

DAFTAR PUSTAKA

- Agustriyanto, R., Sapei, L., Setiawan, R. dan Rosaline, G., 2017, Pengaruh Rasio Asam Sulfat Terhadap Asam Nitrat Pada Sintesis Nitrobenzena dalam CSTR, *Seminar Nasional Inovasi Dan Aplikasi Teknologi di Industri 2017 ITN Malang, 4 Pebruari 2017*. Fakultas Teknologi Industri ITN Malang.
- Akkari, R., Ghorbel, A., Essayem, N. dan Figueras, F., 2005. Mesoporous Silica Supported Sulfated Zirconia Prepared by A Sol–Gel Process. *J. Sol-Gel Sci. Technol.* 33(1), 121-125.
- Aneu, A., Wijaya, K. and Syoufian, A., 2020. Silica-based Solid Acid Catalyst With Different Concentration of H₂SO₄ and Calcination Temperature: Preparation And Characterization. *Silicon*, 13(7), 2265-2270.
- Astsatryan, H., Abajyan, H., Narsisian, W., Da Costa, G. and Gurout, T., 2015, September. Dynamic Voltage and Frequency Scaling for 3D Classical Spin Glass Application. In: *10th International Conference on Computer Science and Information Technologies (CSIT 2015)*, 121-124.
- Atkins, P. dan Paula, J. D., 2006. *Physical Chemistry for The Life Science*, 8th edn, New York: W. H. Freeman and Company.
- Bogdal, D., 2005. *Microwave-Assisted Organic Synthesis: One Hundred Reaction Procedures*. Elsevier.
- Bose, A.K., Ganguly, S.N., Srirajari, V., Sharma, A.H., Lavlinskaia, N., Manhas, M.S. and Damavarapu, R., 1999, March. Highly Accelerated Microwave Assisted Aromatic Nitration with Dilute Nitric Acid. In *National Meeting-American Chemical Society Division of Environmental Chemistry*. American Chemical Society, Division of Environmental Chemistry. 453-453.

- Christensen, C. H. and Nørskov, J. K., 2008, A Molecular View of Heterogeneous Catalysis, *J. Chem. Phys.* 128, 182503.
- Clearfield, A., Serrette, G.P.D. and Khazi-Syed, A.H., 1994, Nature of Hydrous Zirconia and Sulfated Hydrous Zirconia, *Catal. Today*, 20, 295-312.
- Dixit, C.K., Bhakta, S., Kumar, A., Suib, S.L. and Rusling, J.F., 2016. Fast Nucleation for Silica Nanoparticle Synthesis Using A Sol–Gel Method. *Nanoscale*, 8(47), 19662-19667.
- Fu, B., Gao, L., Nia, L., Wei, R., and Xiao, G., 2009, Biodiesel from Waste Cooking Oil via Heterogeneous Superacid Catalyst $\text{SO}_4^{2-}/\text{ZrO}_2$, *Energ. Fuel*, 23, 569-572.
- Ghoreishi, K. B., Asim, N., Yarno, M. A., dan Samsudin, M. W., 2014, Mesoporous Phosphated and Sulphated Silica as Solid Acid Catalyst for Glycerol Acetylation, *Chem. Pap.* 68 (9), 1195-1204.
- Gong, S., Liu, L., Cui, Q. and Ding, J., 2010. Liquid Phase Nitration of Benzene over Supported Ammonium Salt of 12-Molybdophosphoric Acid Catalysts Prepared by Sol–Gel Method. *J. Hazard. Mater.* 178(1-3), 404-408.
- Gong, S.W., Liu, L.J., Zhang, Q., and Wang, L.Y., 2012. Effective Liquid-phase Nitration of Benzene Catalyzed by a Stable Solid Acid Catalyst: Silica Supported $\text{Cs}_{2.5}\text{H}_{0.5}\text{PMo}_{12}\text{O}_{40}$. *Bull. Korean Chem. Soc.* 33(4), 1279-1284.
- Horikoshi, S., dan Serpone, N., 2014, Role of Microwaves in Heterogeneous Catalytic Systems, *Catal. Sci. and Technol.*, 4(5), 1197–1210.
- Izumi, Y., Saito, S. and Soma, K., 1999. Differential Scanning Calorimetry and Structural Studies of The Sol-gel Transition of Gellan Gum in Water. *Physical Chemistry and Industrial Application of Gellan Gum*. Springer, Berlin, Heidelberg, 48-55.

