

DAFTAR PUSTAKA

- Abro, R., Abdeltawab, A.A., Al-Deyab, S.S., Yu, G., Qazi, A.B., Gao, S., and Chen, X., 2014, A Review of Extractive Desulfurization of Fuel Oils Using Ionic Liquids, *RSC Adv.*, 4(67), 35302–35317.
- Afridha, M.S.H.F., Prakash, S.H., and Roopan, S.M., 2024, MoO₃ Based Nanocomposites for the Photocatalytic Degradation of Colourants – A Review, *J. Taiwan Inst. Chem. Eng.*, 166, 1-13.
- Agharadatu, R.H., Wijaya, K., Prastyo, Wangsa, Hauli, L., and Oh, W.C., 2024, Application of Mesoporous NiMo/Silica (NiMo/SiO₂) as a Catalyst in the Hydrocracking of Used Cooking Oil into Jet Fuel, *Silicon*, 16(1), 331–343.
- Al-Degs, Y.S., El-Sheikh, A.H., Al Bakain, R.Z., Newman, A.P., and Al-Ghouti, M.A., 2016, Conventional and Upcoming Sulfur-Cleaning Technologies for Petroleum Fuel: A Review, *Energy Technol.*, 4(6), 679–699.
- AL-Hammadi, S.A., Al-Amer, A.M., and Saleh, T.A., 2018, Alumina-Carbon Nanofiber Composite as a Support for Moco Catalysts in Hydrodesulfurization Reactions, *J. Chem. Eng.*, 345, 242–251.
- Alisha, G.D., Trisunaryanti, W., Syoufian, A., and Larasati, S., 2023, Synthesis of High Stability Mo/SiO₂ Catalyst Utilizing Parangtritis Beach Sand for Hydrocracking Waste Palm Oil into Biofuel, *Biomass Convers. Bior.*, 13(12), 11041–11055.
- Alwan, H.H., 2022, Oxidative Desulfurization of a Model Fuel Using MoO₃ Nanoparticles Supported on Carbon Nanotubes Catalyst: Examine Most Significance Variables, Optimization, Kinetics and Thermodynamics Study, *S. Afr. J. Chem. Eng.*, 40(1), 230–239.
- Amakawa, K., Wang, Y., Kröhnert, J., Schlögl, R., and Trunschke, A., 2019, Acid Sites on Silica-Supported Molybdenum Oxides Probed by Ammonia Adsorption: Experiment and Theory, *Mol. Catal.*, 478, 110580.
- Ardini, M.A., Triyono, Hara, T., Ichikuni, N., and Trisunaryanti, W., 2025, Study of Metal Sequenced Spray Impregnation Method Towards Co-Mo/ γ -Al₂O₃ Catalytic Performance in Hydrotreating of Used Coconut Oil to Liquid Biohydrocarbon, *Micropor. Mesopor. Mat.*, 382, 113357.
- Badr, A.M., El-Anssary, E.H., Elshaikh, H.A., and Afify, H.H., 2017, Hydrothermal Synthesis and Influence of Later Heat Treatment on the Structural Evolution, Optical and Electrical Properties of Nanostructured α -MoO₃ Single Crystals, *J. Phys. D Appl. Phys.*, 50(50), 505111.
- Bakar, R.A., Yahya, R., and Gan, S.N., 2016, Production of High Purity Amorphous Silica from Rice Husk, *Procedia Chem.*, 19, 189–195.
- Banoth, S., Babu, V.S., Raghavendra, G., Rakesh, K., and Ojha, S., 2022, Sustainable Thermochemical Extraction of Amorphous Silica from Biowaste, *Silicon*, 14(10), 5289–5296.
- Barde, R. V., Nemade, K.R., and Waghuley, S.A., 2021, Impedance Spectroscopy Study of the AC Conductivity of Sodium Superoxide Nanoparticles Doped Vanadate Based Glasses, *Mater. Sci. Energy Technol.*, 4, 202–207.
