UNIVERSITAS
GADJAH MADA
Studi Sifat Fisis, Konduktivitas Termal, Kekuatan Bending, dan Kekerasan Vickers Keramik Kaolin Berpori dengan Serbuk Kayu Jati Ukuran 20-30 Mesh sebagai Pore-Forming Agent
Ghitha Aufar Mazaya, Ir. Muhammad Waziz Wildan, M.Sc., Ph. D.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Anusavice, R. W., Shen, C., & Rawls, H. R. (2013). Dental ceramics. In Phillips' science of dental materials (12th ed.). Elsevier.

Arvieu, C., Galy, C., Le Guen, E., & Lacoste, E. (2020). Relative Density of SLM-Produced Aluminum Alloy Parts: Interpretation of Results. *Journal of Manufacturing and Materials Processing*, *4*(3). https://doi.org/10.3390/JMMP4030083

Askeland, D. R., & Fulay, P. P. (2009). Essentials of Materials Science and Engineering (2nd ed.). Cengage Learning. USA

Ayala-Landeros, J. G., Saucedo-Rivalcoba, V., Bribiesca-Vasquez, S., Castaño, V. M., Martínez-Hernández, A. L., & Velasco-Santos, C. (2016). Influence of corn flour as pore forming agent on porous ceramic material based mullite: Morphology and mechanical properties. *Science of Sintering*, *48*(1), 29–39. https://doi.org/10.2298/SOS1601029A

Badan Pusat Statistik. (2024). Statistik produksi kehutanan 2024. Jakarta: BPS. Diakses melalui GoodStats: https://data.goodstats.id/statistic/produksi-kayu-indonesia-terus-meroket-sepanjang-5-tahun-terakhir-Z1Pke

Barsoum, M. W. (2003). Fundamentals of ceramics (2nd ed.). Taylor & Francis.

Callister, W. D., Jr. (2000). Materials science and engineering: An introduction (5th ed.). John Wiley & Sons.

Callister, W. D., Jr. & Rethwisch, D. G. (2018). Materials science and engineering: An introduction (10th ed.). John Wiley & Sons.

Data Bridge Market Research. 2022. *Global Porous Ceramic Market – Industry Trends and Forecast to 2029*. Data Bridge Market Research. Diakses dari https://www.databridgemarketresearch.com/reports/global-porous-ceramic-market.

German, R. M. (1996). *Sintering theory and practice*. New York: Wiley.

Gong, L. L., Wang, Y. H., Cheng, X. D., Zhang, R. F., & Zhang, H. P. (2013). Preparation of porous mullite ceramics with low thermal conductivity. *Advanced Materials Research*, *813*, 502–505. https://doi.org/10.4028/www.scientific.net/AMR.813.502

Guida, M. Y., Lanaya, S., Rbihi, Z., & Hannioui, A. (2019). Thermal degradation behaviors of sawdust wood waste : pyrolysis kinetic and mechanism. *Journal of Materials and Environmental Sciences*, *10*(8), 742–755.

Groover, M. P. (2010). Fundamentals of modern manufacturing: Materials, processes, and systems (4th ed.). Wiley.

Hammel, E. C., Ighodaro, O. L. R., & Okoli, O. I. (2014). Processing and properties of advanced porous ceramics: An application based review. *Ceramics International*, *40*(10), 15351–15370. https://doi.org/10.1016/j.ceramint.2014.06.095

Inkson, B. J. (2016). Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM) for Materials Characterization. *Materials Characterization Using Nondestructive Evaluation (NDE) Methods*, 17–43. https://doi.org/10.1016/B978-0-08-100040-3.00002-X

International Energy Agency. (2025). *World energy outlook 2025*. IEA

UNIVERSITAS
GADJAH MADA
Studi Sifat Fisis, Konduktivitas Termal, Kekuatan Bending, dan Kekerasan Vickers Keramik Kaolin Berpori dengan Serbuk Kayu Jati Ukuran 20-30 Mesh sebagai Pore-Forming Agent
Ghitha Aufar Mazaya, Ir. Muhammad Waziz Wildan, M.Sc., Ph. D.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Publications. https://www.iea.org/reports/world-energy-outlook-2025

Izadifar, M., Thissen, P., Steudel, A., Kleeberg, R., Kaufhold, S., Kaltenbach, J., Schuhmann, R., Dehn, F., & Emmerich, K. (2020). Comprehensive Examination of Dehydroxylation of Kaolinite, Disordered Kaolinite, and Dickite: Experimental Studies and Density Functional Theory. *Clays and Clay Minerals*, *68*(4), 319–333. https://doi.org/10.1007/s42860-020-00082-w

Miyazaki, N., & Hoshide, T. (2018). Influence of Porosity and Pore Distributions on Strength Properties of Porous Alumina. *Journal of Materials Engineering and Performance*, *27*(8), 4345–4354. https://doi.org/10.1007/s11665-018-3500-x

Mohanta, K., Kumar, A., Parkash, O., & Kumar, D. (2014). Processing and properties of low cost macroporous alumina ceramics with tailored porosity and pore size fabricated using rice husk and sucrose. *Journal of the European Ceramic Society*, *34*(10), 2401–2412. https://doi.org/10.1016/j.jeurceramsoc.2014.01.024

Ondro, T., Al-Shantir, O., Csáki, Š., Lukáč, F., & Trník, A. (2019). *Kinetic analysis of sinter-crystallization of mullite and cristobalite from kaolinite*.

