

DAFTAR PUSTAKA

- Achaw, O.W. and Afrane, G., 2008, The Evolution of the Pore Structure of Coconut Shells during the Preparation of Coconut Shell-Based Activated Carbons. *Microporous Mesoporous Mater.*, 112, 284–290.
- Achmadi, S., 1987, *Kimia Dasar: Prinsip dan Terapan Modern Edisi Keempat Jilid 2* (diterjemahkan dari Petrucci, R.H., 1985, General Chemistry: Principles and Modern Application, 4th Ed., Collier Macmillan, Inc., California), Erlangga, Jakarta.
- Agirre, I., Barrio, V.L., Güemez, M.B., Cambra, J.F., and Arias, P.L., 2011, Acetals as Possible Diesel Additives. In: Bernardes, M.A.D.S. (Ed.), Economic Effect of Biofuel Production. InTech, Spanyol, 299–316.
- An, H., Yang, W.M., Li, J., and Zhou, D.Z., 2015, Modeling Study of Oxygenated Fuels on Diesel Combustion: Effects of Oxygen Concentration, Cetane Number and C/H Ratio. *Energy Convers. Manag.*, 90, 261–271.
- Antón, L.M.R., Martín, F.G., and Doce, Y., 2016, Physical Properties of Gasoline, Isobutanol and ETBE Binary Blends in Comparison with Gasoline Ethanol Blends. *Fuel*, 166, 73–78.
- Barrios, C.C., Martín, C., Sáez, A.D., Álvarez, P., Pujadas, M., and Casanova, J., 2014, Effects of the Addition of Oxygenated Fuels as Additives on Combustion Characteristics and Particle Number and Size Distribution Emissions of a TDI Diesel Engine. *Fuel*, 132, 93–100.
- Bueno, A.C., Gonçalves, J.A., and Gusevskaya, E. V., 2007. Palladium-Catalyzed Oxidation of Primary Alcohols: Highly Selective Direct Synthesis of Acetals. *Appl. Catal. A Gen.*, 329, 1–6.
- Bulushev, D.A., Yuranov, I., Suvorova, E.I., Buffat, P.A., and Minsker, L.K., 2004. Highly Dispersed Gold on Activated Carbon Fibers for Low-Temperature CO Oxidation. *J. Catal.*, 224, 8–17.
- Cao, G., Zhang, X., Gong, S., and Zheng, F., 2008, Investigation on Emission Factors of Particulate Matter and Gaseous Pollutants from Crop Residue Burning. *J. Environ. Sci.*, 20, 50–55.
- Capeletti, M.R., Balzano, L., de la Puente, G., Laborde, M., and Sedran, U., 2000. Synthesis of Acetal (1,1-Diethoxyethane) from Ethanol and Acetaldehyde over Acidic Catalysts. *Appl. Catal. A Gen.*, 198.
- Charles, J.N., Desphande, N.D., and Desphande, D.A., 2001, Dehydration of $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$. *Thermochimica Acta*, 375, 169–176.
- Daifullah, A.A.M. and Girgis, B.S., 2002, Impact of Surface Characteristics of Activated Carbon on Adsorption of BTEX. *Colloids Surf. A Physicochem.*

214, 181–193.