- Bava, Y.B., Geronés, M., Giovanetti, L.J., Andrini, L., and Erben, M.F., 2019, Speciation of Sulphur in Asphaltenes and Resins from Argentinian Petroleum by Using XANES Spectroscopy, *Fuel*, 256, 1–9.

- Bibak, F. and Moradi, G., 2020, Oxidative Desulfurization of Model Oil and Oil Cuts with $\text{MoO}_3/\text{SBA-15}$: Experimental Design and Optimization by Box–Behnken Method, *React. Kinet. Mech. Cat.*, 131(2), 935–951.
- Boniek, D., Figueiredo, D., Dos Santos, A.F.B., and De Resende Stoianoff, M.A., 2015, Biodesulfurization: A Mini Review About the Immediate Search for the Future Technology, *Clean Technol. Envir.*, 17, 29–37.
- Cao, Y., Wang, H., Ding, R., Wang, L., Liu, Z., and Lv, B., 2020, Highly Efficient Oxidative Desulfurization of Dibenzothiophene Using Ni Modified MoO_3 Catalyst, *Appl. Catal. A Gen.*, 589, 117308.
- Chamack, M., Mahjoub, A.R., and Aghayan, H., 2015, Catalytic Performance of Vanadium-Substituted Molybdophosphoric Acid Supported on Zirconium Modified Mesoporous Silica in Oxidative Desulfurization, *Chem. Eng. Res. Des.*, 94, 565–572.
- Cheng, C., Wang, A., Humayun, M., and Wang, C., 2024, Recent Advances of Oxygen Vacancies in MoO_3 : Preparation and Roles, *Chem. Eng. J.*, 498, 1–20.
- Coletti, A., Sabuzi, F., Floris, B., Galloni, P., and Conte, V., 2018, Efficient and Sustainable V-Catalyzed Oxidative Desulfurization of Fuels Assisted by Ionic Liquids, *J. Fuel. Chem. Technol.*, 46(9), 1121–1129.
- Danmaliki, G.I., Saleh, T.A., and Shamsuddeen, A.A., 2017, Response Surface Methodology Optimization of Adsorptive Desulfurization on Nickel/Activated Carbon, *Chem. Eng. J.*, 313, 993–1003.
- Debecker, D.P., Stoyanova, M., Rodemerck, U., Eloy, P., Léonard, A., Su, B.L., and Gaigneaux, E.M., 2010, Thermal Spreading as an Alternative for the Wet Impregnation Method: Advantages and Downsides in the Preparation of $\text{MoO}_3/\text{SiO}_2\text{--Al}_2\text{O}_3$ Metathesis Catalysts, *J. Phys. Chem. C*, 114(43), 18664–18673.
- Dhaneswara, D., Fatriansyah, J.F., Situmorang, F.W., and Haqoh, A.N., 2020, Synthesis of Amorphous Silica from Rice Husk Ash: Comparing HCl and CH_3COOH Acidification Methods and Various Alkaline Concentrations, *Synthesis*, 11(1), 200–208.
- Dong, C., Ji, J., Yang, Z., Xiao, Y., Xing, M., and Zhang, J., 2019, Research Progress of Photocatalysis Based on Highly Dispersed Titanium in Mesoporous SiO_2 , *Chin. Chem. Lett.*, 30(4), 853–862.
- Dubray, F., Dib, E., Medeiros-Costa, I., Aquino, C., Minoux, D., van Daele, S., Nesterenko, N., Gilson, J.-P., and Mintova, S., 2022, The Challenge of Silanol Species Characterization in Zeolites, *Inorg. Chem. Front.*, 9(6), 1125–1133.
- Dutta, S., Hartkopf-Fröder, C., Witte, K., Brocke, R., and Mann, U., 2013, Molecular Characterization of Fossil Palynomorphs by Transmission Micro-FTIR spectroscopy: Implications for Hydrocarbon Source Evaluation, *Int. J. Coal Geol.*, 115, 13–23.
