus, C. G., dos Santos, M., Canestraro, C. D., Zucolotto, V., Fujiwara, S. T., Garcia, J. R., Pessoa, C. A., & Wohnrath, K. (2012). The effect of ozone oxidation on single-walled carbon nanotubes. *J Nanopart Res*, 14(9), 1–11.

[http://link.springer.com/article/10.1007/s11051-012-1081-](http://link.springer.com/article/10.1007/s11051-012-1081-4)

4%5Cnfile:///Users/anjohans/Documents/Papers2/Articles/2012/dos Santos/J Nanopart Res 2012 dos Santos.pdf%5Cnpapers2://publication/uuid/76BE186D-A5D6-4F02-8A66-08BD28E0435E

El-Sayed, Y., & Bandosz, T. J. (2004). Adsorption of valeric acid from aqueous solution onto activated carbons: Role of surface basic sites. *Journal of Colloid and Interface Science*, 273(1), 64–72. <https://doi.org/10.1016/j.jcis.2003.10.006>

Figueiredo, J. L., Pereira, M. F. R., Freitas, M. M. A., & Órfão, J. J. M. (1999). Modification of the surface chemistry of activated carbons. *Carbon*, 37(9), 1379–1389. [https://doi.org/10.1016/S0008-6223\(98\)00333-9](https://doi.org/10.1016/S0008-6223(98)00333-9)

Forse, A. C., Merlet, C., Griffin, J. M., & Grey, C. P. (2016). New perspectives on the charging mechanisms of supercapacitors. *Journal of the American Chemical Society*, 138(18), 5731–5744. <https://doi.org/10.1021/jacs.6b02115>

García-Martín, J., López-Garzón, R., Godino-Salido, M. L., Gutiérrez-Valero, M. D., Arranz-Mascarós, P., Cuesta, R., & Carrasco-Marín, F. (2005). Ligand adsorption on an activated carbon for the removal of chromate ions from aqueous solutions. *Langmuir*, 21(15), 6908–6914. <https://doi.org/10.1021/la050549h>

González-García, C. M., González-Martín, M. L., Denoyel, R., Gallardo-Moreno, A. M., Labajos-Broncano, L., & Bruque, J. M. (2004). Ionic surfactant adsorption onto activated carbons. *Journal of Colloid and Interface Science*, 278(2), 257–264. <https://doi.org/10.1016/j.jcis.2004.06.012>

Gunten, U. Von. (2003). Ozonation of drinking water: Part I. Oxidation kinetics and product formation. *Water research*, 37, 1443–1467. <http://www.sciencedirect.com/science/article/pii/S0043135402004578>

Halper, M., & Ellenbogen, J. (2006). Supercapacitors: A brief overview. *Report No. MP 05W0000272, The ... , March*, Report No. MP 05W0000272, 1-29. <https://doi.org/Report No. MP 05W0000272>

Haus, A. (1981). *United States Patent* (19).

He, Y., Wang, X., Lv, Z., Huang, X., Zhang, Y., Li, X., & Liu, Z. (2018). Capacitive mechanism of oxygen functional groups on carbon surface in supercapacitors. *Electrochimica Acta*, 282(5), 618–625. <https://doi.org/10.1016/j.electacta.2018.06.103>

Henning, K. D., & Schäfer, S. (1993). Impregnated activated carbon for environmental protection. *Gas Separation and Purification*, 7(4), 235–240. [https://doi.org/10.1016/0950-4214\(93\)80023-P](https://doi.org/10.1016/0950-4214(93)80023-P)

Hesse, W., Ag, H., Albert, W. K., & Republic, F. (2005). Phenolic Resins. In *ullmann's encyclopedia of industrial chemistry* (hal. 9–10).

Huang, C. P., & Vane, L. M. (1989). Enhancing As⁵⁺ removal by a Fe²⁺-treated activated carbon. *Research Journal of the Water Pollution Control Federation*, 61(9–10), 1596–1603.

Jansen, R. J. J., & van Bekkum, H. (1994). Amination and ammoxidation of activated carbons. *Carbon*, 32(8), 1507–1516. [https://doi.org/10.1016/0008-6223\(94\)90146-5](https://doi.org/10.1016/0008-6223(94)90146-5)

Jaramillo, Álvarez, P. M., & Gómez-Serrano, V. (2010a). Oxidation of activated carbon by dry and wet methods surface chemistry and textural modifications. *Fuel Processing Technology*, 91(11), 1768–1775. <https://doi.org/10.1016/j.fuproc.2010.07.018>

Jaramillo, J., Álvarez, P. M., & Gómez-Serrano, V. (2010b). Preparation and ozone-surface modification of activated carbon. Thermal stability of oxygen surface groups. *Applied Surface Science*, 256(17), 5232–5236. <https://doi.org/10.1016/j.apsusc.2009.12.109>

Johansson, E. M. (2010). *Controlling the Pore Size and Morphology of Mesoporous Silica* (Nomor 1451). Linkopings University.

