

REFERENCES

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- Abdullahi, T., Harun, Z., and Othman, M. H. D. (2017). A review on sustainable synthesis of zeolite from kaolinite resources via hydrothermal process. *Advanced Powder Technology*, 28(8), 1827-1840.
- Amoni, B. d. C., Freitas, A. D. L. d., Loiola, A. R., Soares, J. B., and Soares, S. d. A. (2019). A method for NaA zeolite synthesis from coal fly ash and its application in warm mix asphalt. *Road Materials and Pavement Design*, 20(sup2), S558-S567.
- Bakkali, F., Averbeck, S., Averbeck, D., and Idaomar, M. (2008). Biological effects of essential oils-a review. *Food and chemical toxicology*, 46(2), 446-475.
- Barthomeuf, D. (1984). Conjugate acid-base pairs in zeolites. *The Journal of Physical Chemistry*, 88(1), 42-45.
- Barthomeuf, D. (2003). Framework induced basicity in zeolites. *Microporous and Mesoporous Materials*, 66(1), 1-14.
- Boer, D. G., Langerak, J., and Pescarmona, P. P. (2023). Zeolites as selective adsorbents for CO₂ separation. *ACS Applied Energy Materials*, 6(5), 2634-2656.
- Bonenfant, D., Kharoune, M., Niquette, P., Mimeault, M., and Hausler, R. (2008). Advances in principal factors influencing carbon dioxide adsorption on zeolites. *Science and technology of advanced materials*, 9(1), 013007.
- Cholmaitri, C., Uthairatanakij, A., Laohakunjit, N., Jitareerat, P., and Mingvanish, W. (2020). Controlled release of methyl salicylate by biosorbents delays the ripening of banana fruit. *PeerJ Materials Science*, 2, e12.
- Costa, S. P., Soares, O. v. S., Aguiar, C. A., and Neves, I. C. (2022). Fragrance carriers obtained by encapsulation of volatile aromas into zeolite structures. *Industrial Crops and Products*, 187, 115397.

- Cui, Y., Xing, Y., Tian, J., Su, W., Sun, F.-Z., and Liu, Y. (2023). Insights into the adsorption performance and separation mechanisms for CO₂ and CO on NaX and CaA zeolites by experiments and simulation. *Fuel*, 337, 127179.
- Dasgupta, A., Wahed, A., Dasgupta, A., and Wahed, A. (2014). Common poisonings including heavy metal poisoning. *Clinical Chemistry, Immunology and Laboratory Quality Control*, 337-351.
- Davarpanah, E., Armandi, M., Hernández, S., Fino, D., Arletti, R., Bensaid, S., and Piumetti, M. (2020). CO₂ capture on natural zeolite clinoptilolite: Effect of temperature and role of the adsorption sites. *Journal of environmental management*, 275, 111229.
- de Aquino, T. F., Estevam, S. T., Viola, V. O., Marques, C. R., Zancan, F. L., Vasconcelos, L. d. B., Riella, H. G., Pires, M. a. J., Morales-Ospino, R., and Torres, A. E. B. (2020). CO₂ adsorption capacity of zeolites synthesized from coal fly ashes. *Fuel*, 276, 118143.
- de Carvalho Izidoro, J., Fungaro, D. A., and Cataldo, E. (2024). Zeolites synthesized from agro-industrial residues applied in agriculture: A review and future prospects. *Soil Use and Management*, 40(1), e13003.
- Evans, W., and Evans, D. (2009). Chapter 22-Volatile oils and resins. *Trease and Evans' Pharmacognosy (Sixteenth Edition): WB Saunders*, 263-303.
- Gao, F., Li, Y., Bian, Z., Hu, J., and Liu, H. (2015). Dynamic hydrophobic hindrance effect of zeolite@ zeolitic imidazolate framework composites for CO₂ capture in the presence of water. *Journal of Materials Chemistry A*, 3(15), 8091-8097.
- Gouveia, L. G. T., Agustini, C. B., Perez-Lopez, O. W., and Gutterres, M. (2020). CO₂ adsorption using solids with different surface and acid-base properties. *Journal of Environmental Chemical Engineering*, 8(4), 103823.
- Jantarit, N., Tayraukham, P., Osakoo, N., Föttinger, K., and Wittayakun, J. (2020). Formation of EMT/FAU intergrowth and nanosized SOD zeolites from synthesis