- Echevsky, G. V., Toktarev, A. V., Kodenev, E.G., and Aksenov, D.G., 2023, Development of Highly Efficient Hydroisodeparaffinization Catalysts Based on Micro-Mesoporous SAPO-31: New Approaches in the Synthesis of SAPO-31 and the Preparation of Bifunctional Catalysts, *Catalysts*, 13(5), 810.
- Ettekali, N., Allahyari, S., Rahemi, N., and Abedini, F., 2021, One-Pot Oxidative-Adsorptive Desulfurization of Model and Real Fuel Using Micro-Mesoporous SiO_2 Aerogel Supported MoO_3 , *Micropor. Mesopor. Mat.*, 326, 111376.

- Fatimah, I., Purwiantono, G., Sahroni, I., Sagadevan, S., Chun-Oh, W., Ghazali, S.A.I.S.M., and Doong, R.A., 2022, Recyclable Catalyst of ZnO/SiO₂ Prepared from Salacca Leaves Ash for Sustainable Biodiesel Conversion, *S. Afr. J. Chem. Eng.*, 40(1), 134–143.
- Fatimah, I., Zaenuri, F.U., Doewandono, L.N., Yahya, A., Citradewi, P.W., Sagadevan, S., and Oh, W.C., 2021, Biogenic Silica Extracted from Salacca Leaf Ash for Salicylic Acid Adsorption, *Sci. Technol. Indones.*, 6(4), 296–302.
- Ganiyu, S.A. and Lateef, S.A., 2021, Review of Adsorptive Desulfurization Process: Overview of the Non-carbonaceous Materials, Mechanism and Synthesis Strategies, *Fuel*, 294, 120273.
- Guo, Q., Huang, D., Kou, X., Cao, W., Li, L., Ge, L., and Li, J., 2017, Synthesis of Disperse Amorphous SiO₂ Nanoparticles via Sol–Gel Process, *Ceram. Int.*, 43(1), 192–196.
- Haghighi, M. and Gooneh-Farahani, S., 2020, Insights to the Oxidative Desulfurization Process of Fossil Fuels over Organic and Inorganic Heterogeneous Catalysts: Advantages and Issues, *Environ. Sci. Pollut. Res.*, 27, 39923–39945.
- Han, Y., Zhang, Y., Xu, C., and Hsu, C.S., 2018, Molecular Characterization of Sulfur-Containing Compounds in Petroleum, *Fuel*, 221, 144–158.
- Haruna, A., Merican, Z.M.A., and Musa, S.G., 2022, Recent Advances in Catalytic Oxidative Desulfurization of Fuel Oil – A Review, *J. Ind. Eng. Chem.*, 112, 20–36.
- Houda, S., Lancelot, C., Blanchard, P., Poinel, L., and Lamonier, C., 2018, Oxidative Desulfurization of Heavy Oils with High Sulfur Content: A Review, *Catalysts*, 8(9), 344.
- Jha, D., Maheshwari, P., Singh, Y., Haider, M.B., Kumar, R., and Balathanigaimani, M.S., 2023, A Comparative Review of Extractive Desulfurization Using Designer Solvents: Ionic Liquids & Deep Eutectic Solvents, *J. Energy Inst.*, 110, 101313.
- Jiang, Y., Wang, Y., Ni, J., and Li, L., 2021, Molybdenum-Based Materials for Sodium-Ion Batteries, *InfoMat*, 3(4), 339–352.
- Jing, X., Peng, X., Sun, X., Zhou, W., Wang, W., and Wang, S., 2019, Design and Synthesis of Mo₂C/MoO₃ with Enhanced Visible-Light Photocatalytic Performance for Reduction of Cr(VI) and Degradation of Organic Pollutants, *Mater. Sci. Semicond. Process.*, 100, 262–269.