Jost, K., Dion, G., & Gogotsi, Y. (2014). Textile energy storage in perspective. *Journal of Materials Chemistry A*, 2(28), 10776–10787. <https://doi.org/10.1039/c4ta00203b>

Juhaniswari, Y. (2016). *Efek Ukuran Bulir Terhadap Kapasitansi Superkapasitor Dengan Elektroda Dari Komposit Ekstrak Pasir Besi Dan Arang Aktif Dari Kulit Biji Mte.*

Kiciński, W., Szala, M., & Bystrzejewski, M. (2014). Sulfur-doped porous carbons: Synthesis and applications. *Carbon*, 68, 1–32. <https://doi.org/10.1016/j.carbon.2013.11.004>

Kim, M. Il, Yun, C. H., Kim, Y. J., Park, C. R., & Inagaki, M. (2002). Changes in pore properties of phenol formaldehyde-based carbon with carbonization and oxidation conditions. *Carbon*, 40(11), 2003–2012. [https://doi.org/10.1016/S0008-6223\(02\)00058-1](https://doi.org/10.1016/S0008-6223(02)00058-1)

Koike, M., Tachikawa, E., & Matsui, T. (1969). Gamma-radiolysis of aqueous boric acid

solution. *Journal of Nuclear Science and Technology*, 6(4), 163–169.

<https://doi.org/10.3327/jnst.6.163>

Kötz, R., & Carlen, M. (2000). Principles and applications of electrochemical capacitors.

Electrochimica Acta. [https://doi.org/10.1016/S0013-4686\(00\)00354-6](https://doi.org/10.1016/S0013-4686(00)00354-6)

Lee, D., Hong, S. H., Paek, K. H., & Ju, W. T. (2005). Adsorbability enhancement of activated carbon by dielectric barrier discharge plasma treatment. *Surface and Coatings Technology*, 200(7), 2277–2282. <https://doi.org/10.1016/j.surfcoat.2004.11.027>

Lempong, M. (2014). Pembuatan Dan Kegunaan Arang Aktif. *Info Teknis EBONI*, 11(2), 65–80. <http://ejournal.forda-mof.org/ejournal-litbang/index.php/buleboni/article/view/5041/4463>

Leon y Leon, C. A., Solar, J. M., Calemme, V., & Radovic, L. R. (1992). Evidence for the protonation of basal plane sites on carbon. *Carbon*, 30(5), 797–811. [https://doi.org/10.1016/0008-6223\(92\)90164-R](https://doi.org/10.1016/0008-6223(92)90164-R)

Leyva Ramos, R., Ovalle-Turrubiarres, J., & Sanchez-Castillo, M. A. (1999). Adsorption of fluoride from aqueous solution on aluminum-impregnated carbon. In *Carbon* (Vol. 37, Nomor 4, hal. 609–617). [https://doi.org/10.1016/S0008-6223\(98\)00231-0](https://doi.org/10.1016/S0008-6223(98)00231-0)

Li, B., Dai, F., Xiao, Q., Yang, L., Shen, J., Zhang, C., & Cai, M. (2016). Nitrogen-doped activated carbon for a high energy hybrid supercapacitor. *Energy and Environmental Science*, 9(1), 102–106. <https://doi.org/10.1039/c5ee03149d>

Li, Jiang, Y. H., Wang, P. Z., Mo, Y., Lai, W. De, Li, Z. J., Yu, R. J., Du, Y. T., Zhang, X. R., & Chen, Y. (2020). Effect of the oxygen functional groups of activated carbon on its electrochemical performance for supercapacitors. *Xinxing Tan Cailiao/New Carbon Materials*, 35(3), 232–243. [https://doi.org/10.1016/S1872-5805\(20\)60487-5](https://doi.org/10.1016/S1872-5805(20)60487-5)

Li, Liqing, Yao, X., Li, H., Liu, Z., Ma, W., & Liang, X. (2014). Thermal stability of oxygen-containing functional groups on activated carbon surfaces in a thermal oxidative environment. *Journal of Chemical Engineering of Japan*, 47(1), 21–27. <https://doi.org/10.1252/jcej.13we193>

Lin-Gibson, S., Baranauskas, V., Riffle, J. S., & Sorathia, U. (2002). Cresol novolac-epoxy networks: Properties and processability. *Polymer*, 43(26), 7389–7398. [https://doi.org/10.1016/S0032-3861\(02\)00538-4](https://doi.org/10.1016/S0032-3861(02)00538-4)

Liu, Song, Q., Zheng, T., Li, N., Wang, P., & Abulikemu, G. (2010). Modification of bamboo-based activated carbon using microwave radiation and its effects on the adsorption of

methylene blue. *Applied Surface Science*, 256(10), 3309–3315.