- gel of zeolite NaX containing ethanol. *Materials Research Express*, 7(7), 075011.
- Kaithwas, A., Prasad, M., Kulshreshtha, A., and Verma, S. (2012). Industrial wastes derived solid adsorbents for CO₂ capture: A mini review. *Chemical Engineering Research and Design*, 90(10), 1632-1641.
- Kamseu, E., á Mounsam, L. B., Cannio, M., Billong, N., Chaysuwan, D., Melo, U. C., and Leonelli, C. (2017). Substitution of sodium silicate with rice husk ash-NaOH solution in metakaolin based geopolymer cement concerning reduction in global warming. *Journal of cleaner production*, 142, 3050-3060.
- Keawkumay, C., Krukkratoke, P., Youngjan, S., Osakoo, N., Deekamwong, K., Khemthong, P., Phanthasri, J., Prayoonpokarach, S., and Wittayakun, J. (2024). Extraction of silica from sugarcane bagasse ash and its utilization in zeolite 4A synthesis for CO₂ adsorption. *RSC advances*, 14(27), 19472-19482.
- Keawkumay, C., Rongchapo, W., Sosa, N., Suthirakun, S., Koleva, I. Z., Aleksandrov, H. A., Vayssilov, G. N., and Wittayakun, J. (2019). Paraquat adsorption on NaY zeolite at various Si/Al ratios: A combined experimental and computational study. *Materials Chemistry and Physics*, 238, 121824.
- Khaleque, A., Alam, M. M., Hoque, M., Mondal, S., Haider, J. B., Xu, B., Johir, M., Karmakar, A. K., Zhou, J., and Ahmed, M. B. (2020). Zeolite synthesis from low-cost materials and environmental applications: A review. *Environmental advances*, 2, 100019.
- Khaosomboon, P., Khuanmar, K., and Weerayuttil, P. (2018). Synthesis of zeolite-A and zeolite-Y using silica gel waste as silica source and modifying with Fe. *Int. J. Eng. Technol*, 7, 1376.
- Khraisheh, M., Mukherjee, S., Kumar, A., Al Momani, F., Walker, G., and Zaworotko, M. J. (2020). An overview on trace CO₂ removal by advanced physisorbent materials. *Journal of environmental management*, 255, 109874.

- Kuceba, I., and Nowak, W. (2005). A thermogravimetric study of the adsorption of CO₂ on zeolites synthesized from fly ash. *Thermochimica Acta*, 437(1-2), 67-74.
- Lakiss, L., Gilson, J.-P., Valtchev, V., Mintova, S., Vicente, A. I., Vimont, A., Bedard, R., Abdo, S., and Bricker, J. (2020). Zeolites in a good shape: Catalyst forming by extrusion modifies their performances. *Microporous and Mesoporous Materials*, 299, 110114.
- Li, Y., Yi, H., Tang, X., Li, F., and Yuan, Q. (2013). Adsorption separation of CO₂/CH₄ gas mixture on the commercial zeolites at atmospheric pressure. *Chemical Engineering Journal*, 229, 50-56.
- Li, Z., Huang, J., Ye, L., Lv, Y., Zhou, Z., Shen, Y., He, Y., and Jiang, L. (2020). Encapsulation of highly volatile fragrances in Y zeolites for sustained release: Experimental and theoretical studies. *ACS omega*, 5(49), 31925-31935.
- Mallard, I., Bourgeois, D., and Fourmentin, S. (2018). A friendly environmental approach for the controlled release of Eucalyptus essential oil. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 549, 130-137.
- Masoudian, S. K., Sadighi, S., and Abbasi, A. (2013). Synthesis and characterization of high aluminum zeolite X from technical grade materials. *Bulletin of Chemical Reaction Engineering & Catalysis*, 8(1), 54-60.
- Maurin, G., Llewellyn, P., and Bell, R. (2005). Adsorption mechanism of carbon dioxide in faujasites: grand canonical Monte Carlo simulations and microcalorimetry measurements. *The Journal of Physical Chemistry B*, 109(33), 16084-16091.
- Mekki, A., Benmaati, A., Mokhtar, A., Hachemaoui, M., Zaoui, F., Habib Zahmani, H., Sassi, M., Hacini, S., and Boukoussa, B. (2020). Michael addition of 1, 3-dicarbonyl derivatives in the presence of zeolite Y as an heterogeneous catalyst. *Journal of Inorganic and Organometallic Polymers and Materials*, 30, 2323-2334.

- Muriithi, G. N., Petrik, L. F., and Doucet, F. d. r. J. (2020). Synthesis, characterisation and CO₂ adsorption potential of NaA and NaX zeolites and hydrotalcite obtained from the same coal fly ash. *Journal of CO₂ Utilization*, 36, 220-230.
- Nakano, T., and Harashima, S. (2024). Magnetic properties of Ca-containing zeolite low-silica X loaded with K atoms. *Interactions*, 245(1), 59.
- Norby, P., Poshni, F. I., Gualtieri, A. F., Hanson, J. C., and Grey, C. P. (1998). Cation migration in zeolites: an in situ powder diffraction and MAS NMR study of the structure of zeolite Cs (Na)-Y during dehydration. *The Journal of Physical Chemistry B*, 102(5), 839-856.
- Panda, D., Kumar, E. A., and Singh, S. K. (2019). Amine modification of binder-containing zeolite 4A bodies for post-combustion CO₂ capture. *Industrial & Engineering Chemistry Research*, 58(13), 5301-5313.
- Ríos, J.-L. (2016). Essential oils: What they are and how the terms are used and defined. In *Essential oils in food preservation, flavor and safety* (pp. 3-10). Elsevier.
- Rouquerol, F. (1999). Adsorption by clays, pillared layer structures and zeolites. *Adsorption by powders and porous solids*.
- Salehi, S., and Anbia, M. (2017). Characterization of CPs/Ca-exchanged FAU-and LTA-type zeolite nanocomposites and their selectivity for CO₂ and N₂ adsorption. *Journal of Physics and Chemistry of Solids*, 110, 116-128.
- Sharma, P., Jeong, S.-J., Han, M.-H., and Cho, C.-H. (2015). Influence of silica precursors on octahedron shaped nano NaY zeolite crystal synthesis. *Journal of the Taiwan Institute of Chemical Engineers*, 50, 259-265.
- Siriwardane, R. V., Shen, M.-S., Fisher, E. P., and Losch, J. (2005). Adsorption of CO₂ on zeolites at moderate temperatures. *Energy & Fuels*, 19(3), 1153-1159.
- Siriwardane, R. V., Shen, M.-S., Fisher, E. P., and Poston, J. A. (2001). Adsorption of CO₂ on molecular sieves and activated carbon. *Energy & Fuels*, 15(2), 279-284.