- Joni, I.M., Nulhakim, L., Vanitha, M., and Panatarani, C., 2018, Characteristics of Crystalline Silica (SiO₂) Particles Prepared by Simple Solution Method Using Sodium Silicate (Na₂SiO₃) Precursor, *J. Phys. Conf. Ser.*, 1080, 012006.
- Karimifard, S. and Moghaddam, M.R.A., 2018, Application of Response Surface Methodology in Physicochemical Removal of Dyes from Wastewater: A Critical Review, *Sci. Total Environ.*, 640, 772–797.
- Kianpour, E. and Azizian, S., 2014, Polyethylene Glycol as a Green Solvent for Effective Extractive Desulfurization of Liquid Fuel at Ambient Conditions, *Fuel*, 137, 36–40.
- Kunimatsu, K., Uchida, H., and Watanabe, M., 2024, Interactions Between Adsorbed Hydrogen and Water Molecules on a Polycrystalline Pt Electrode Studied by In-Situ ATR-FTIR Spectroscopy, *J. Electroanal. Chem.*, 954, 118037.
- Lestari, P., Damayanti, S., and Arrohman, M.K., 2020, Emission Inventory of Pollutants (CO, SO₂, PM_{2.5}, and NO_x) in Jakarta Indonesia, *IOP Conf. Ser.: Earth Environ. Sci.*, 489(1), 012014.

- Li, S.W., Wang, W., and Zhao, J.S., 2020, Catalytic Oxidation of DBT for Ultra-Deep Desulfurization Under MoO_3 Modified Magnetic Catalyst: The Comparison Influence on Various Morphologies of MoO_3 , *Appl. Catal. A Gen.*, 602, 117671.
- Lin, Y.C., Hsu, C.H., Lin, H.P., Tang, C.Y., and Lin, C.Y., 2007, Preparation of Mesoporous Silica and Carbon Using Gelatin or Gelatin-Phenol-Formaldehyde Polymer Blend as Template, *Chem. Lett.*, 36(10), 1258–1259.
- Mahmoudi, V., Mojaverian Kermani, A., Ghahramaninezhad, M., and Ahmadpour, A., 2021, Oxidative Desulfurization of Dibenzothiophene by Magnetically Recoverable Polyoxometalate-Based Nanocatalyst: Optimization by Response Surface Methodology, *Mol. Catal.*, 509, 111611.
- Mel'gunov, M.S., 2023, Application of the Simple Bayesian Classifier for the N_2 (77 K) Adsorption/Desorption Hysteresis Loop Recognition, *Adsorption*, 29(5), 199–208.
- Mhareb, M.H.A., Ghrib, T., Sayyed, M.I., Hamad, M.K., Sfina, N., Ben Ali, A., and Almessiere, M.A., 2024, Structural, Morphological, Optical, and Radiation Shielding Properties for $\text{BaO}-\text{TeO}_2$ Glass Ceramic Modified with Different Oxides: Bi_2O_3 , MoO_3 , MnO_2 , and TiO_2 , *Phys. B: Condens. Mater*, 690, 416221.
- Mishra, S., Pradhan, N., Panda, S., and Akcil, A., 2016, Biodegradation of Dibenzothiophene and Its Application in the Production of Clean Coal, *Fuel Process. Technol.*, 152, 325–342.
- Mohammadi, Z., Najafi Chermahini, A., and Kasiri Baboukani, Z., 2024, Oxidative Desulfurization of Real and Model Fuel Using Vanadium–Chromium Bimetallic Catalysts Supported on KIT-6, *Res. Chem. Intermed.*, 50(2), 597–624.
- Mohapatra, M., Nayak, B., Sanjay, K., Subbaiah, T., and Mishra, B.K., 2014, Ligand Mediated Eco-Friendly Leaching of Zinc from Spent Catalyst in Alkaline Media, *J. Ind. Eng. Chem.*, 20(4), 2217–2223.
