

## DAFTAR PUSTAKA

- Akhlaghi, O., Camposilvan, E., Goharibajestani, Z., Abkenar, S. K., Ow-Yang, C. W., Jorand, Y., Gremillard, L., Garnier, V., & Chevalier, J. (2022). Transparent high-strength nanosized yttria stabilized zirconia obtained by pressure-less sintering. *Journal of the European Ceramic Society*, 42(15), 7187–7195.
- Al-Attar, A. F., Farid, S. B. H., & Hashim, F. A. (2019). Ionic conductivity of gamma- $\text{Al}_2\text{O}_3$  and  $\text{Pb}_3\text{O}_4$  dopants in 8 mol%YSZ as electrolyte in SOFC. *AIP Conference Proceedings*, 2190(December), 2–9.
- Alaswad, A., Baroutaji, A., Rezk, A., Ramadan, M., & Olabi, A. G. (2021). Advances in Solid Oxide Fuel Cell Materials. In *Encyclopedia of Smart Materials*. Elsevier Ltd.
- Alderton, D. (2021). X-Ray Diffraction (XRD). *Encyclopedia of Geology*, 520–531.
- Ali, A. S. (2016). Application of Nanomaterials in Environmental Improvement. *Nanotechnology and the Environment*, 1–13.
- Aprely, K. J., Misfadhila, S., & Asra, R. (2021). A Review: The Phytochemistry, Pharmacology and Traditional Use of Gambir (*Uncaria gambir* (Hunter) Roxb). *EAS Journal of Pharmacy and Pharmacology*, 3(1), 21–25.
- Arief, S., Gustia, V., Wellia, D. V., Zuhadjri, Ban, T., & Ohya, Y. (2015). Hydrothermal synthesized Ag nanoparticles using bioreductor of gambier leaf extract (*Uncaria gambier* Roxb). *Journal of Chemical and Pharmaceutical Research*, 7(9), 189–192.
- Bakshi, M. S. (2016). How Surfactants Control Crystal Growth of Nanomaterials. *Crystal Growth and Design*, 16(2), 1104–1133.
- Basu, S., Alam, M. N., Basu, S., & Maiti, H. S. (2020). 8YSZ – Carbonate composite electrolyte-conductivity enhancement. *Journal of Alloys and Compounds*, 816, 152561.
- Colarusso, P., Kidder, L. H., Levin, I. W., Lewis, E. N., & Institutes, N. (2017). Raman and Infrared Microspectroscopy. In *Encyclopedia of Spectroscopy and Spectrometry* (3rd ed.). Elsevier Ltd.
- Dang, J., Wang, N., & Atiyeh, H. K. (2021). Review of Dissolved CO and H<sub>2</sub> Measurement Methods for Syngas Fermentation.
- Elsya, S. A. R., Zuhadjri, Z., & Arief, S. (2019). Pendekatan Green Synthesis Nanopartikel  $\text{CuFe}_2\text{O}_4$  Dengan Bantuan Ekstrak Daun Gambir Dan Sifat Anti Bakterinya. *Jurnal Kimia Dan Kemasan*, 41(2), 55.
- Esposito, V., Gadea, C., Hjelm, J., Marani, D., Hu, Q., Agersted, K., Ramousse, S., & Jensen, S. H. (2015). Fabrication of thin yttria-stabilized-zirconia dense electrolyte layers by inkjet printing for high performing solid oxide fuel cells. *Journal of Power Sources*, 273, 89–95.