- Jafarzadeh, M., Rahman, I. A., and Sipaut, C.S., 2009, Synthesis of Silica Nanoparticles by Modified Sol-gel Process: The Effect of Mixing Modes of The Reactants and Drying Techniques, *J. Sol-Gel Sci. Technol.* 50, 328-336.
- Jeon, H.J., Yi, S.C., Oh, S.G., 2003, Preparation and Antibacterial Effects of Ag–SiO₂ Thin Films by Sol–Gel Method, *Biomaterials*, 24, 4921-4928.
- Keller, T. C., Arras, J., Haus, M. O., Hauert, R., Kevin, A., Kevin, J., and Ramierez, J. P., 2016, Synthesis-Proprety-Performance Relationships of Amorphous Silica Alumina Catalysts for The Production of Methylene dianiline And Higher Homologues, *J. Catal.* 344, 757-767.
- Kingston H.M., dan Jassie L.B. 1988. *Introduction to Microwave Sample Preparation Theory and Practice*. ACS publishing.
- Koskin, A.P., Kenzhin, R.V., Vedyagin, A.A. and Mishakov, I.V., 2014. Sulfated Perfluoropolymer–Cnf Composite as A Gas-Phase Benzene Nitration Catalyst. *Catal. Commun.* 53, pp.83-86.
- Koskin, A.P., Mishakov, I.V., and Vedyagin, A.A., 2016. In Search of Efficient Catalysts and Appropriate Reaction Conditions for Gas Phase Nitration of Benzene. *Resour. Technol.* 2(3), 118-125.
- Kulkarni, A.A., 2014. Continuous Flow Nitration in Miniaturized Devices. *Beilstein J. Org. Chem.* 10(1), 405-424.
- Kustov, L.M., dan Sinev, I.M., 2010, Microwave Activation of Catalysts and Catalytic Processes, *Russ. J. Phys. Chem.*, 84(10), 1676–1694.
- Li, L., Fang, Y., Xiao, Q., Wu, Y. J., Wang, N., dan Chen, X. M. (2012). Microwave Dielectric Properties of Fused Silica Prepared by Different Approaches. *Int. J. Appl. Ceram. Technol.* 11(1), 193–199.
- Loupy, A., 2006. *Microwaves in Organic Synthesis*, 2nd edn. Wiley-VCH. New Jersey.

- Mane, V., Lalaso, M., Waghmode, S., Jadhav, K.D., Dongare, M.K. and Dagade, S.P., 2014. Nitration of Benzene Using Mixed Oxide Catalysts. *IOSR J. Appl. Chem*, 7, 50-57.
- Mann, U., 2009. *Principles Of Chemical Reactor Analysis and Design: New Tools for Industrial Chemical Reactor Operations*. John Wiley & Sons.
- Motasemi, F., dan Afzal, T., 2013. A Review on The Microwave-Assisted Pyrolysis Technique. *Renew. Sustain. Energ. Rev.* 28(1), 317–330.
- Palma, V., Barba, D., Cortese, M., Martino, M., Renda, S., & Meloni, E., 2020, Microwaves and Heterogeneous Catalysis: A Review on Selected Catalytic Processes, *Catalysts*, 10(2), 246.
- Pratiwi, A. F, 2021. Sintesis Katalis Silika Tersulfatasi Teremban Logam NiMo untuk Hidrorengkah Minyak Sawit Segar menjadi Biogasolin, *Skripsi*, Universitas Gajah Mada, Yogyakarta.
- Purwanto, A.S., Taslimah, dan Sriatun, 2012, Sintesis dan Karakterisasi Silica Gel dari Tetraetilortosilikat (TEOS) Menggunakan Surfaktan Polyethylene Glycol (PEG) 6000 dalam Kondisi Basa, *J. Kim. Sains Apl.* 15(1), 1-6.
- Radwan, N., Hagar, M., Afifi, T., Al-wadaani Fahd, and Okasha, R., 2018, Catalytic Activity of Sulfated and Phosphate Catalysts Towards the Synthesis of Substituted Coumarin, *Catalysts*, 8(1), 1-18.
- Rahman, I.A. and Padavettan, V., 2012. Synthesis of Silica Nanoparticles by Sol-gel: Size-Dependent Properties, Surface Modification, and Applications in Silica-Polymer Nanocomposites—A Review. *J. Nano Mater.* 2012, 1-15.
- Rasheed, S., Rao, D. N., Reddy, A. S., Shankar, R., dan Das, P., 2015, Sulphuric Acid Immobilized on Silica Gel ($\text{H}_2\text{SO}_4\text{-SiO}_2$) as an Eco-friendly Catalyst for Transamidation, *RSC Adv.* 5(14), 10567-10574.