- Mokhtari, B., Akbari, A., and Omidkhah, M., 2019, Superior Deep Desulfurization of Real Diesel over $\text{MoO}_3/\text{Silica}$ Gel as an Efficient Catalyst for Oxidation of Refractory Compounds, *Energ. Fuel*, 33(8), 7276–7286.
- Nadia, A., Wijaya, K., Falah, I.I., Sudiono, S., and Budiman, A., 2022, Self-regeneration of Monodisperse Hierarchical Porous $\text{NiMo}/\text{Silica}$ Catalyst Induced by NaHCO_3 for Biofuel Production, *Waste Biomass Valori.*, 13, 2335–2347.
- Nguyen, T.K.O., Lai, N.H., Permadi, D.A., Nguyen, N.H.C., Sothea, K., Chitaporpan, S., Kanabkaew, T., Rattanasarat, J., and Sichum, S., 2020, *Emission Inventories for Air Pollutants and Greenhouse Gases with Emphasis on Data Management in the Cloud*, John Wiley & Sons, Inc., Hoboken.
- Novita, L. and Idris, I., 2022, Effectiveness of Silica Gel from Palm Kernel Shell Ash as a Moisture Absorber of Bottle Packaging Medicine, *IOP Conf. Ser.: Earth Environ. Sci.*, 1041, 012044.
- Parghi, K.D. and Jayaram, R. V., 2010, Sequential Oxidation and Condensation of Alcohols to Benzimidazoles/Benzodiazepines by $\text{MoO}_3-\text{SiO}_2$ as a Heterogeneous Bifunctional Catalyst, *Catal. Commun.*, 11(15), 1205–1210.
- Park, J.H., Ahn, J.W., Kim, K.H., and Son, Y.S., 2019, Historic and Futuristic Review of Electron Beam Technology for the Treatment of SO_2 and NO_x in Flue Gas, *Chem. Eng. J.*, 355, 351–366.
- Prabha, S., Durgalakshmi, D., Rajendran, S., and Lichtfouse, E., 2021, Plant-Derived Silica Nanoparticles and Composites for Biosensors, Bioimaging, Drug Delivery and Supercapacitors: A Review, *Environ. Chem. Lett.*, 19(2), 1667–1691.

- Purwaningsih, H., Ervianto, Y., Pratiwi, V.M., Susanti, D., and Purniawan, A., 2019, Effect of Cetyl Trimethyl Ammonium Bromide as Template of Mesoporous Silica MCM-41 from Rice Husk by Sol-Gel Method, *IOP Conf. Ser.: Mater. Sci. Eng.*, 515(1), 012051.
- Purwiandono, G., Fatimah, I., Sahroni, I., Citradewi, P.W., Kamari, A., Sagadevan, S., Oh, W.C., and Doong, R.A., 2022, Fe₃O₄@SiO₂ nanoflakes Synthesized Using Biogenic Silica from *Salacca zalacca* Leaf Ash and the Mechanistic Insight into Adsorption and Photocatalytic Wet Peroxidation of Dye, *Green Process. Synth.*, 11(1), 345–360.
- Raharjo, G., Saidi, D., and Afany, M.R., 2022, Soil Quality in Cultivation Land of Snakefruit (*Salacca edulis*) in Ledoknongko, Bangunkerto Village, Turi, Sleman Yogyakarta Indonesia, *Int. J. Adv. Eng. Res. Sci.*, 6(5), 27-31.
- Rosli, M.U. and Khor, C.Y., 2024, Simulation-Based Optimization of Plastic Transfer Molding Parameter for Thin Small Outline Package via Response Surface Methodology, *Int. J. Adv. Manuf. Technol.*, 130(9), 5055–5073.
