

## DAFTAR PUSTAKA

- [1] BBC NEWS, “Polusi udara: Indonesia masuk enam negara paling berkontribusi terhadap polusi udara global, warga akan gugat pemerintah dan industri - BBC News Indonesia.”
- [2] Dwi Latifatul Fajri, “Mengenal PM<sub>2.5</sub> dan PM<sub>10</sub>, Partikel Berbahaya Bagi Tubuh,” KataData.
- [3] J. Hansen, M. Sato, R. Ruedy, K. Lo, D. W. Lea, and M. Medina-Elizade, “Global temperature change,” 2006. [Online]. Available: [www.pnas.org/cgi/doi/10.1073/pnas.0606291103](http://www.pnas.org/cgi/doi/10.1073/pnas.0606291103)
- [4] A. Sya’bani *et al.*, “Pemantauan Konsentrasi PM<sub>2.5</sub> dan CO<sub>2</sub> Berbasis Low-Cost Sensor secara Real-Time di Cekungan Udara Bandung Raya,” *Jurnal Teknologi Lingkungan*, vol. 21, no. 1, pp. 9–15, 2020, doi: 10.29122/jtl.v21i1.3707.
- [5] A. S. Adiwidya *et al.*, “Analysis of Spatio-temporal PM<sub>2.5</sub> and CO<sub>2</sub> Concentrations Distribution with PSCF in the Greater Bandung Air Basin,” *Journal of Measurements Electronics Communications and Systems*, vol. 10, no. 1, p. 30, 2023, doi: 10.25124/jmeecs.v10i1.6003.
- [6] Hawatif Ruhil Millah, “Hubungan Faktor Meteorologis Dan Kepadatan Lalu Lintas Dengan Kualitas Udara Di Kota Tabanan,” *Jurnal Kesehatan Lingkungan*, vol. 12, pp. 93–98, Oct. 2022.
- [7] D. J. J. Darrell A. Winner, “Effect of climate change on air quality,” *Atmos Environ*, vol. 43, no. 1, pp. 51–63, Jan. 2009.
- [8] Badan Standardisasi Nasional, “SNI 9178:2023,” 2023.
- [9] James D. Wilcox, “Isokinetic Flow and Sampling,” *J Air Pollut Control Assoc*, vol. 5, no. 4, pp. 226–245, 1956.
- [10] Abdul Samad, “Effect of Relative Humidity and Air Temperature on the Results Obtained from Low-Cost Gas Sensors for Ambient Air Quality Measurements,” Sep. 2020.

- [11] Peng Wang, “Effect of relative humidity on the performance of five cost-effective PM sensors,” *Aerosol Science And Technology* , vol. 55, pp. 957–974, 2021.
- [12] M. Nothhelfer *et al.*, “Effect of an Aerosol Dryer on Ambient PM Measurements with SDS011 Low Cost Sensors during a Two-year Period in Duisburg, Germany,” *Aerosol Air Qual Res*, vol. 23, no. 10, p. 230080, 2023, doi: 10.4209/aaqr.230080.
- [13] Sri Purwiyanti, “Aplikasi Efek Peltier Sebagai Kotak Pemanas dan Pendingin Berbasis Mikroprosesor Arduino Uno,” *Jurnal Rekayasa dan Teknologi Elektro*, 2017.
- [14] E. H. Radu Musat, “Characteristics of the PTC Heater Used in Automotive HVAC Systems,” *Advances in Information and Communication Technology*, vol. 314, pp. 461–468, Feb. 2010.
- [15] S. Sedra, *Microelectronics Circuit*, 7th ed. New York: Oxford University Press.
- [16] Vladimir Gurevich, *Electric Relays Principles And Application*. CRC Press, 2006.
- [17] Dongho Shina, “Development of a sampling probe with a small non-isokinetic sampling error in variable flow velocity environments,” *Aerosol Science And Technology*, vol. 56, no. 10, pp. 906–916, 2022.
- [18] J. C. Yunus Cengel, *Fluid Mechanics Fundamentals and Applications*, 3rd ed. Mcgraw-hill Us Higher , 2013.
- [19] Dong Chen, “Measurements of particulate matter concentration by the light scattering method: Optimization of the detection angle,” *Fuel Processing Technology*, vol. 179, pp. 124–134, Oct. 2018.
- [20] X. Jia, J. Roels, R. Baets, and G. Roelkens, “A miniaturised, fully integrated NDIR CO<sub>2</sub> sensor on-chip,” *Sensors*, vol. 21, no. 16, Aug. 2021, doi: 10.3390/s21165347.
- [21] Hamid Farahani, “Humidity Sensors Principle, Mechanism, and Fabrication Technologies: A Comprehensive Review,” *Sensors (Basel)*, vol. 14, no. 5, pp. 7881–7939, Apr. 2014.
- [22] Kevin Cope, “What is a Pressure Sensor?,” Realpars.
- [23] Erik Wahyu Pratama and Agus Kiswantono, “Electrical Analysis Using ESP-32 Module In Realtime,” *Journal of Electrical Engineering and Computer Sciences*, vol. 7, no. 2, Dec. 2022.

