

## DAFTAR PUSTAKA

- [1] C. A. S. Hall, “The 50th Anniversary of The Limits to Growth: Does It Have Relevance for Today’s Energy Issues?,” *Energies*, vol. 15, no. 14, 2022, doi: 10.3390/en15144953.
- [2] M. Farghali *et al.*, *Strategies to save energy in the context of the energy crisis: a review*, vol. 21, no. 4. Springer International Publishing, 2023. doi: 10.1007/s10311-023-01591-5.
- [3] N. Scarlat, J. F. Dallemand, and F. Fahl, “Biogas: Developments and perspectives in Europe,” *Renew. Energy*, vol. 129, pp. 457–472, 2018, doi: 10.1016/j.renene.2018.03.006.
- [4] A. H. Abdurrahman, M. R. Kirom, and A. Suhendi, “Biogas Production Volume Measurement and Internet of Things based Monitoring System,” *2020 IEEE Int. Conf. Commun. Networks Satell. Comnetsat 2020 - Proc.*, pp. 213–217, 2020, doi: 10.1109/Comnetsat50391.2020.9328948.
- [5] T. E. Rasimphi and D. Tinarwo, “Relevance of biogas technology to Vhembe district of the Limpopo province in South Africa,” *Biotechnol. Reports*, vol. 25, p. e00412, 2020, doi: 10.1016/j.btre.2019.e00412.
- [6] A. Haryanto and D. Cahyani, “Greenhouse gas emission of household plastic biogas digester using life cycle assessment approach,” *IOP Conf. Ser. Earth Environ. Sci.*, vol. 258, no. 1, 2019, doi: 10.1088/1755-1315/258/1/012015.
- [7] M. Logan, M. Safi, P. Lens, and C. Visvanathan, “Investigating the performance of internet of things based anaerobic digestion of food waste,” *Process Saf. Environ. Prot.*, vol. 127, pp. 277–287, 2019, doi: 10.1016/j.psep.2019.05.025.
- [8] K. Maurus, N. Kremmeter, S. Ahmed, and M. Kazda, “High-resolution monitoring of VFA dynamics reveals process failure and exponential decrease of biogas production,” *Biomass Convers. Biorefinery*, vol. 13, no. 12, pp. 10653–10663, 2023, doi: 10.1007/s13399-021-02043-2.
- [9] R. P. P. de Oliveira, M. E. K. Fuziki, P. M. L. Z. Costa, A. M. Tusset, and G. G. Lenzi, “Syngas Generation Process Simulation: A Comparative Study,” *Int. J. Robot. Control Syst.*, vol. 2, no. 1, pp. 187–200, 2022, doi:

- 10.31763/ijrcs.v2i1.584.
- [10] A. Mukasine, L. Sibomana, K. Jayavel, K. Nkurikiyeyezu, and E. Hitimana, “Correlation Analysis Model of Environment Parameters Using IoT Framework in a Biogas Energy Generation Context,” *Futur. Internet*, vol. 15, no. 8, 2023, doi: 10.3390/fi15080265.
  - [11] S. Wang, F. Ma, W. Ma, P. Wang, G. Zhao, and X. Lu, “Influence of temperature on biogas production efficiency and microbial community in a two-phase anaerobic digestion system,” *Water (Switzerland)*, vol. 11, no. 1, 2019, doi: 10.3390/w11010133.
  - [12] A. Admasu, W. Bogale, and Y. S. Mekonnen, “Experimental and simulation analysis of biogas production from beverage wastewater sludge for electricity generation,” *Sci. Rep.*, vol. 12, no. 1, pp. 1–15, 2022, doi: 10.1038/s41598-022-12811-3.
  - [13] S. He, L. Su, H. Fan, and R. Ren, “Methane explosion accidents of tunnels in SW China,” *Geomatics, Nat. Hazards Risk*, vol. 10, no. 1, pp. 667–677, 2019, doi: 10.1080/19475705.2018.1541826.
  - [14] E. Gul, G. Baldinelli, A. Farooqui, P. Bartocci, and T. Shamim, “AEM-electrolyzer based hydrogen integrated renewable energy system optimisation model for distributed communities,” *Energy Convers. Manag.*, vol. 285, no. April, p. 117025, 2023, doi: 10.1016/j.enconman.2023.117025.
  - [15] M. F. Manher, H. A. Mohammed, H. A. G. Jaaz, A. F. Naser, and A. A. Mohammed, “Structural Performance Evaluation of Reinforced Concrete Anaerobic Digester Tank in Sewage Treatment Plant: Investigational and Theoretical Study,” *Int. J. Sustain. Dev. Plan.*, vol. 18, no. 7, pp. 2079–2088, 2023, doi: 10.18280/ijsdp.180710.
  - [16] R. Erbaşu and D. Taşpuş, “About the conception and design of anaerobic digesters in zootechnical farms,” *E3S Web Conf.*, vol. 85, pp. 1–7, 2019, doi: 10.1051/e3sconf/20198507006.
  - [17] N. Contuzzi *et al.*, “Metals Biotribology and Oral Microbiota Biocorrosion Mechanisms,” *J. Funct. Biomater.*, vol. 14, no. 1, 2023, doi: 10.3390/jfb14010014.
  - [18] C. C. Ebeya *et al.*, “Influence of the Construction Materials Properties of the