- Saha, B., Vedachalam, S., and Dalai, A.K., 2021, Review on Recent Advances in Adsorptive Desulfurization, *Fuel Process. Technol.*, 214, 106685.
- Said, S. and Abdelrahman, A.A., 2020, Atomic Layer Deposition of MoO₃ on Mesoporous γ -Al₂O₃ Prepared by Sol-Gel Method as Efficient Catalyst for Oxidative Desulfurization of Refractory Dibenzothiophene Compound, *J. Solgel Sci. Technol.*, 95, 308–320.
- Saleh, T.A., 2022, Global Trends in Technologies and Nanomaterials for Removal of Sulfur Organic Compounds: Clean Energy and Green Environment, *J. Mol. Liq.*, 359, 119340.
- Samy, A., Ismail, A.M., and Ali, H., 2023, Environmentally Friendly Mesoporous SiO₂ with Mixed Fiber/Particle Morphology and Large Surface Area for Enhanced Dye Adsorption, *J. Mater. Sci.*, 58(4), 1586–1607.
- Sari, Z.G.L.V., Younesi, H., and Kazemian, H., 2015, Synthesis of Nanosized ZSM-5 Zeolite Using Extracted Silica from Rice Husk Without Adding Any Alumina Source, *Appl. Nanosci.*, 5, 737–745.
- Saviola, A.J., Vebryana, M.F., Wangsa, W., Prastyo, P., Syoufian, A., Saputra, D.A., Timuda, G.E., Hauli, L., Oh, W.C., and Wijaya, K., 2025, Performance Comparison of Molybdenum-Impregnated Sulfated Mesoporous Silica Catalysts by Spray and Wet Impregnation in Transforming Used Palm Cooking Oil into Bio-Jet Fuel, *Chem. Afr.*, 8(4), 1539–1556.
- Sharma, M., Sharma, P., and Kim, J.N., 2013, Solvent Extraction of Aromatic Components from Petroleum Derived Fuels: A Perspective Review, *RSC Adv.*, 3(26), 10103–10126.
- Sharma, P., Kherb, J., Prakash, J., and Kaushal, R., 2023, A Novel and Facile Green Synthesis of SiO₂ Nanoparticles for Removal of Toxic Water Pollutants, *Appl. Nanosci.*, 13(1), 735–747.
- Shen, K., Liu, X., Lu, G., Miao, Y., Guo, Yanglong, Wang, Y., and Guo, Yun, 2013, Lewis Acid Property and Catalytic Performance of MoO₃/SiO₂ for Propylene Epoxidation by Chp: Effects of Precipitant PH Value and Rare Earth Additive, *J. Mol. Catal. A Chem.*, 373, 78–84.
- Shi, Q. and Wu, J., 2021, Review on Sulfur Compounds in Petroleum and Its Products: State-of-the-Art and Perspectives, *Energ. Fuel*, 35(8), 14445–14461.

- Shinozaki, T.A., Suenaga, M., Ko, Y., Yamamoto, E., Murayama, H., and Tokunaga, M., 2022, Ultraviolet Light-Induced Decomposition of Benzothiophene and Dibenzothiophene Derivatives for Efficient Sulfur Removal Without Additives and Catalysts, *J. Clean. Prod.*, 370, 133402.
- Sikarwar, P., Kumar, U.K.A., Gosu, V., and Subbaramaiah, V., 2018, Catalytic Oxidative Desulfurization of Dbt Using Green Catalyst (Mo/MCM-41) Derived from Coal Fly Ash, *J Environ. Chem. Eng.*, 6(2), 1736–1744.
- Soleimani, M., Bassi, A., and Margaritis, A., 2007, Biodesulfurization of Refractory Organic Sulfur Compounds in Fossil Fuels, *Biotechnol. Adv.*, 25(6), 570–596.