- Estupinan, P.R., Giraldo, L., and Piraján, J.C.M., 2013, Energetic Changes in the Surface of Activated Carbons and Relationship with Ni (II) Adsorption from Aqueous Solution. *Appl. Surf. Sci.*, 286, 351–357.
- Ewansiha, C.J., Ebhoaye, J.E., Asia, I.O., Ekebafé, L.O., and Ehigie, C., 2012, Proximate and Mineral Composition of Coconut (*Cocos nucifera*) Shell. *Int. J. Pure Appl. Sci. Technol.*, 13, 57–60.
- Fassaert, D.J., Verbeek, H., and Avoird, A.V.D., 1972, Molecular Orbital Models for Hydrogen Adsorption on Different Sites of a Nickel Crystal. *Surf. Sci.*, 29, 501–522.
- Friedlingstein, P., Andrew, R.M., Rogelj, J., Peters, G.P., Canadell, J.G., Knutti, R., Luderer, G., Raupach, M.R., Schaeffer, M., Vuuren, D.P.V., and Quéré, C.L., 2014, Persistent Growth of CO₂ Emissions and Implications for Reaching Climate Targets. *Nat. Geosci.*, 7, 709–715.
- Guo, S., Peng, J., Li, W., Yang, K., Zhang, L., Zhang, S., and Xia, H., 2009, Applied Surface Science Effects of CO₂ Activation on Porous Structures of Coconut Shell-Based Activated Carbons. *Appl. Surf. Sci.*, 255, 8443–8449.
- Hara, M., Yoshida, T., Takagaki, A., Takata, T., Kondo, J.N., Hayashi, S., and Domen, K., 2004, A Carbon Material as a Strong Protonic Acid. *Angew. Chem. Int. Ed. Engl.*, 43, 2955–8.
- He, X. and Liu, H., 2014, Efficient Synthesis of 1,1-Diethoxyethane via Sequential Ethanol Reactions on Silica-Supported Copper and H-Y Zeolite Catalysts. *Catal. Today*, 233, 133–139.
- Hui, K.S., Chao, C.Y.H., Kwong, C.W., and Wan, M.P., 2008, Use of Multi-Transition-Metal-Ion-Exchanged Zeolite 13X Catalysts in Methane Emissions Abatement. *Combust. Flame*, 153, 119–129.
- Islamiyah, 2015, Sintesis 1,1-Dipentoksipentana dari 1-Pentanol Menggunakan Katalis Ni/Karbon Aktif, *Skripsi*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Jung, S.H. and Kim, J.S., 2014. Journal of Analytical and Applied Pyrolysis Production of Biochars by Intermediate Pyrolysis and Activated Carbons from Oak by Three Activation Methods Using CO₂. *J. Anal. Appl. Pyrolysis*, 107, 116–122.
- Karabektas, M. and Hosoz, M., 2009, Performance and Emission Characteristics of a Diesel Engine Using Isobutanol–diesel Fuel Blends. *Renew. Energy*, 34, 1554–1559.
- Kristanto, P., 2002, Oksigenat Methyl Tertiary Buthyl Ether Sebagai Aditif Octane Booster Bahan Bakar Motor Bensin. *J. Tek. Mesin*, 4, 25–31.

- Li, D., Shi, F., Peng, J., Guo, S., and Deng, Y., 2004, Application of Functional Ionic Liquids Possessing Two Adjacent Acid Sites for Acetalization of Aldehydes. *J. Org. Chem.*, 69, 3582–3585.
- Li, W., Yang, K., Peng, J., Zhang, L., Guo, S., and Xia, H., 2008, Effects of Carbonization Temperatures on Characteristics of Porosity in Coconut Shell Chars and Activated Carbons Derived from Carbonized Coconut Shell Chars. *Ind. Crops Prod.*, 28, 190–198.
- Mack, J.H., Rapp, V.H., Broeckelmann, M., Lee, T.S., and Dibble, R.W., 2014. Investigation of Biofuels from Microorganism Metabolism for Use as Anti-Knock Additives. *Fuel*, 117, 939–943.
- Marcu, I.C., Tichit, D., Fajula, F., and Tanchoux, N., 2009. Catalytic Valorization of Bioethanol over Cu-Mg-Al Mixed Oxide Catalysts. *Catal. Today*, 147, 231–238.
- Mishra, S.K. and Kanungo, S.B., 1992, Thermal Dehydration and Decomposition of Nickel Chloride Hydrate ($\text{NiCl}_2 \cdot x\text{H}_2\text{O}$). *J. Therm. Anal.*, 38, 2417–2436.
- Noh, J.S. and Schwarz, J.A., 1991, Relationship between Metal Ion Adsorption and Catalytic Properties of Carbon-Supported Nickel Catalysts. *J. Catal.*, 33, 22–33.
- Novita, S., 2013, Konversi 1-Butanol Menjadi Senyawa Eter Menggunakan Katalis Cu/Karbon Aktif, *Skripsi*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Pawestri, U.D., 2014, Pembuatan Katalis Ni/AC dan Pemakaiannya untuk Konversi n-Pentanol Menjadi Eter, *Skripsi*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Radkevich, V.Z., Senko, T.L., Wilson, K., Grishenko, L.M., Zaderko, A.N., and Diyuk, V.Y., 2008, The Influence of Surface Functionalization of Activated Carbon on Palladium Dispersion and Catalytic Activity in Hydrogen Oxidation. *Appl. Catal. A Gen.*, 335, 241–251.
- Rashedul, H.K., Masjuki, H.H., Kalam, M.A., Ashraful, A.M., Rahman, S.M.A., and Shahir, S.A., 2014, The Effect of Additives on Properties, Performance and Emission of Biodiesel Fuelled Compression Ignition Engine. *Energy Convers. Manag.*, 88, 348–364.
- Rianto, A., 2014, Konversi Isopropanol Menjadi Senyawa 1,1-Diisopropoksietana dengan Katalis Cu/Karbon Aktif, *Skripsi*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Sato, S., Yoshihara, K., Moriyama, K., Machida, M., and Tatsumoto, H., 2007, Influence of Activated Carbon Surface Acidity on Adsorption of Heavy Metal Ions and Aromatics from Aqueous Solution. *Appl. Surf. Sci.*, 253,