- Biodigester on the Biogas Production and Electricity Generated by the Slaughterhouse Waste," *Int. J. Des. Nat. Ecodynamics*, vol. 17, no. 4, pp. 513–520, 2022, doi: 10.18280/ijdne.170404.
- [19] K. C. Obileke, G. Makaka, N. Nwokolo, E. L. Meyer, and P. Mukumba, "Economic Analysis of Biogas Production via Biogas Digester Made from Composite Material," *ChemEngineering*, vol. 6, no. 5, pp. 1–12, 2022, doi: 10.3390/chemengineering6050067.
  - [20] M. Zhang *et al.*, "Variations of antibiotic resistome in swine wastewater during full-scale anaerobic digestion treatment," *Environ. Int.*, vol. 155, no. June, p. 106694, 2021, doi: 10.1016/j.envint.2021.106694.
  - [21] Fathima Rehana Munas, J. A. D. A. S. Appuhamy, and Abdul Majeed Muzathik, "Design And Fabrication of a Domestic Biogas Unit for Cooking Applications," *J. Adv. Res. Fluid Mech. Therm. Sci.*, vol. 88, no. 3, pp. 156–164, 2021, doi: 10.37934/arfmnts.88.3.156164.
  - [22] M. A. Hailan, B. M. Albaker, and M. S. Alwan, "Transformation to a smart factory using NodeMCU with Blynk platform," *Indones. J. Electr. Eng. Comput. Sci.*, vol. 30, no. 1, pp. 237–245, 2023, doi: 10.11591/ijeecs.v30.i1.pp237-245.
  - [23] A. Widiyanto, W. A. Suryantoro, F. A. Prasety, H. F. Naufal, A. R. Maslikhan, and D. Istiyadi, "Biogas portabel sebagai energi alternatif dengan memanfaatkan kulit durian," vol. 7, no. 9, pp. 1483–1487, 2022.
  - [24] H. D. Chinh, H. Anh, N. D. Hieu, V. T. Anh, and K. K. R, "An IoT based Condition Monitoring System of Biogas Electrical Generator for Performance Evaluation," *Proc. Sixth Int. Conf. Res. Intell. Comput.*, vol. 27, pp. 7–11, 2022, doi: 10.15439/2021r24.
  - [25] D. Hercog, T. Lerher, M. Trunčić, and O. Težak, "Design and Implementation of ESP32-Based IoT Devices," *Sensors*, vol. 23, no. 15, 2023, doi: 10.3390/s23156739.
  - [26] S. Villamil, C. Hernández, and G. Tarazona, "An overview of internet of things," *Telkomnika (Telecommunication Comput. Electron. Control.)*, vol. 18, no. 5, pp. 2320–2327, 2020, doi: 10.12928/TELKOMNIKA.v18i5.15911.

- [27] A. A. Taiwo, O. J. Femi, A. A. Ruth, and P. J. Olusogo, “Determination of optimum load resistances of MQ-series gas sensor circuit for specific gas concentrations,” *Telkomnika (Telecommunication Comput. Electron. Control.)*, vol. 20, no. 1, pp. 158–165, 2022, doi: 10.12928/TELKOMNIKA.v20i1.21091.
- [28] M. Mina and K. Kartika, “Monitoring System for Levels of Voltage, Current, Temperature, Methane, and Hydrogen in IoT-Based Distribution Transformers,” *Int. J. Eng. Sci. Inf. Technol.*, vol. 3, no. 1, pp. 22–27, 2023, doi: 10.52088/ijesty.v3i1.414.
- [29] F. N. Abbas, I. M. Saadoon, Z. K. Abdalrdha, and E. N. Abud, “Capable of gas sensor MQ-135 to monitor the air quality with arduino uno,” *Int. J. Eng. Res. Technol.*, vol. 13, no. 10, pp. 2955–2959, 2020, doi: 10.37624/IJERT/13.10.2020.2955-2959.
- [30] Y. R. Carrillo-Amado, M. A. Califa-Urquiza, and J. A. Ramón-Valencia, “Calibration and standardization of air quality measurements using MQ sensors,” *Respuestas*, vol. 25, no. 1, pp. 70–77, 2020, doi: 10.22463/0122820x.2408.
- [31] N. D. Susetyo and M. M. Ilham, “14185-Article Text-11601-1-10-20200207”.
- [32] B. Salam, S. Biswas, and M. S. Rabbi, “Biogas from mesophilic anaerobic digestion of cow dung using silica gel as catalyst,” *Procedia Eng.*, vol. 105, no. Icte 2014, pp. 652–657, 2015, doi: 10.1016/j.proeng.2015.05.044.
- [33] G. M. Salkhozhayeva, K. M. Abdiyeva, S. Y. Arystanova, and G. D. Ultanbekova, “Technological Process of Anaerobic Digestion of Cattle Manure in a Bioenergy Plant,” *J. Ecol. Eng.*, vol. 23, no. 7, pp. 131–142, 2022, doi: 10.12911/22998993/149516.
- [34] A. Scoma, M. Coma, F. M. Kerckhof, N. Boon, and K. Rabaey, “Efficient molasses fermentation under high salinity by inocula of marine and terrestrial origin,” *Biotechnol. Biofuels*, vol. 10, no. 1, pp. 1–17, 2017, doi: 10.1186/s13068-017-0701-8.