- Fei, L., Dayan, M., & Bo, G. (2017). Grain Growth Characteristics of Hydrothermally Prepared Ytria Stabilized Zirconia Nanocrystals during Calcination. *Rare Metal Materials and Engineering*, 46(4), 899–905.
- Gao, J., Liu, Z., Akbar, M., Gao, C., Dong, W., Meng, Y., Jin, X., Xia, C., Wang, B., Zhu, B., Wang, H., & Wang, X. (2023). Efficiently enhance the proton conductivity of YSZ-based electrolyte for low temperature solid oxide fuel cell. *Ceramics International*, 49(4), 5637–5645.
- Guerra, C., Lanzini, A., Leone, P., Santarelli, M., & Brandon, N. P. (2014). Optimization of dry reforming of methane over Ni/YSZ anodes for solid oxide fuel cells. *Journal of Power Sources*, 245, 154–163.
- Haibo, O., Cuiyan, L. I., Kezhi, L. I., Hejun, L. I., & Yulei, Z. (2015). Effect of pH on Crystallization of Nanocrystalline Zirconia in a Microwave-hydrothermal Process. *Journal of Wuhan University of Technology-Mater. Sci. Ed*, 31(1), 68–73.
- Handani, S., Emriadi, Dahlan, D., & Arief, S. (2020). Enhanced structural, optical and morphological properties of ZnO thin film using green chemical approach. *Vacuum*, 179(May), 109513.
- Hossain, F. M., Hasanuzzaman, M., Rahim, N. A., & Ping, H. W. (2015). Impact of renewable energy on rural electrification in Malaysia: a review. *Clean Technologies and Environmental Policy*, 17(4), 859–871.
- Hsu, Y., Yang, K., Chang, K., Yeh, S., & Wang, M. (2011). Synthesis and crystallization behavior of 3 mol % yttria stabilized tetragonal zirconia polycrystals ( 3Y-TZP ) nanosized powders prepared using a simple co-precipitation process. *Journal of Alloys and Compounds*, 509(24), 6864–6870.
- Huang, Z., Han, W., Feng, Z., Qi, J., Wu, D., Wei, N., Tang, Z., Zhang, Y., Duan, J., & Lu, T. (2019). The effects of precipitants on co-precipitation synthesis of yttria-stabilized zirconia nanocrystalline powders. *Journal of Sol-Gel Science and Technology*, 90(2), 359–368.
- Hung, I. M., Hung, D. T., Fung, K. Z., & Hon, M. H. (2006). Effect of calcination temperature on morphology of mesoporous YSZ. *Journal of the European Ceramic Society*, 26(13), 2627–2632.
- Irshad, M., Siraj, K., Raza, R., Rafique, M., Usman, M., Ain, Q. ul, & Ghaffar, A. (2021). Evaluation of densification effects on the properties of 8 mol % yttria stabilized zirconia electrolyte synthesized by cost effective coprecipitation route. *Ceramics International*, 47(2), 2857–2863.
- Irshad, M., Siraj, K., Raza, R., Rafique, M., Usman, M., & Ghaffar, A. (2020). Evaluation of densification effects on the properties of 8 mol % yttria stabilized zirconia electrolyte synthesized by cost effective coprecipitation route. *Ceramics International*, September.
- Isnawati Ani, Raini Mariana, Dwi, S. O., D, M., Lucie, W., & Gitawati Retno. (2012). Characterication of 3 Types Gambir Extract (( *Uncaria gambir* Roxb ). *Bul. Penelit. Kesehatan*, 40(4), 201–208.

- Kafle, B. P. (2020). Introduction to nanomaterials and application of UV–Visible spectroscopy for their characterization. In *Chemical Analysis and Material Characterization by Spectrophotometry*.
- Kavukcuoglu, N. B., & Pleshko, N. (2011). Infrared and Raman Microscopy and Imaging of Biomaterials. In *Comprehensive Biomaterials (Vol. 1)*. Elsevier Ltd.
- Keshmiri, M., & Kesler, O. (2006). Colloidal formation of monodisperse YSZ spheres : Kinetics of nucleation and growth. *Acta Materialia*, 54, 4149–4157.
- Kim, J., Bondarchuk, O., Kay, B. D., White, J. M., & Dohna, Z. (2007). Preparation and characterization of monodispersed. 120, 186–195.
- Kopp Alves, A., Bergmann, C. P., & Berutti, F. A. (2013). Hydrothermal Synthesis. *Engineering Materials*, 61–76.
- Kuppusamy, P., Ichwan, S. J. A., Parine, N. R., Yusoff, M. M., Maniam, G. P., & Govindan, N. (2015). Intracellular biosynthesis of Au and Ag nanoparticles using ethanolic extract of *Brassica oleracea* L. and studies on their physicochemical and biological properties. *JES*, 06(June), 1–7.
- Kuppusamy, P., Yusoff, M. M., & Govindan, N. (2014). Biosynthesis of metallic nanoparticles using plant derivatives and their new avenues in pharmacological applications - An updated report. *Saudi Pharmaceutical Journal*.
- Labanni, A., Zulhadjri, Handayani, D., Ohya, Y., & Arief, S. (2020). Size controlled synthesis of well-distributed nano-silver on hydroxyapatite using alkanolamine compounds. *Ceramics International*, 46(5), 5850–5855.
- Lai, Q., Chen, J., Chang, F., Pei, J., Liang, Y., Chen, X., Feng, Q., Cen, Z., & Luo, N. (2023). Cold sintering process assisted sintering for 8YSZ ceramic: A way of achieving high density and electrical conductivity at a reduced sintering temperature. *Ceramics International*, 49(9PA), 14744–14749.
- Li, J., Meng, S., Niu, J., & Lu, H. (2017). Electronic structures and optical properties of monoclinic  $ZrO_2$  studied by first-principles local density approximation +U approach. *Journal of Advanced Ceramics*, 6(1), 43–49.
- Li, Y., Han, Q., Yao, Y. A. O., Li, M., Dong, P., Han, L., Zeng, X., Liu, J., & Liu, J. (2019). Comparative Study of Ytria-Stabilized Zirconia Synthesis by Co-Precipitation and Solvothermal Methods. *JOM*.
- Lin, Y., Ran, R., Zheng, Y., Shao, Z., Jin, W., Xu, N., & Ahn, J. (2008). Evaluation of  $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\delta}$  as a potential cathode for an anode-supported proton-conducting solid-oxide fuel cell. *Journal of Power Sources*, 180(1), 15–22.
- Loureiro, F. J. A., Silva, V. D., Simões, T. A., Cesário, M. R., Grilo, J. P. F., Fagg, D. P., & Macedo, D. A. (2019). Misfit-layered Ca-cobaltite-based cathodes for intermediate-temperature solid oxide fuel cell. In *Intermediate Temperature Solid Oxide Fuel Cells: Electrolytes, Electrodes and Interconnects (Issue*