- Teimouri, A., Mahmoudsalehi, M., and Salavati, H., 2018, Catalytic Oxidative Desulfurization of Dibenzothiophene Utilizing Molybdenum and Vanadium Oxides Supported on MCM-41, *Int. J. Hydrogen Energy*, 43(31), 14816–14833.
- Tran, D.T., Palomino, J.M., and Oliver, S.R.J., 2018, Desulfurization of JP-8 Jet Fuel: Challenges and Adsorptive Materials, *RSC Adv.*, 8(13), 7301–7314.
- Trisunaryanti, W., Sumbogo, S.D., Novianti, S.A., Fatmawati, D.A., Ulfa, M., and Nikmah, Y.L., 2021, ZnO-Activated Carbon Blended as a Catalyst for Oxidative Desulfurization of Dibenzothiophene, *Bull. Chem. React. Eng. Catal.*, 16(4), 881–887.
- Trisunaryanti, W., Triyono, Wijaya, K., Kartini, I., Purwono, S., Rodiansono, Mara, A., and Budiansyah, A., 2023, Preparation of Mo-Impregnated Mordenite Catalysts for the Conversion of Refined Kernel Palm Oil into Bioavtur, *Communications in Science and Technology*, 8(2), 226–234.
- Tu, Y., Li, T., Yu, G., Wei, L., Ta, L., Zhou, Z., and Ren, Z., 2019, Study on Modification and Desulfurization Performance of a Molybdenum-Based Catalyst, *Energ. Fuel*, 33(9), 8503–8510.
- Upare, D.P., Lee, C.W., Lee, D.K., and Kang, Y.S., 2024, Effect of Acidity of Solid Acid Catalysts During Non-oxidative Thermal Decomposition of LDPE, *Carbon Lett.*, 35(1), 277–285.
- Vargas-Consuelos, I., Camacho-López, M.A., Ramos-Sanchez, V.H., and Graeve, O.A., 2023, Phase and Morphology Control of Hexagonal MoO₃ Crystals via Na⁺ Interactions: A Raman Spectroscopy Study, *J. Phys. Chem. C*, 127(27), 13136–13148.
- Wang, R., Luo, L., JunYang, Y., Shu, L., Jegatheesan, V., Wang, H. Bin, and Yang, M., 2017, Preparation and Characterization of Mesoporous Silica (Ms) Supporting Lanthanum Carbonate (Ms-la) for the Defluorination of Aqueous Solutions, *Desalin. Water Treat.*, 96, 112–119.
- Wang, W., Zheng, S., Pu, J., Cai, Z., Wang, H., Wang, L., and He, G., 2020, Microstructure, Mechanical and Tribological Properties of Mo-V-N Films by Reactive Magnetron Sputtering, *Surf. Coat. Technol.*, 387, 125532.
- Wei, Y., Yang, W., and Yang, Z., 2022, An Excellent Universal Catalyst Support-Mesoporous Silica: Preparation, Modification and Applications in Energy-Related Reactions, *Int. J. Hydrogen Energy*, 47(16), 9537–9565.
- Wijaya, K., Ningrum, T.S., Saviola, A.J., Prasetyo, N., Ardelia, Z.L., Fitria, R.A., Gea, S., Hauli, L., Amin, A.K., Saputri, W.D., Setiawan, A., and Oh, W.-C., 2023, Development of Chromium-Impregnated Sulfated Silica as a Mesoporous Catalyst in the Production of Biogasoline from Used Cooking Oil via a Hydrocracking Process, *React. Kinet. Mech. Catal.*, 137(2), 971–989.

- Wijaya, K., Saputri, W.D., Aziz, I.T.A., Wangsa, Heraldry, E., Hakim, L., Suseno, A., and Utami, M., 2022, Mesoporous Silica Preparation Using Sodium Bicarbonate as Template and Application of the Silica for Hydrocracking of Used Cooking Oil into Biofuel, *Silicon*, 14, 1583–1591.