<https://doi.org/10.1016/j.apsusc.2009.12.025>

Liu, Wang, K., Chen, Y., Zhao, S., & Han, Y. (2019). Dominant role of wettability in improving the specific capacitance. *Green Energy and Environment*, xxxx, 1–9.

<https://doi.org/10.1016/j.gee.2019.01.010>

Liu, Y., Hu, Z., Xu, K., Zheng, X., & Gao, Q. (2008). Modification and Performance of Activated Carbon Electrode Material. *Acta Physico-Chimica Sinica*, 24(7), 1143–1148.

Lopez-Ramon, M. V., Stoeckli, F., Moreno-Castilla, C., & Carrasco-Marin, F. (1999). On the characterization of acidic and basic surface sites on carbons by various techniques. *Carbon*, 37(8), 1215–1221. [https://doi.org/10.1016/S0008-6223\(98\)00317-0](https://doi.org/10.1016/S0008-6223(98)00317-0)

Lota, G., Krawczyk, P., Lota, K., Sierczyńska, A., Kolanowski, Ł., Baraniak, M., & Buchwald, T. (2016). The application of activated carbon modified by ozone treatment for energy storage. *Journal of Solid State Electrochemistry*, 20(10), 2857–2864.

<https://doi.org/10.1007/s10008-016-3293-5>

Maroto-Valer, M. M., Dranca, I., Lupascu, T., & Nastas, R. (2004). Effect of adsorbate polarity on thermodesorption profiles from oxidized and metal-impregnated activated carbons. *Carbon*, 42(12–13), 2655–2659. <https://doi.org/10.1016/j.carbon.2004.06.007>

Mastragostino, M., Arbizzani, C., & Soavi, F. (2002). Conducting polymers as electrode materials for supercapacitors. *Springer Series in Materials Science*, 302, 333–352. https://doi.org/10.1007/978-3-030-52359-6_13

Mayasari, H. E., & Yuniari, A. (2016). Karakteristik termogravimetri dan kinetika dekomposisi EPDM dengan bahan pengisi carbon black. *Majalah Kulit, Karet, dan Plastik*, 32(2), 125. <https://doi.org/10.20543/mkkip.v32i2.1591>

Menéndez, J. A., Phillips, J., Xia, B., & Radovic, L. R. (2002). On the Modification and Characterization of Chemical Surface Properties of Activated Carbon: In the Search of Carbons with Stable Basic Properties. *Langmuir*, 12(18), 4404–4410. <https://doi.org/10.1021/la9602022>

Meng, C., Gall, O. Z., & Irazoqui, P. P. (2013). A flexible super-capacitive solid-state power supply for miniature implantable medical devices. *Biomedical Microdevices*, 15(6), 973–983. <https://doi.org/10.1007/s10544-013-9789-1>

Mohd Nor, N. S., Deraman, M., Omar, R., Awitdrus, Farma, R., Basri, N. H., Mohd Dolah, B.

