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DAFTAR PUSTAKA

Akhter, J., Gilani, S. I., Al-kayiem, H. H., Ali, M., & Masood, F. (2019). Characterization and stability analysis of oil-based copper oxide nanofluids for medium temperature solar collectors[Charakterisierung und Stabilitätsanalyse von ölbasierten Kupferoxid-Nanofluiden für Mitteltemperatursonnenkollektoren]. *Materialwissenschaft und Werkstofftechnik*, *50*(3), 311–319. https://doi.org/10.1002/mawe.201800220

Akram, M. W., Chen, Q., Nortz, G., & Nortz, P. (2026). Hydraulic performance and pressure drop sensitivity analysis of an innovative horizontal coaxial ground heat exchanger (HCGHE) for geothermal heat pump applications. *Applied Thermal Engineering*, *300*, 131288. https://doi.org/10.1016/j.applthermaleng.2026.131288

Alobaid, O., Ezekiel, C. J., Daniilidis, A., Finkbeiner, T., & Mai, P. M. (2025). Groundwater-induced advective heat transfer in U-shaped closed-loop geothermal system: application for a Red Sea rift sedimentary basin. *Geothermal Energy 2025 13:1*, *13*(1), 40-. https://doi.org/10.1186/S40517-025-00363-4

Cao, B., Ma, Y., Ullah, M. Z., Gu, Y., & Liu, M. (2026). Study on inhibition behavior of high temperature calcium carbonate scale by HPMA/N-CQDs scale inhibitor. *Reactive and Functional Polymers*, *222*, 106677. https://doi.org/10.1016/J.REACTFUNCTPOLYM.2026.106677

Congedo, P. M., Colangelo, G., & Starace, G. (2012). CFD simulations of horizontal ground heat exchangers: A comparison among different configurations. *Applied Thermal Engineering*, *33–34*(1), 24–32. https://doi.org/10.1016/J.APPLTHERMALENG.2011.09.005

Cui, Y., Liu, Q., Wu, X., & Duan, Y. (2026). Heat extraction performance of horizontal wellbores under fracture-seepage coupling in deep geothermal reservoirs. *International Journal of Thermal Sciences*, *225*, 110750. https://doi.org/10.1016/J.IJTHERMALSCI.2026.110750

Huang, S., Li, J., Gao, H., Zhu, K., Dong, J., Li, J., Tao, J., & Jiang, Y. (2024). Numerical modeling and thermal performance analysis of deep borehole heat exchangers considering groundwater seepage. *Applied Thermal Engineering*, *250*, 123508. https://doi.org/10.1016/J.APPLTHERMALENG.2024.123508

Ilyas, S. U., Pendyala, R., Narahari, M., & Susin, L. (2017). Stability, rheology and thermal analysis of functionalized alumina- thermal oil-based nanofluids for advanced cooling systems. *Energy Conversion and Management*, *142*, 215–229. https://doi.org/10.1016/J.ENCONMAN.2017.01.079

Lei, K., Chen, Y., Du, X., Pan, Y., Lu, B., Jia, P., Fernandez-Steegerc, T. M., & Azzamb, R. (2026). A review of reservoir stimulation technologies for enhanced geothermal systems. *Renewable and Sustainable Energy Reviews*, *229*, 116618. https://doi.org/10.1016/J.RSER.2025.116618

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Li, M., Shi, Y., Chen, H., Liu, C., & Li, H. (2024). Study on the heat transfer performance of coaxial casing heat exchanger for medium and deep geothermal energy in cold regions. *Renewable Energy*, *237*, 121666. https://doi.org/10.1016/J.RENENE.2024.121666

Liu, S., & Dahi Taleghani, A. (2026). Closed-loop geothermal systems: Critical review of technologies, performance enhancement, and emerging solutions. *Renewable and Sustainable Energy Reviews*, *225*, 116177. https://doi.org/10.1016/J.RSER.2025.116177

Liu, W. I., Al-Rashed, A. A. A. A., Alsagri, A. S., Mahmoudi, B., Shahsavar, A., & Afrand, M. (2019). Laminar forced convection performance of non-Newtonian water-CNT/Fe3O4 nano-fluid inside a minichannel hairpin heat exchanger: Effect of inlet temperature. *Powder Technology*, *354*, 247–258. https://doi.org/10.1016/J.POWTEC.2019.05.079