- Witek-Krowiak, A., Chojnacka, K., Podstawczyk, D., Dawiec, A., and Pokomeda, K., 2014, Application of Response Surface Methodology and Artificial Neural Network Methods in Modelling and Optimization of Biosorption Process, *Bioresour. Technol.*, 160, 150–160.
- Xu, L., Zhang, J., Ding, J., Liu, T., Shi, G., Li, X., Dang, W., Cheng, Y., and Guo, R., 2020, Pore Structure and Fractal Characteristics of Different Shale Lithofacies in the Dalong Formation in the Western Area of the Lower Yangtze Platform, *Minerals*, 10(1), 72.
- Xu, W., Tamarov, K., Fan, L., Granroth, S., Rantanen, J., Nissinen, T., Peräniemi, S., Uski, O., Hirvonen, M.R., and Lehto, V.P., 2018, Scalable Synthesis of Biodegradable Black Mesoporous Silicon Nanoparticles for Highly Efficient Photothermal Therapy, *ACS Appl. Mater. Interfaces*, 10(28), 23529–23538.
- Xue, M., Chitrakar, R., Sakane, K., Hirotsu, T., Ooi, K., Yoshimura, Y., Toba, M., and Feng, Q., 2006, Preparation of Cerium-Loaded Y-Zeolites for Removal of Organic Sulfur Compounds from Hydrodesulfurized Gasoline and Diesel Oil, *J. Colloid Interface Sci.*, 298(2), 535–542.
- Yang, G., Feng, F., Luo, Y., Qin, J., Yuan, F., Wang, S., Luo, S., and Ma, J., 2021, Facile Synthesis of MoO₃ Nanodots Self-Assembled into Hollow Mesoporous Silica: Enhancing Efficient Oxidative Desulfurization and Investigating Reaction Mechanism, *J. Environ. Chem. Eng.*, 9(5), 106309.
- Yang, G., Yang, H., Zhang, X., Iqbal, K., Feng, F., Ma, J., Qin, J., Yuan, F., Cai, Y., and Ma, J., 2020, Surfactant-Free Self-Assembly to the Synthesis of MOO₃ Nanoparticles on Mesoporous SiO₂ to Form MoO₃/SiO₂ Nanosphere Networks with Excellent Oxidative Desulfurization Catalytic Performance, *J. Hazard. Mater.*, 397, 122654.
- Yolmeh, M. and Jafari, S.M., 2017, Applications of Response Surface Methodology in the Food Industry Processes, *Food Bioprocess Technol.*, 10(3), 413–433.
- Zawada, A., Lubas, M., and Przerada, I., 2023, Application of Mössbauer Spectroscopy and FT-IR to Describe Coordination of Amphoteric Ions in Structure of Glasses from the SiO₂–Na₂O–MgO–CaO–Al₂O₃–Fe₂O₃ System, *J. Mol. Struct.*, 1285, 135368.
- Zhang, X., Liu, Qiang, Zhang, Q., Liu, Qiyang, Chen, L., Li, Y., Wang, C., and Ma, L., 2019, Aromatic Fuel Production from Phenolics by Catalytic Hydrodeoxygenation over Novel Mo-Based Catalyst, *Energy Procedia*, 22–25 August 2018, Hong Kong.
- Zhang, Z., Xi, F., Chen, X., Li, S., Ma, W., Ding, Z., Qu, T., Dai, Y., and Deng, R., 2022, Improved Lithium-Ion Batteries with Coral-Like Anodes Made of Recycled Spherical Porous Silicon Coated with Nitrogen-Doped Carbon, *Environ. Chem. Lett.*, 20(6), 3377–3385.
- Zhao, Y., Xu, J., Li, Z., Fu, T., and Jiang, S., 2020, In Vitro Antibacterial Properties of MoO₃/SiO₂/Ag₂O Nanocomposite Coating Prepared by Double Cathode Glow Discharge Technique, *Surf. Coat Technol.*, 397, 125992.