



DAFTAR PUSTAKA

- Ali-Dahmane, T., Brahmi, L., Hamacha, R., Hacini, S., & Bengueddach, A. (2019). Comparison of lewis acidity between Al-MCM-41 pure chemicals and Al-MCM-41 synthesized from bentonite. *Bulletin of Chemical Reaction Engineering and Catalysis*, 14(2), 358–368. <https://doi.org/10.9767/bcrec.14.2.3367.358-368>
- Alothman, Z. A. (2012). A review: Fundamental aspects of silicate mesoporous materials. In *Materials* (Vol. 5, Issue 12, pp. 2874–2902). <https://doi.org/10.3390/ma5122874>
- Branković, M. D., Zarubica, A. R., Andjelković, T. D., & Andjelković, D. H. (2017). *Mesoporous Silica (MCM-41): Synthesis/Modification, Characterization And Removal Of Selected Organic Micro-Pollutants From Water*.
- Carvalho, G. C., Marena, G. D., Karnopp, J. C. F., Jorge, J., Sábio, R. M., Martines, M. A. U., Bauab, T. M., & Chorilli, M. (2022). Cetyltrimethylammonium bromide in the synthesis of mesoporous silica nanoparticles: General aspects and in vitro toxicity. *Advances in Colloid and Interface Science*, 307, 102746. <https://doi.org/10.1016/J.CIS.2022.102746>
- Chen, L. Y., Ping, Z., Chuah, G. K., Jaenicke, S., & Simon, G. (1999). A comparison of post-synthesis alumination and sol-gel synthesis of MCM-41 with high framework aluminum content. In *Microporous and Mesoporous Materials* (Vol. 27).
- Chen, Y., Wang, M., Hon, M. (2004). Phase Transformation and Growth of Mullite in Kaolin Ceramics. *Journal of the European Ceramic Society*, 24, 2389-2397.
- Claverie, M., Martin, F., Tardy, J. P., Cyr, M., De Parseval, P., Grauby, O., & Le Roux, C. (2015). Structural and chemical changes in kaolinite caused by flash calcination: Formation of spherical particles. *Applied Clay Science*, 114, 247–255. <https://doi.org/10.1016/j.clay.2015.05.031>



- Dewi, R., Agusnar, H., Alfian, Z., & Tamrin. (2018). Characterization of technical kaolin using XRF, SEM, XRD, FTIR and its potentials as industrial raw materials. *Journal of Physics*. doi:10.1088/1742-6596/1116/4/042010
- Du, C., & Yang, H. (2012). Investigation of the physicochemical aspects from natural kaolin to Al-MCM-41 mesoporous materials. *Journal of Colloid and Interface Science*, 369(1), 216–222. <https://doi.org/10.1016/j.jcis.2011.12.041>
- Fadhlulloh, M. A., Rahman, T., Bayu, A., Nandiyanto, D., & Mudzakir, A. (2014). REVIEW TENTANG SINTESIS SiO₂ NANOPARTIKEL. In *Jurnal Integrasi Proses* (Vol. 5, Issue 1). <http://jurnal.untirta.ac.id/index.php/jip>
- Hamid, A., & Prasetyoko, D. (2015). Formation Of Mesoporous Zsm-5 From Natural Kaolin And Colloidal Silica With Two-Step Crystallization, *Proceeding of International Conference On Research, Implementation And Education Of Mathematics And Sciences*.
- Hartanto, D., Yuan, L. S., Sari, S. M., Sugiarso, D., Murwani, I. K., Ersam, T., Prasetyoko, D., & Nur, H. (2016). Can kaolin function as source of alumina in the synthesis of ZSM-5 without an organic template using a seeding technique? *Malaysian Journal of Fundamental and Applied Sciences*, 12(2). <https://doi.org/10.11113/mjfas.v12n2.476>
- Hartati, H., Purwaningsih, A., Tjahjandarie, T. S., Saputri, N. H., Puspitasari, I. S., Lamanele, C. N., Sa'adah, A. A., Haque, A. S., & Mardho, D. Z. (2020). Synthesis of amorphous aluminosilicate from impure Indonesian kaolin. *Open Chemistry*, 18(1), 295–302. <https://doi.org/10.1515/chem-2020-0033>
- Hasanah, N., Sutarno, S., & Kunarti, E. S. (2018). Characteristic Study of the MCM-41 Modified with Zn by Direct Synthesis. *JKPK (Jurnal Kimia Dan Pendidikan Kimia)*, 3(3), 183. <https://doi.org/10.20961/jkpk.v3i3.22808>
- Heru, B. S. (2010). *Katalisis Heterogen*. Universitas Indonesia Press.
- Ibrahim JIBRIL, Z., Ramli, A., & Jumbri, K. (2018). Al-MCM-41 Based Catalysts for Transesterification of Jatropha Oil to Biodiesel: Effect of Ce and Zr Special articles: JCREN Technical Report. In *J. Jpn. Inst. Energy* (Vol. 97, Issue 7).
- Ifa, L., & Nurjannah, N. (2021). *Bioadsorben dan Aplikasinya*. <https://www.researchgate.net/publication/357393346>
-