- Sotomayor, F.J., Cychosz, K.A. dan Thommes, M., 2018. Characterization of Micro/Mesoporous Materials by Physisorption: Concepts and Case Studies. *Acc. Mater. Surf. Res.* 3(2), pp.34-50.
- Sriyanti, S., Taslimah, T., Nuryono, N. and Narsito, N., 2005. Sintesis Bahan Hibrida Amino-Silika dari Abu Sekam Padi melalui Proses Sol-gel. *J. Kim. Sains Apl.* 8(1), 1-8.
- Sriyanti, S., Taslimah, T., Nuryono, N. and Narsito, N., 2005. Sintesis Bahan Hibrida Amino-Silika dari Abu Sekam Padi melalui Proses Sol-gel. *J. Kim. Sains Apl.* 8(1), 1-8.
- Stanitski, C. L., Eubanks, L. P., Middlecamp, C. H., and Pienta, N. J., 2003, *Chemistry in Context Applying Chemistry to Society 4th ed.*, Mc-GrawwHill, New York.
- Sulastris, S. and Kristianingrum, S., 2010. Berbagai Macam Senyawa Silika: Sintesis, Karakterisasi dan Pemanfaatan. *In Prosiding Seminar Nasional Penelitian, Pendidikan dan Penerapan MIPA*, Fakultas MIPA, Universitas Negeri Yogyakarta, 15, 212-216.
- Sun, J., Wang, W., & Yue, Q., 2016, Review on Microwave-Matter Interaction Fundamentals and Efficient Microwave-Associated Heating Strategies, *Materials*, 9(4), 231.
- Umbarkar, S.B., Biradar, A.V., Mathew, S.M., Shelke, S.B., Malshe, K.M., Patil, P.T., Dagde, S.P., Niphadkar, S.P. and Dongare, M.K., 2006. Vapor Phase Nitration of Benzene Using Mesoporous MoO₃/SiO₂ Solid Acid Catalyst. *Green Chem.* 8(5), 488-493.
- Wang, D., Romer, F., Connell, L., Walter, C., Saiz, E., Yue, S., Lee, P. D., McPhail, D. S., Hanna, J. V. and Jones, J. R., 2015, Highly Flexible Silica/Chitosan

Hybrid Scaffolds with Oriented Pores for Tissue Regeneration, *J. Mater. Chem. B.*, 3, 7560-7576,

Zarei, A., Khazdooz, L., Aghaei, H., Gheisari, M.M., Alizadeh, S. and Golestanifar, L., 2017, Synthesis of Phenols by Using Aryldiazonium Silica Sulfate Nanocomposites, *Tetrahedron*, 73, 6954–6961.

Zhang, J., Zhang, B., Zhou, J., Li, J., Shi, C., Huang, T., Shi, C., Huang, T., Wang, Z., and Tang, J., 2011, H₂SO₄-SiO₂: Highly Efficient and Reusable Catalyst for per-O-Acetylation of Carbohydrates Under Solvent-Free Conditions, *J. Carbohydrate Chem.* 30(3), 165-177.

Zhang, X., Hayward, D. O., dan Mingos, D. M. P., 2003, Effects of Microwave Dielectric Heating on Heterogeneous Catalysis, *Catal. Letters*, 88(1–2), 33–38.

Zhilin, V.F., Zbarskii, V.L. and Yudin, N.V., 2006. Kinetics of 2, 4-dihydro-1, 2, 4-triazol-3-one Nitration in Nitric Acid. *Kinet. Catal.* 47(6), 846-849.

Zuhra, Z., Husin, H., Hasfita, F. dan Rinaldi, W., 2015. Preparasi Katalis Abu Kulit Kerang Untuk Transesterifikasi Minyak Nyamplung menjadi Biodiesel. *Agritech*, 35(1), 69-77.