Mairizal, Pratama, G. A., Maulana, Y., & Nurmutia, S. (2026). Modeling the causal relationships among barriers to geothermal power plant investment in Indonesia: A Fuzzy Delphi and DEMATEL approach. *Unconventional Resources*, *11*, 100327. https://doi.org/10.1016/J.UNCRES.2026.100327

Mohaman, D. A., Procesi, M., Di Sipio, E., Dalla Santa, G., Scotton, P., & Galgaro, A. (2025). Evaluation of a Closed-Loop coaxial borehole heat exchanger in High-Temperature volcanic environment. *Energy Conversion and Management: X*, *28*, 101388. https://doi.org/10.1016/J.ECMX.2025.101388

Smith, J. D., Susilowati, M. H., Maarif, S., & Cahyono, E. (2026). When energy transitions drive polarization: Narratives of green energy and mitigation strategies by proponents and opponents of geothermal energy developments in Indonesia. *Energy Policy*, *210*, 115080. https://doi.org/10.1016/J.ENPOL.2026.115080

Tonkul, S., André, L., Baba, A., Demir, M. M., Regenspurg, S., & Kieling, K. (2025). Effect of degassing on scaling in hypersaline system: Tuzla geothermal field, Turkey. *Geothermal Energy 2024 13:1*, *13*(1), 5-. https://doi.org/10.1186/S40517-024-00320-7

Trindade, G. S., Mendes, R. T., Duarte, W. M., Chaves, F. D., & Machado, L. (2025). COP determination, selection of a thermal oil heated by solar energy and transient response of a diffusion absorption refrigerator for vaccine storage. *Thermal Science and Engineering Progress*, *61*, 103541. https://doi.org/10.1016/J.TSEP.2025.103541

Wahid, M. N., Asif, M., Khan, M. I., & Khalid, M. (2025). A strategic analysis of geothermal energy for sustainable energy transition: Case study from Indonesia. *Energy Conversion and Management: X*, *28*, 101303. https://doi.org/10.1016/J.ECMX.2025.101303

Wang, H., Wu, H., Wang, X., Liu, J., Wu, X., & Sheng, J. (2026). Convective heat transfer in rough fractures: Flow rate threshold and geothermal implications. *International Journal of Heat and Mass Transfer*, *264*, 128758. https://doi.org/10.1016/J.IJHEATMASSTRANSFER.2026.128758

Yu, Y., Cheng, F., Cheng, J., Yang, G., & Ma, X. (2023). Comparative thermo-economic analysis of co-axial closed-loop geothermal systems using CO2 and water as working

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fluids. *Applied Thermal Engineering*, *230*, 120710. https://doi.org/10.1016/J.APPLTHERMALENG.2023.120710

Zhang, S., & Zhao, X. (2026). Concept and Key Technical Challenges of Deep Underground Hydraulic and Hydropower Engineering[水利水电深部地下工程：地质环境、围岩灾变与技术挑战]. *Gongcheng Kexue Yu Jishu/Advanced Engineering Sciences*, *58*(1), 1–17. https://doi.org/10.12454/j.jsuese.202500556

Zhang, Y., Yu, C., Li, G., Guo, X., Wang, G., Shi, Y., Peng, C., & Tan, Y. (2019). Performance analysis of a downhole coaxial heat exchanger geothermal system with various working fluids. *Applied Thermal Engineering*, *163*, 114317. https://doi.org/10.1016/J.APPLTHERMALENG.2019.114317

Badan Geologi. (2025). Neraca sumber daya dan cadangan mineral, batubara dan panas bumi Indonesia tahun 2025. Kementerian Energi dan Sumber Daya Mineral.

Qiao, M., Jing, Z., Feng, C., Li, M., Chen, C., Zou, X., & Zhou, Y. (2024). Review on heat extraction systems of hot dry rock: Classifications, benefits, limitations, research status and future prospects. Renewable & Sustainable Energy Reviews, 196, 114364–114364. https://doi.org/10.1016/j.rser.2024.114364

Çengel, Y. A., & Ghajar, A. J. (2020). Heat and mass transfer : fundamentals & applications (6th ed.). Mcgraw-Hill Education.

Chiasson, A. D. (2016). Geothermal Heat Pump and Heat Engine Systems Theory and Practice. Chichester, Uk John Wiley & Sons, Ltd.