

DAFTAR PUSTAKA

- Abidin, H.Z., Davies, R.J., Kusuma, M.A., Andreas, H., and Deguchi, T., 2009, Subsidence and uplift of Sidoarjo (East Java) due to the eruption of the Lusi mud volcano (2006-present), *Environ. Geol.*, 57, 833–844.
- Absalome, M.A., Massara, C.C., Alexandre, A.A., Gervais, K., Chantal, G.G.A., Ferdinand, D., Rhedoor, A.J., Coulibaly, I., George, T.G., Brigitte, T., Marion, M., and Jean-Paul, C., 2020, Biochemical properties, nutritional values, health benefits and sustainability of palm oil, *Biochimie*, 178, 81–95.
- Alisha, G.D., Trisunaryanti, W., and Syoufian, A., 2021, Hydrocracking of Waste Palm Cooking Oil into Hydrocarbon Compounds over Mo Catalyst Impregnated on SBA-15, *Silicon*, 1–7.
- Belton, D.J., Deschaume, O., and Perry, C.C., 2012, An overview of the fundamentals of the chemistry of silica with relevance to biosilicification and technological advances, *FEBS J.*, 279, 1710–1720.
- Deutschmann, O., Knözinger, H., Kochloefl, K., and Turek, T., 2009, Heterogeneous Catalysis and Solid Catalysts., In, *Ullmann's Encyclopedia of Industrial Chemistry*. Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim.
- Doronin, V.P., Potapenko, O. V., Lipin, P. V., and Sorokina, T.P., 2013, Catalytic cracking of vegetable oils and vacuum gas oil, *Fuel*, 106, 757–765.
- Fangfang, F., Alagumalai, A., and Mahian, O., 2021, Sustainable biodiesel production from waste cooking oil: ANN modeling and environmental factor assessment, *Sustain. Energy Technol. Assessments*, 46, 101265.
- Fukuda, H., Kondo, A., and Noda, H., 2001, Biodiesel fuel production by transesterification of oils, *J. Biosci. Bioeng.*, 92, 405–416.
- Gao, Q., Xie, W., Zhao, L., Wang, Y., Zhang, W., and Cai, Q., 2018, Synthesis of hierarchical sieve-like mesoporous silica nanoparticle aggregates via centrifugal method for drug delivery system, *Chinese Chem. Lett.*, 29, 1804–1810.
- Hsu, C.S. and Robinson, P.R., 2019, *Petroleum Science and Technology*, Springer Nature Switzerland, Cham.
- Jaramillo, L.Y., Henao, W., and Romero-Sáez, M., 2020, Synthesis and characterization of MCM-41–SBA-15 mixed-phase silica with trimodal mesoporous system and thick pore wall, *J. Porous Mater.*, 27, 1669–1676.
- Kari, J., Olsen, J.P., Jensen, K., Badino, S.F., Krogh, K.B.R.M., Borch, K., and Westh, P., 2018, Sabatier Principle for Interfacial (Heterogeneous) Enzyme Catalysis, *ACS Catal.*, 8, 11966–11972.

- Kubickova, I. and Kubicka, D., 2010, Utilization of Triglycerides and Related Feedstocks for Production of Clean Hydrocarbon Fuels and Petrochemicals: A Review, *Waste Biomass Valor*, 1, 293–308.
- Kumar, S., Shamsuddin, M.R., Farabi, M.S.A., Saiman, M.I., Zainal, Z., and Taufiq-Yap, Y.H., 2020, Production of methyl esters from waste cooking oil and chicken fat oil via simultaneous esterification and transesterification using acid catalyst, *Energy Convers. Manag.*, 226, 113366.
- Kusumastuti, H., Trisunaryanti, W., Falah, I.I., and Marsuki, M.F., 2018, Synthesis of mesoporous silica-alumina from lapindo mud as a support of Ni and Mo metals catalysts for hydrocracking of pyrolyzed α -cellulose, *Rasayan J. Chem.*, 11, 522–530.
- Larasti, S., 2019, Synthesis of NiMo-NH₂/Mesoporous Silica catalyst for the conversion of used coconut oil into biofuel, *Thesis*, Departement of Chemistry UGM, Yogyakarta.
- Li, T., Cheng, J., Huang, R., Zhou, J., and Cen, K., 2015, Conversion of waste cooking oil to jet biofuel with nickel-based mesoporous zeolite Y catalyst, *Bioresour. Technol.*, 197, 289–294.
- Mannu, A., Vlahopoulou, G., Urgeghe, P., Ferro, M., Del Caro, A., Taras, A., Garroni, S., Rourke, J.P., Cabizza, R., and Petretto, G.L., 2019, Variation of the chemical composition of waste cooking oils upon bentonite filtration, *Resources*, 8, 1–15.
- Marsuki, M.F., Trisunaryanti, W., Falah, I.I., and Wijaya, K., 2018, Synthesis of Co, Mo, Co-Mo and Mo-Co catalysts, supported on mesoporous silica-alumina for hydrocracking of α -cellulose pyrolysis oil, *Orient. J. Chem.*, 34, 955–962.
- Martínez, D., Mederos, F., Trejo, F., and Sotelo, R., 2015, Synthesis of Diesel Fuel from Waste Cooking Oil Through Catalytic Hydrotreating, *Pet. Sci. Technol.*, 33, 1757–1763.
- Medford, A.J., Vojvodic, A., Hummelshøj, J.S., Voss, J., Abild-Pedersen, F., Studt, F., Bligaard, T., Nilsson, A., and Nørskov, J.K., 2015, From the Sabatier principle to a predictive theory of transition-metal heterogeneous catalysis, *J. Catal.*, 328, 36–42.
- Méndez, N.T., Paniagua Solar, L.A., and Gamboa, S.A., 2021, Influence of MCM-41 as a co-support of Pt–ZnO/C for avoiding poisoning effects during the electrooxidation reaction of bioethanol waste for energy conversion system applications, *Mater. Chem. Phys.*, 263, .
- Nwosu, C., 2012, An Electronegativity Approach to Catalytic Performance, *J. Tech.*