November).

- Marcott, C., Solutions, L. L., & States, U. (2017). 3 . 23 Infrared and Raman Microscopy and Imaging of Biomaterials at the Micro and Nano Scale ☆. 3(November 2016), 365–378.
- Martinez-felipe, A., Zaton, D., Castillo-vall, M., Baldini, A., Pease, J., Leader, N., Fadhilah, N., Aripin, K., Giacinti-baschetti, M., & Ros, M. B. (2023). Bent-core liquid crystals joining the ethylene-oxide / lithium ion tandem: Ionic conductivity and dielectric response towards new electrolytes for energy applications. 390(June).
- Mittal, A. K., Chisti, Y., & Banerjee, U. C. (2013). Synthesis of metallic nanoparticles using plant extracts. *Biotechnology Advances*.
- Mudavakkat, V. H., Atuchin, V. V., Kruchinin, V. N., Kayani, A., & Ramana, C. V. (2012). Structure, morphology and optical properties of nanocrystalline yttrium oxide (Y<sub>2</sub>O<sub>3</sub>) thin films. *Optical Materials*, 34(5), 893–900.
- Mufti, N., Sari, E. T., Hasan Abadi, M. T., Puspita Dewi, A. S., Diantoro, M., Aziz, M. S., Zuhadjri, Setiyanto, H., Sunaryono, & Puspitasari, P. (2022). Effect of activation temperature of Yttria Stabilized Zirconia (YSZ)/ZnO nanorods thin film on photoelectrochemical cell performance. *Journal of Materials Research and Technology*, 20, 2348–2357.
- Ningsih, S. K. W. (2016). Sintesis Anorganik. In *Angewandte Chemie International Edition*, 6(11), 951–952.
- Pambayun, R., Gardjito, M., Sudarmadji, S., & Rahayu, K. (2007). Kandungan Fenolik Ekstrak Daun Gambir (*Uncaria gambir* Roxb) dan Aktivitas Antibakterinya. *Agritech*, 27(2), 89–94.
- Payyapilly, J. J., & Butt, D. P. (2007). Kinetics of hydrothermally induced transformation of yttria partially stabilized zirconia. *Nuclear Materials*, 360, 92–98.
- Peak, D. (2013). Fourier Transform Infrared Spectroscopic Methods of Soil Analysis ☆. In *Reference Module in Earth Systems and Environmental Sciences* (Issue July). Elsevier Inc.
- Piticescu, R., & Malič, B. (2001). Hydrothermal synthesis of zirconia nanomaterials Related papers. *Journal of the European Ceramic Society*, 21(November), 2057–2060.
- Prabhakaran, K., Melkeri, A., Gokhale, N. M., & Sharma, S. C. (2007). Synthesis of nanocrystalline 8 mol % yttria stabilized zirconia powder from sucrose derived organic precursors. 33, 1551–1555.
- Preux, N., Rolle, A., & Vannier, R. N. (2012). Electrolytes and ion conductors for solid oxide fuel cells (SOFCs). In *Functional materials for sustainable energy applications*. Woodhead Publishing Limited.
- Putra, G., Munggaran, D., Fitriyani, D., & Rivai, K. (2014). Sintesis Bahan YSZ