- N., Mamat, N. F., Yatim, B., & Md Daud, M. N. (2015). Influence of gamma irradiation exposure on the performance of supercapacitor electrodes made from oil palm empty fruit bunches. *Energy*, 79(C), 183–194. <https://doi.org/10.1016/j.energy.2014.11.002>
- Montes-Morán, M. A., Suárez, D., Menéndez, J. A., & Fuente, E. (2004). On the nature of basic sites on carbon surfaces: An overview. *Carbon*, 42(7), 1219–1225. <https://doi.org/10.1016/j.carbon.2004.01.023>
- Nielsen, F., & Jonsson, M. (2008). Simulations of H₂O₂ concentration profiles in the water surrounding spent nuclear fuel taking mixed radiation fields and bulk reactions into account. *Journal of Nuclear Materials*, 374(1–2), 281–285. <https://doi.org/10.1016/j.jnucmat.2007.08.008>
- Nurmanjaya, A., Putra, S., & Megasari, K. (2018). Degradasi Zat Warna Lithol Dalam Medium Air Dengan Radiasi Gamma. *Jurnal Jurusan Teknik Kimia Nuklir STTN-BATAN Yogyakarta*, 3(1), 14–24.
- Overend, R. P., Paraskevopoulos, G., & Svetanovic, R. J. (1975). Rates of {OH} Radical Reactions. {I}. {R}eactions with {H₂, CH₄, C₂H₆,} and {C₃H₈} at 295{K}. *Can. J. Chem.*, 53, 3374.
- Pandolfo, A. G., & Hollenkamp, A. F. (2006). Carbon properties and their role in supercapacitors. *Journal of Power Sources*, 157(1), 11–27. <https://doi.org/10.1016/j.jpowsour.2006.02.065>
- Park, S. J., & Kim, B. J. (2005). Ammonia removal of activated carbon fibers produced by oxyfluorination. *Journal of Colloid and Interface Science*, 291(2), 597–599. <https://doi.org/10.1016/j.jcis.2005.05.012>
- Perbangkara, H. (FMIPA U. (2011). *Estimasi dosis ..., Hendya Perbangkara, FMIPA UI, 2011.*
- Pradhan, B. K., & Sandle, N. K. (1999). *Bhabendra K. Pradhan, Carbon 37 (1999) 1323–1332.pdf*. 37, 1323–1332.
- Przepiórski, J. (2006). Enhanced adsorption of phenol from water by ammonia-treated activated carbon. *Journal of Hazardous Materials*, 135(1–3), 453–456. <https://doi.org/10.1016/j.jhazmat.2005.12.004>
- Razdyakonova, G. I., Kokhanovskaya, O. A., & Likholobov, V. A. (2015). Self-Decomposition of Hydrogen Peroxide on the Surface of Disperse Carbon Black. *Radioelectronics. Nanosystems. Information Technologies.*, 7(2), 180–190.

<https://doi.org/10.17725/rensit.2015.07.180>

- Rehman, A., Park, M., & Park, S. J. (2019). Current progress on the surface chemical modification of carbonaceous materials. *Coatings*, 9(2), 1–22.
<https://doi.org/10.3390/COATINGS9020103>
- Rios, R. R. A., Alves, D. E., Dalmázio, I., Bento, S. F. V., Donnici, C. L., & Lago, R. M. (2003). Tailoring activated carbon by surface chemical modification with O, S, and N containing molecules. *Materials Research*, 6(2), 129–135. <https://doi.org/10.1590/s1516-14392003000200004>
- Roosen, J., Babu, C. M., & Binnemans, K. (2018). *Functionalised Activated Carbon for the Adsorption of Rare-Earth Elements From Aqueous Solutions*. 305–310.
- Roth, O., Ekeröth, E., & Nilsson, S. (2007). Fuel Dissolution under Deep Repository Conditions. *Environ. Sci. Technol.*, 41(20), 7087–7093.
- Sani, D. A. R. (2018). *Preparasi dan Karakterisasi Katalis Oksida Magnesium Teremban pada Karbon Berpori dari Pirolisis Polimer Berbasis Asam Salisilat dengan Metode Impregnasi pada Berbagai Jumlah Steam untuk Aktivasi*.
- Santiago, M., Stüber, F., Fortuny, A., Fabregat, A., & Font, J. (2005). Modified activated carbons for catalytic wet air oxidation of phenol. *Carbon*, 43(10), 2134–2145.
<https://doi.org/10.1016/j.carbon.2005.03.026>
- Saparudin, Syahrul, & Nurchayati. (2015). Pengaruh Variasi Temperatur Pirolisis Terhadap Kadar Hasil Dan Nilai Kalor Briket Campuran Sekam Padi-Kotoran Ayam. *Dinamika Teknik Mesin*, 5(1), 2088–88.
- Saputra, A. (2018). *Pemungutan Uranium Dalam Limbah Cair Uranium Menggunakan Mg (Oh) 2 Impregnated Activated Carbon*. Universitas Gadjah Mada.
- Scholz, F. (2010). Electroanalytical methods: Guide to experiments and applications. In *Electroanalytical Methods: Guide to Experiments and Applications*.
<https://doi.org/10.1007/978-3-642-02915-8>
- Schubert, C. C., & Pease, R. N. (1956). The oxidation of lower paraffin hydrocarbons. II. Observations on the role of ozone in the slow combustion of isobutane. *Journal of the American Chemical Society*, 78(21), 5553–5556. <https://doi.org/10.1021/ja01602a024>
- Sekulić, D. R., Babić, B. M., Kljajević, L. M., Stasić, J. M., & Kaludjerović, B. V. (2009). The effect of gamma radiation on the properties of activated carbon cloth. *Journal of the Serbian*