- [24] S. Ernest, J. Henley, *Separation Process Principles*, 3rd ed. New York , 2011.
- [25] TDK Electronics AG, “PTC thermistors as heating elements,” Nov. 2024.
- [26] Ruqiong Qin and Chunyi Duan, “The principle and applications of Bernoulli equation,” in *The principle and applications of Bernoulli equation*, Journal of Physics: Conference Series, 2017.
- [27] I. C. and H. B. Y. Sinrang, “Data Validation of Air Quality Based on Fault Detection Method in Long-Term Measurement,” Telkom University, Bandung, 2021.
- [28] J. A. de C. M. A. M. C. and C. P. S. S. Amaral, “An overview of particulate matter measurement instruments,” *MDPI*, 2015.
- [29] Antares, “Protokol HTTP & MQTT.”
- [30] P. K. H. Akhilesh Kumar Yadav, “Characterization of radionuclide activity concentrations and lifetime cancer risk due to particulate matter in the Singrauli Coalfield, India,” *Environmental Monitoring and Assessment* , vol. 192, Oct. 2020.
- [31] MicroStep-MIS, “Calibration System for Wind Speed and Direction ”.
- [32] S. Albrecht, E. Bakker, J. Jong, R. Tubbs, J. Meisner, and R. Le Poole, “Calibration of temperature and relative humidity sensors for use on the VLT-Interferometer,” *Proceedings of SPIE - The International Society for Optical Engineering*, vol. 5491, Oct. 2004, doi: 10.1117/12.561882.
- [33] Y. Liu A. Carullo and A. Carullo, “Intelligent Sensor Calibration: Techniques, Devices and Methodologies,” *Sensors*, vol. 23, no. 4, pp. 123–145, 2023.
- [34] F. F. Shoum R. A. Salam, I. Chandra, and R. A. Salam, “Sensor Development of Simple Calibration System for CO<sub>2</sub> Sensor,” Telkom University, Bandung, 2023.
- [35] C. Cristiando Ginting, Indra. Chandra, and Rahmat Awaludin Salam, “Rancang Bangun Sistem Kalibrasi Sederhana untuk Low-Cost Sensor PM<sub>2.5</sub> Berbasis Nebulizer,” Telkom University, Bandung, 2020.
- [36] R. Müller, “Calibration and verification of remote sensing instruments and observations,” 2014, *MDPI AG*. doi: 10.3390/rs6065692.

- [37] R. Dubey *et al.*, “Low-Cost CO<sub>2</sub> NDIR Sensors: Performance Evaluation and Calibration Using Machine Learning Techniques,” *Sensors*, vol. 24, no. 17, Sep. 2024, doi: 10.3390/s24175675.
- [38] T. Araújo, L. Silva, A. Aguiar, and A. Moreira, “Calibration Assessment of Low-Cost Carbon Dioxide Sensors Using the Extremely Randomized Trees Algorithm,” *Sensors*, vol. 23, no. 13, Jul. 2023, doi: 10.3390/s23136153.
- [39] Pulse Sensors News, “CO<sub>2</sub> Sensor Calibration: Ensuring Accuracy and Longevity.”
- [40] Teng Lv, Ping Yan, and Weimin He, “Survey on JSON Data Modelling,” in *Journal of Physics Conference Series*, Aug. 2018.
- [41] F. Vaicdan, I. Chandra, and A. Suhendi, “Pengamatan Konsentrasi Massa PM<sub>2.5</sub> di Cekungan Udara Bandung Raya (Observation of PM<sub>2.5</sub> mass concentrations in the Greater Bandung air basin),” 2019.
- [42] R. N. Hidayat, L. M. Sabri, and M. Awaluddin, “Analisis Desain Jaring GNSS Berdasarkan Fungsi Presisi (Studi Kasus : Titik Geoid Geometri Kota Semarang),” 2019.
- [43] J. A. Canchola, “Correct Use of Percent Coefficient of Variation (%CV) Formula for Log-Transformed Data,” *MOJ Proteom Bioinform*, vol. 6, no. 3, Nov. 2017, doi: 10.15406/mojpb.2017.06.00200.