- (Yttria Stabilized Zirconia,  $Y_2O_3-ZrO_2$ ) Dengan Metode Reaksi Padatan Dan Karakterisasinya. 3(2), 102–108.
- Putri, R. A., & Noviyanti, A. R. (2021). Sel Bahan Bakar Oksida Padat Sebagai Sumber Energi Yang Ramah Lingkungan di Masa Pandemi COVID-19. *Jambura Journal of Chemistry*, 3(1), 16–26.
- Rahmawati, F., Zuhri, N., Nugrahaningtyas, K. D., & Arifah, S. K. (2019). Yttria-stabilized zirconia (YSZ) film produced from an aqueous nano-YSZ slurry: Preparation and characterization. *Journal of Materials Research and Technology*, 8(5), 4425–4434.
- ranklin & Marchall College. (2020). *Materials Characterization Fundamentals*. LibreTexts.
- Rollinson, G., & Kingdom, U. (2019). *Automated Mineralogy by SEM-EDS*. In *Encyclopedia of Geology*, 2nd edition (2nd ed.). Elsevier Inc.
- Sardela, M. (2014). *Practical materials characterization*. In *Practical Materials Characterization*.
- Sarfraz, A., Raza, A. H., Mirzaeian, M., Abbas, Q., & Raza, R. (2021). *Electrode Materials for Fuel Cells*. *Encyclopedia of Smart Materials*, 341–356.
- Sato, K., Horiguchi, K., Nishikawa, T., Yagishita, S., Kuruma, K., Murakami, T., & Abe, H. (2015). *Hydrothermal Synthesis of Yttria-Stabilized Zirconia Nanocrystals with Controlled Yttria Content*. American Chemical Society.
- Suvaci, E., & Özel, E. (2021). Hydrothermal synthesis. *Encyclopedia of Materials: Technical Ceramics and Glasses*, 1–3, 59–68.
- T. Prabhakaran, Mangalaraja, R. V., Denardin, J. C., & Varaprasad, K. (2022). The effect of capping agents on the structural and magnetic properties of cobalt ferrite nanoparticles. *Materials Research Bulletin*, 147(0123456789).
- Talebi, T., Haji, M., & Raissi, B. (2010). Effect of sintering temperature on the microstructure, roughness and electrochemical impedance of electrophoretically deposited YSZ electrolyte for SOFCs. *International Journal of Hydrogen Energy*, 35(17), 9420–9426.
- Tsampas, M. N., Sapountzi, F. M., & Vernoux, P. (2015). Applications of yttria stabilized zirconia (YSZ) in catalysis. *Catalysis Science and Technology*, 5(11), 4884–4900. <https://doi.org/10.1039/c5cy00739a>
- Veluri, R., Weir, T. L., Bais, H. P., Stermitz, F. R., & Vivanco, J. M. (2004). Phytotoxic and Antimicrobial Activities of Catechin Derivatives. *Journal of Agricultural and Food Chemistry*, 52(5), 1077–1082.
- Vernieuwe, K., Lommens, P., Martins, J. C., Van Den Broeck, F., Van Driessche, I., & De Buysser, K. (2013). Aqueous  $ZrO_2$  and YSZ colloidal systems through microwave assisted hydrothermal synthesis. *Materials*, 6(9), 4082–4095.
- Voon, C. H., Foo, K. L., Lim, B. Y., & Gopinath, S. C. B. (2020). 3. Synthesis and

preparation of metal oxide powders. In *Metal Oxide Powder Technologies*. INC.

- Wei, T., Jia, B., Shen, L., Zhao, C., Wu, L., Zhang, B., Tao, X., Wu, S., & Liang, Y. (2020). Reversible upconversion modulation in new photochromic  $\text{SrBi}_2\text{Nb}_2\text{O}_9$  based ceramics for optical storage and anti-counterfeiting applications. *Journal of the European Ceramic Society*, 40(12), 4153–4163.
- Xu, X., Feng, Y., Zhong, Z., Guo, X., Zhang, Z., Li, J., Zhao, S., Wu, S., & Sun, H. (2023). Modified room temperature solid-state synthesis of yttria-stabilized zirconia (YSZ) nano-powders for solid oxide fuel cells. *Journal of Rare Earths*, 41(9), 1385–1391.
- Yang, P. W., Thoka, S., Lin, P. C., Su, C. J., Sheu, H. S., Huang, M. H., & Jeng, U. S. (2017). Tracing the Surfactant-Mediated Nucleation, Growth, and Superpacking of Gold Supercrystals Using Time and Spatially Resolved X-ray Scattering. *Langmuir*, 33(13), 3253–3261.
- Zhao, Y., Xu, L., Guo, M., Li, Z., Xu, Z., Ye, J., Li, W., & Wei, S. (2022). Effects of calcination temperature on grain growth and phase transformation of nano-zirconia with different crystal forms prepared by hydrothermal method. *Journal of Materials Research and Technology*, 19, 4003–4017.