- Shafeeyan, M. S., Daud, W. M. A. W., Houshmand, A., & Shamiri, A. (2010). A review on surface modification of activated carbon for carbon dioxide adsorption. *Journal of Analytical and Applied Pyrolysis*, 89(2), 143–151.
<https://doi.org/10.1016/j.jaap.2010.07.006>
- Sharma, P., & Bhatti, T. S. (2010). A review on electrochemical double-layer capacitors. *Energy Conversion and Management*, 51(12), 2901–2912.
<https://doi.org/10.1016/j.enconman.2010.06.031>
- Stöhr, B., Boehm, H. P., & Schlögl, R. (1991). Enhancement of the catalytic activity of activated carbons in oxidation reactions by thermal treatment with ammonia or hydrogen cyanide and observation of a superoxide species as a possible intermediate. *Carbon*, 29(6), 707–720.
[https://doi.org/10.1016/0008-6223\(91\)90006-5](https://doi.org/10.1016/0008-6223(91)90006-5)
- Szubzda, B., Szmaja, A., & Halama, A. (2012). Influence of structure and wettability of supercapacitor electrodes carbon materials on their electrochemical properties in water and organic solutions. *Electrochimica Acta*, 86, 255–259.
<https://doi.org/10.1016/j.electacta.2012.08.060>
- Țucureanu, V., Matei, A., & Avram, A. M. (2016). FTIR Spectroscopy for Carbon Family Study. *Critical Reviews in Analytical Chemistry*, 46(6), 502–520.
<https://doi.org/10.1080/10408347.2016.1157013>
- Valdes, H., Sanchez-Polo, M., & Zaror, C. A. (2003). Effect of ozonation on the activated carbon surface chemical properties and on 2-mercaptobenzothiazole adsorption. *Latin American Applied Research*, 33(3), 219–223.
- Velo-Gala, I., López-Peñalver, J. J., Sánchez-Polo, M., & Rivera-Utrilla, J. (2014). Surface modifications of activated carbon by gamma irradiation. *Carbon*, 67(February), 236–249.
<https://doi.org/10.1016/j.carbon.2013.09.087>
- Wang, H., Lin, J., & Shen, Z. X. (2016). Polyaniline (PANi) based electrode materials for energy storage and conversion. *Journal of Science: Advanced Materials and Devices*, 1(3), 225–255. <https://doi.org/10.1016/j.jsamd.2016.08.001>
- Wu, & Pendleton, P. (2001). Adsorption of anionic surfactant by activated carbon: Effect of surface chemistry, ionic strength, and hydrophobicity. *Journal of Colloid and Interface Science*, 243(2), 306–315. <https://doi.org/10.1006/jcis.2001.7905>

- Wu, S., & Chen, J. P. (2008). Modification of a commercial activated carbon for metal adsorption by several approaches. *Indian Journal of Environmental Protection*, 28(8), 673–675.
- Zakir, M., Budi, P., Raya, I., Karim, A., Wulandari, R., & Sobrido, A. B. J. (2018). Determination of specific capacitance of modified candlenut shell based carbon as electrode material for supercapacitor. *Journal of Physics: Conference Series*, 979(1).
<https://doi.org/10.1088/1742-6596/979/1/012024>
- Zhang, L., Liu, H., Wang, M., & Chen, L. (2007). Structure and electrochemical properties of resorcinol-formaldehyde polymer-based carbon for electric double-layer capacitors. *Carbon*, 45(7), 1439–1445. <https://doi.org/10.1016/j.carbon.2007.03.030>
- Zhou, G., Xu, C., Cheng, W., Zhang, Q., & Nie, W. (2015). Effects of Oxygen Element and Oxygen-Containing Functional Groups on Surface Wettability of Coal Dust with Various Metamorphic Degrees Based on XPS Experiment. *Journal of Analytical Methods in Chemistry*, 2015. <https://doi.org/10.1155/2015/467242>
- Zhu, Y., Hu, H., Li, W., & Zhang, X. (2007). Resorcinol-formaldehyde based porous carbon as an electrode material for supercapacitors. *Carbon*, 45(1), 160–165.
<https://doi.org/10.1016/j.carbon.2006.07.010>
- Zou, Y., & Han, B. X. (2001). Preparation of activated carbons from Chinese coal and hydrolysis lignin. *Adsorption Science and Technology*, 19(1), 59–72.
<https://doi.org/10.1260/0263617011493971>