- Strzemiecka, B., Kasperkowiak, M., Łożyński, M., Paukšta, D., and Voelkel, A. (2012). Examination of zeolites as fragrance carriers. *Microporous and Mesoporous Materials*, 161, 106-114.
- Tavasoli, M., Kazemian, H., Sadjadi, S., and Tamizifar, M. (2014). Synthesis and characterization of zeolite NaY using kaolin with different synthesis methods. *Clays and Clay Minerals*, 62(6), 508-518.
- Tekin, R., and Bac, N. (2016). Antimicrobial behavior of ion-exchanged zeolite X containing fragrance. *Microporous and Mesoporous Materials*, 234, 55-60.
- Tekin, R., Bac, N., Warzywoda, J., and Sacco Jr, A. (2015). Encapsulation of a fragrance molecule in zeolite X. *Microporous and Mesoporous Materials*, 215, 51-57.
- Thommes, M., Kaneko, K., Neimark, A. V., Olivier, J. P., Rodriguez-Reinoso, F., Rouquerol, J., and Sing, K. S. (2015). Physisorption of gases, with special reference to the evaluation of surface area and pore size distribution (IUPAC Technical Report). *Pure and applied chemistry*, 87(9-10), 1051-1069.
- Tsitsishvili, V. (2019). Transformation of natural analcime and phillipsite during their hydrothermal recrystallization into zeolites a and X. *Int. J. Adv. Res.*, 7, 219-230.
- Vaughn, J., Wu, H., Efremovska, B., Olson, D. H., Mattai, J., Ortiz, C., Puchalski, A., Li, J., and Pan, L. (2013). Encapsulated recyclable porous materials: an effective moisture-triggered fragrance release system. *Chemical Communications*, 49(51), 5724-5726.
- Walton, K. S., Abney, M. B., and LeVan, M. D. (2006). CO₂ adsorption in Y and X zeolites modified by alkali metal cation exchange. *Microporous and Mesoporous Materials*, 91(1-3), 78-84.
- Wang, Y., Du, T., Song, Y., Che, S., Fang, X., and Zhou, L. (2017). Amine-functionalized mesoporous ZSM-5 zeolite adsorbents for carbon dioxide capture. *Solid State Sciences*, 73, 27-35.

- Wittayakun, J., Khemthong, P., and Prayoonpokarach, S. (2008). Synthesis and characterization of zeolite NaY from rice husk silica. *Korean Journal of Chemical Engineering*, 25, 861-864.
- Yates, D. (1968). Studies on the surface area of zeolites, as determined by physical adsorption and X-ray crystallography. *Canadian Journal of Chemistry*, 46(10), 1695-1701.
- Yilmaz, B., and Müller, U. (2009). Catalytic applications of zeolites in chemical industry. *Topics in Catalysis*, 52, 888-895.
- Zhang, B., Huang, J., Liu, K., Zhou, Z., Jiang, L., Shen, Y., and Zhao, D. (2019). Biocompatible cyclodextrin-based metal-organic frameworks for long-term sustained release of fragrances. *Industrial & Engineering Chemistry Research*, 58(43), 19767-19777.
- Zhang, C., Li, S., and Bao, S. (2019). Sustainable synthesis of ZSM-5 zeolite from rice husk ash without addition of solvents. *Waste and Biomass Valorization*, 10, 2825-2835.
- Zouaoui, E. H., Djamel, N., Wan Ab Karim Ghani, W. A., and Samira, A. (2021). High-pressure CO₂ adsorption onto NAX zeolite: Effect of Li⁺, K⁺, Mg²⁺, and Zn²⁺ and equilibrium isotherms study. *Iranian Journal of Chemistry and Chemical Engineering*, 40(4), 1195-1215.
- Zukal, A., Arean, C., Delgado, M., Nachtigall, P., Pulido, A., Mayerová, J., and Čiejka, J. (2011). Combined volumetric, infrared spectroscopic and theoretical investigation of CO₂ adsorption on Na-A zeolite. *Microporous and Mesoporous Materials*, 146(1-3), 97-105.