- Johansson, E. M. (2010). *Controlling the Pore Size and Morphology of Mesoporous Silica*. Linköping University Electronic Press.
- Kleitz, F. (2002). Ordered Mesoporous Materials : Template Removal, *frameworks and morphology*.
- Laudise, R. A. (1987). *Hydrothermal Synthesis of Crystals*. Washington, D.C.
- Lorenti, J. P., Scolari, E., Finger, P. H., Plass, W., & Gallo, J. M. R. (2021). Synthesis of Sn-MCM-41 at Low Temperature: Effect of the Synthesis Parameters on the Structural, Textural, and Catalytic Properties. *European Journal of Inorganic Chemistry*, 2021(23), 2231–2240. <https://doi.org/10.1002/ejic.202100162>
- Trisunaryanti, W. (2018). *Material Katalis dan Karakternya*. Gadjah Mada University Press.
- Muljani, S., Setyawan, H., Wibawa, G., & Altway, A. (2014). A facile method for the production of high-surface-area mesoporous silica gels from geothermal sludge. *Advanced Powder Technology*, 25(5), 1593–1599. <https://doi.org/10.1016/j.appt.2014.05.012>
- Ngatijo. (2013). *Sintesis Silika Termomodifikasi Amin Dan Aplikasinya Sebagai Adsorben Ion Tembaga (II)*. Prosiding Semirata FMIPA, Universitas Lampung.
- Nugraha, R. E., Prasetyoko, D., Asikin-Mijan, N., Bahruji, H., Suprpto, S., Taufiq-Yap, Y. H., & Jalil, A. A. (2021). The effect of structure directing agents on micro/mesopore structures of aluminosilicates from Indonesian kaolin as deoxygenation catalysts. *Microporous and Mesoporous Materials*, 315. <https://doi.org/10.1016/j.micromeso.2021.110917>
- Nur'aeni, D., Prabowo Hadisantoso, E., Suhendar, D. D., Kimia, J., Sains, F., Teknologi, D., Gunung, S., Bandung, D., Nasution, J. A. H., 105 Cibiru, N., & Bandung, K. (2017). *ADSORPSI ION LOGAM Mn 2+ DAN Cu 2+ OLEH SILIKA GEL DARI ABU AMPAS TEBU* (Vol. 4, Issue 2).
- Roik, N. V., & Belyakova, L. A. (2013). Sol-gel synthesis of MCM-41 silicas and selective vapor-phase modification of their surface. *Journal of Solid State Chemistry*, 207, 194–202. <https://doi.org/10.1016/j.jssc.2013.09.027>
-



- Sadat-Shojai, M., Khorasani, M. T., & Jamshidi, A. (2012). Hydrothermal processing of hydroxyapatite nanoparticles - A Taguchi experimental design approach. *Journal of Crystal Growth*, 361(1), 73–84. <https://doi.org/10.1016/j.jcrysgro.2012.09.010>
- Sahel, F., Sebih, F., Bellahouel, S., Bengueddach, A., & Hamacha, R. (2020). Synthesis and characterization of highly ordered mesoporous nanomaterials Al-MCM-41 and Al-SBA-15 from bentonite as efficient catalysts for the production of biodiesel MEA and EEA. *Research on Chemical Intermediates*, 46(1), 133–148. <https://doi.org/10.1007/s11164-019-03939-5>
- Santos, E. C., Costa, L. S., Oliveira, E. S., Bessa, R. A., Freitas, A. D. L., Oliveira, C. P., Nascimento, R. F., & Loiola, A. R. (2018). Al-MCM-41 synthesized from kaolin via hydrothermal route: Structural characterization and use as an efficient adsorbent of methylene blue. *Journal of the Brazilian Chemical Society*, 29(11), 2378–2386. <https://doi.org/10.21577/0103-5053.20180115>
- Sasaoka, E., Hatori, M., Sada, N., & Uddin, M. A. (2000). Role of H₂O in oxidative regeneration of ZnS formed from high-temperature desulfurization ZnO sorbent. *Industrial and Engineering Chemistry Research*, 39(10), 3844–3848. <https://doi.org/10.1021/ie0004747>
- Side, S., Putri, S. E., Pratiwi, D. E., et al. (2023). The Effect of Acid Treatment on The Characteristics of Modernite Zeolite. *Jurnal Sainsmat*, 12(2), 114–123.
- Vempati, R. K., Borade, R., Hegde, R. S., & Komarneni, S. (2006). Template free ZSM-5 from siliceous rice hull ash with varying C contents. *Microporous and Mesoporous Materials*, 93(1–3), 134–140. <https://doi.org/10.1016/j.micromeso.2006.02.008>
- G. Svehla dkk. (1979). *Vogels Textbook Of Macro And Semimicro Qualitative Inorganic Analysis 5th Edition*. Longman Group. New York.
- Wulandari, N. M., Efiyanti, L., Trisunaryanti, W., Oktaviano, H. S., Bahri, S., Lailun Ni'mah, Y., & Larasati, S. (2021). Effect of CTAB ratio to the characters of mesoporous silica prepared from rice husk ash in the pyrolysis of α -cellulose. *Bulletin of Chemical Reaction Engineering and Catalysis*, 16(3), 632–640. <https://doi.org/10.9767/BCREC.16.3.10828.632-640>
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Laporan Hasil Penelitian

“Pengaruh Mol Surfaktan *Cetyl Trimetyhl Ammonium Bromide* (CTAB) Dan Konsentrasi Asam Klorida (HCl) Pada Sintesis Al-MCM-41”

Xia, Y., & Mokaya, R. (2003). On the hydrothermal stability of mesoporous aluminosilicate MCM-48 materials. *Journal of Physical Chemistry B*, 107 (29), 6954–6960. <https://doi.org/10.1021/jp0270147>