8554–8559.

- Serp, P. and Machado, B., 2015, *Carbon (Nano) Materials for Catalyst*, Royal Society of Chemistry, Cambridge.
- Sharon, H., Ram, P.J.S., Fernando, K.J., Murali, S., and Muthusamy, R., 2013, Fueling a Stationary Direct Injection Diesel Engine with Diesel-Used Palm Oil–Butanol Blends–An Experimental Study. *Energy Convers. Manag.*, 73, 95–105.
- Srebowata, A. and Kaminska, I.I., 2015, Turbostratic Carbon Supported Ni-Pd Alloys in Aqueous-Phase Hydrodechlorination of 1,1,2-Trichloroethene. *Recycl. Catal.*, 2, 17–22.
- Sukmawati, D., 2016, Pembuatan Katalis Ni/Karbon Aktif untuk Konversi n-Butanol menjadi 1,1-Dibutoksibutana, *Skripsi*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Sun, Y., Tao, F., Liu, L., Zeng, X., and Wang, W., 2016. Influence of Activated Carbon Supported Transition Metals on the Decomposition of Polychlorobiphenyls. Part I: Catalytic Decomposition and Kinetic Analysis. *Chemosphere*, 1–9.
- Terzyk, A.P., 2001, The Influence of Activated Carbon Surface Chemical Composition on the Adsorption of Acetaminophen (Paracetamol) in Vitro Part II . TG , FTIR , and XPS Analysis of Carbons and the Temperature Dependence of Adsorption Kinetics at the Neutral pH. *Colloids Surfaces A Physicochem. Eng. Asp.*, 177, 23–45.
- Wang, M., Au, C.T., and Lai, S.Y., 2015, H₂ Production from Catalytic Steam Reforming of N-Propanol over Ruthenium and Ruthenium-Nickel Bimetallic Catalysts Supported on Ceria-Alumina Oxides with Different Ceria Loadings. *Int. J. Hydrogen Energy*, 40, 13926–13935.
- Wang, S. and Lu, G.Q., 1998, Effects of Acidic Treatments on the Pore and Surface Properties of Ni Catalyst Supported on Activated Carbon. *Carbon N. Y.*, 36, 283–292.
- Weaver, J.W., Skaggs, S.A., Spidle, D.L., and Stone, G.C., 2009, Composition and Behavior of Fuel Ethanol, United States Environmental Protection Agency. Washington, DC.
- Yang, K., Peng, J., Srinivasakannan, C., Zhang, L., Xia, H., and Duan, X., 2010, Preparation of High Surface Area Activated Carbon from Coconut Shells Using Microwave Heating. *Bioresour. Technol.*, 101, 6163–6169.
- Yang, P.M., Lin, K.C., Lin, Y.C., Jhang, S.R., and Chen, S.C., 2016, Emission Evaluation of a Diesel Engine Generator Operating with a Proportion of Isobutanol as a Fuel Additive in Biodiesel Blends. *Appl. Therm. Eng.*, 100,

628–635.

Yorgun, S. and Yıldız, D., 2015, Preparation and Characterization of Activated Carbons from Paulownia Wood by Chemical Activation with H_3PO_4 . *J. Taiwan Inst. Chem. Eng.*, 53, 122–131.