Pankow, M., Quabili, A., & Yen, C. F. (2014). Hybrid three-dimensional (3-D) woven thick composite architectures in bending. *Jom*, *66*(2), 255–260. https://doi.org/10.1007/s11837-013-0825-7

Qiao, L., Du, D., Sun, C., Liu, Z., Guo, X., & Zhang, Y. (2025). Preparation and filtration analysis of porous wood ceramics considering different pore-forming agents. *Ceramics International*, *51*(14), 19041–19057. https://doi.org/10.1016/j.ceramint.2025.02.084

Richerson, D. W. (1990). Lesson 12: Ceramic fabrication—Densification. In *Introduction to modern ceramics* (ASM Materials Engineering Institute Course #56). Materials Park, OH: ASM International.

Richerson, D. W., & Lee, W. E. (2018). Modern Ceramic Engineering. CRC Press.

Roy, S. (2025). *Thermal properties of porous ceramics*. *24*(October).

Salleh, S. Z., Awang Kechik, A., Yusoff, A. H., Taib, M. A. A., Mohamad Nor, M., Mohamad, M., Tan, T. G., Ali, A., Masri, M. N., Mohamed, J. J., Zakaria, S. K., Boon, J. G., Budiman, F., & Teo, P. Ter. (2021). Recycling food, agricultural, and industrial wastes as pore-forming agents for sustainable porous ceramic production: A review. *Journal of Cleaner Production*, *306*. https://doi.org/10.1016/j.jclepro.2021.127264

Salomão, R., Fernandes, L., Prado, U. S., & Tiba, P. (2022). Porous Refractory Ceramics for High-Temperature Thermal Insulation - Part 3: Innovation in Energy Saving. *InterCeram: International Ceramic Review*, *71*(3), 30–37. https://doi.org/10.1007/s42411-022-0506-z

Salomão, R., Oliveira, K., Fernandes, L., Tiba, P., & Prado, U. (2022). Porous Refractory Ceramics for High-Temperature Thermal Insulation - Part 2: The Technology Behind Energy Saving. *InterCeram: International Ceramic Review*, *71*(1), 38–50. https://doi.org/10.1007/s42411-022-0483-2

Sánchez-Soto, P. J., Eliche-Quesada, D., Martínez-Martínez, S., Pérez-Villarejo, L., & Garzón, E. (2022). *Study of a waste kaolin as raw material for mullite*

UNIVERSITAS
GADJAH MADA
Studi Sifat Fisis, Konduktivitas Termal, Kekuatan Bending, dan Kekerasan Vickers Keramik Kaolin Berpori dengan Serbuk Kayu Jati Ukuran 20-30 Mesh sebagai Pore-Forming Agent
Ghitha Aufar Mazaya, Ir. Muhammad Waziz Wildan, M.Sc., Ph. D.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

ceramics and mullite refractories by reaction sintering. *Materials*, *15*(583), 1–22. https://doi.org/10.3390/ma15020583

Serra, M. F., Conconi, M. S., Gauna, M. R., Suárez, G., Aglietti, E. F., & Rendtorff, N. M. (2016). Mullite (3Al 2 O 3 ·2SiO 2) ceramics obtained by reaction sintering of rice husk ash and alumina, phase evolution, sintering and microstructure. *Journal of Asian Ceramic Societies*, *4*(1), 61–67. https://doi.org/10.1016/j.jascer.2015.11.003

Shen, J., Tian, X., Zhu, X., Liu, B., Jia, Q., Zhao, F., & Liu, X. (2022). Properties of porous zirconia ceramics fabricated by using various pore-forming agents. *Ceramics International*, *48*(17), 25094–25102. https://doi.org/10.1016/j.ceramint.2022.05.168

Surdia, T., dan Saito, S. (1999). Pengetahuan Bahan Teknik. Jakarta: Pradnya Paramita.

Varma, A. K., Thakur, L. S., Shankar, R., & Mondal, P. (2019). Pyrolysis of wood sawdust: Effects of process parameters on products yield and characterization of products. *Waste Management*, *89*, 224–235. https://doi.org/10.1016/j.wasman.2019.04.016

Wan, Y., Li, X., & Ma, J. (2023). Mullite porous ceramics with high strength for high-temperature thermal insulation. *Journal of Materials Research and Technology*, *27*(October), 5692–5700. https://doi.org/10.1016/j.jmrt.2023.10.288

Yang, H., Li, Y., Li, Q., Wang, Z., Wu, H., Liu, X., Wu, Y., & Cheng, X. (2020). Preparation and properties of porous silicon nitride ceramics with polymethyl methacrylate as pore-forming agent. *Ceramics International*, *46*(10), 17122–17129. https://doi.org/10.1016/j.ceramint.2020.03.204

Yang, H., Yan, R., Chen, H., Lee, D. H., & Zheng, C. (2007). Characteristics of hemicellulose, cellulose and lignin pyrolysis. *Fuel*, *86*(12–13), 1781–1788. https://doi.org/10.1016/j.fuel.2006.12.013

Zuo, T., Wang, H., Zhan, H., Li, Y., Li, S., Xu, X., Yin, Y., & Wang, W. (2025). Preparation and characterization of celsian porous ceramics with corn stalk as pore-forming agent. *Ceramics International*, *51*(October), 65692–65701. https://doi.org/10.1016/j.ceramint.2025.11.250