Sci. Technologies, 1, 25–28.

- Paramesti, C., Trisunaryanti, W., Larasati, S., Santoso, N.R., Sudiono, S., Triyono, T., and Fatmawati, D.A., 2021, The Influence of Metal Loading Amount on Ni/Mesoporous Silica Extracted from Lapindo Mud Templated by CTAB for Conversion of Waste Cooking Oil into Biofuel, *Bull. Chem. React. Eng. Catal.*, 16, 22–30.
- Sie, S.T., 1992, Acid-Catalyzed Cracking of Paraffinic Hydrocarbons. 1. Discussion of Existing Mechanisms and Proposal of a New Mechanism, *Ind. Eng. Chem. Res.*, 31, 1881–1889.
- Sumbogo, S.D., 2019, Sintesis hierarki karbon aktif dari kayu merbau manokwari untuk pengemban logam Co, Ni, dan Pd sebagai katalis hidorengkah minyak nyamplung menjadi fraksi bensin dan solar, *Skripsi*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Travaglini, L. and De Cola, L., 2018, Morphology control of mesoporous silica particles using bile acids as cosurfactants, *Chem. Mater.*, 30, 4168–4175.
- Travaglini, L., Picchetti, P., Del Giudice, A., Galantini, L., and De Cola, L., 2019, Tuning and controlling the shape of mesoporous silica particles with CTAB/sodium deoxycholate catanionic mixtures, *Microporous Mesoporous Mater.*, 279, 423–431.
- Trisunaryanti, Wega, Falah, I.I., Sari, R., Fatmawati, D.A., Hapsari, M.T., and Permata, M.L., 2020, Synthesis of Co/Mesoporous Silica-Alumina Catalyst from Sidoarjo Mud Templated by Bovine Bone's Gelatin for Hydrocracking of Waste Lubricant, *Indones. J. Chem.*, 1–11.
- Trisunaryanti, W., Triyono, Armunanto, R., Hastuti, L.P., Ristiana, D.D., and Ginting, R.V., 2018, Hydrocracking of α -cellulose using Co, Ni, and Pd supported on mordenite catalysts, *Indones. J. Chem.*, 18, 166–172.
- Trisunaryanti, W., Triyono, Paramesti, C., Larasati, S., Santoso, N.R., and Fatmawati, D.A., 2020, Synthesis and characterization of Ni-NH₂/Mesoporous Silica catalyst from lapindo mud for hydrocracking of waste cooking oil into biofuel, *Rasayan J. Chem.*, 13, 1386–1393.
- Trisunaryanti, Wega, Triyono, T., Santoso, N.R., Larasati, S., Paramesti, C., and Fatmawati, D.A., 2020, Enhancement of Cobalt Concentration Supported on Mesoporous Silica towards the Characteristics and Activities of Catalysts for the Conversion of Waste Coconut Oil into Gasoline and Diesel Oil, *Indones. J. Chem.*, 21, 527.
- Vazquez, N.I., Gonzalez, Z., Ferrari, B., and Castro, Y., 2017, Synthesis of mesoporous silica nanoparticles by sol-gel as nanocontainer for future drug

delivery applications, *Bol. la Soc. Esp. Ceram. y Vidr.*, 56, 139–145.

Xie, Y., Kocaefe, D., Chen, C., and Kocaefe, Y., 2016, Review of Research on Template Methods in Preparation of Nanomaterials, *J. Nanomater.*, 1–10.

Yang, H., Liao, S., Huang, C., Du, L., Chen, P., Huang, P., Fu, Z., and Li, Y., 2014, Facile one-pot approach to the synthesis of spherical mesoporous silica nanoflowers with hierarchical pore structure, *Appl. Surf. Sci.*, 314, 7–14.

Yang, Y., Wang, Q., Zhang, X., Wang, L., and Li, G., 2013, Hydrotreating of C18 fatty acids to hydrocarbons on sulphided NiW/SiO₂-Al₂O₃, *Fuel Process. Technol.*, 116, 165–174.