

DAFTAR PUSTAKA

- [1] Harahap P., “Pengaruh Temperatur Permukaan Panel Surya Terhadap Daya yang Dihasilkan dari Berbagai Jenis Sel Surya,” *RELE (Rekayasa Elektr. dan Energi) J. Tek. Elektro*, vol. 2, no. 2, pp. 73–80, 2020, doi: 10.30596/rele.v2i2.4420.
- [2] Aprilia E., A. Aini, A. Frakusya, and A. Safril, “Potensi Panas Laut Sebagai Energi Baru Terbarukan di Perairan Papua Barat Dengan Metode Ocean Thermal Energy Conversion (Otec),” *J. Meteorol. Klimatologi dan Geofis.*, vol. 6, no. 2, pp. 7–14, 2019, doi: 10.36754/jmkg.v6i2.118.
- [3] Tira H. S., A. Natsir, and M. S. Anwar, “Studi Eksperimental pada Emulator Surya Berdasarkan Intensitas Matahari Terhadap Unjuk Kerja Sel Surya 10 Wp Tipe Polycrystalline,” *Rotasi*, vol. 19, no. 4, p. 237, 2017, doi: 10.14710/rotasi.19.4.237-242.
- [4] Sridewi N. L. P. M., H. Suyanto, and I. G. B. W. Kusuma, “Analisis Pengaruh Panjang Gelombang Cahaya Terhadap Keluaran Panel Surya Tipe Polycrystalline,” *J. METTEK*, vol. 4, no. 2, p. 48, 2018, doi: 10.24843/mettek.2018.v04.i02.p03.
- [5] Sarna S., Subhan, R. Murniati, S. Nojeng, “Pengaruh Temperatur Permukaan Terhadap Efisiensi Konversi Photovoltaik Tipe Mono-Crystalline pada Daerah Tropis,” *J-MOVE*, vol. 3, no. 2, pp. 23, 2021.
- [6] Priyatikanto R., “Inklinasi Optimal Panel Surya Sumbu Tetap di Indonesia,” *JMS*, vol. 21, no. 1, pp 16, 2016.
- [7] Asrori A., I. Mashudi, and Suyanta, “Pengujian Rasio Kinerja Instalasi Panel Surya Tipe Silikon–Kristal pada Kondisi Cuaca Kota Malang,” *J. Energi dan Teknol. Manufaktur*, vol. 2, no. 02, pp. 11–18, 2019, doi: 10.33795/jetm.v2i02.41.
- [8] Tripathi A. K., C. S. N. Murthy, and M. Aruna, “Experimental Investigation of Dust Effect on PV Module Performance,” *Glob. J. Res. Eng. J Gen. Eng.*, vol. 17, no. 7, pp. 35–39, 2017.
- [9] Zaihidee F. M., S. Mekhilef, M. Seyedmahmoudian, and B. Horan, “Dust as an unalterable deteriorative factor affecting PV panel’s efficiency: Why

- and how,” *Renew. Sustain. Energy Rev.*, vol. 65, pp. 1267–1278, 2016, doi: 10.1016/j.rser.2016.06.068.
- [10] Satwiko S, “Uji Karakteristik Sel Surya pada Sistem 24 Volt DC sebagai Catudaya pada Sistem Pembangkit Tenaga Hybrid,” in *1 Agust*, 2019, vol. 2, no. 2, pp. 1–5, 2019.
- [11] Paul S., K. A. Khan, S. R. Zishan, and A. Khatun, “Studies on Deterioration of a Mono-crystal Solar Silicon PV Module under the Climatic condition of Bangladesh,” *IEEE*, no. 5, pp. 300–305, 2013.
- [12] Afonso M. M. D., P. C. M. Carvalho, F. L. M. Antunes, and J. J. Hiluy Filho, “Deterioration and performance evaluation of photovoltaic modules in a semi-arid climate,” *Renew. Energy Power Qual. J.*, vol. 1, no. 13, pp. 424–428, 2015, doi: 10.24084/repqj13.345.
- [13] Alfanz R., Y. Okazaki, T. Ikegami, and Y. Deng, “Integrated micro tesla magnetic sensor for detecting photovoltaic cells failure,” *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 673, no. 1, 2019, doi: 10.1088/1757-899X/673/1/012052.
- [14] Hwang M. H., Y. G. Kim, H. S. Lee, Y. D. Kim, and H. R. Cha, “A Study on the Improvement of Efficiency by Detection Solar Module Faults in Deteriorated Photovoltaic Power Plants,” *Appl. Sci.*, vol. 11, no. 2, pp. 1–16, 2021, doi: 10.3390/app11020727.
- [15] Erwanto D., D. A. Widhining K., and T. Sugiarto, “Sistem Pemantauan Arus dan Tegangan Panel Surya Berbasis Internet of Things,” *Multitek Indones.*, vol. 14, no. 1, pp. 1, 2020, doi: 10.24269/mtkind.v14i1.2195.
- [16] Pamungkas I. F., U. T. Kartini, T. Wrahatnolo, Joko, “Sistem Monitoring Daya Listrik Photovoltaic Berbasis Internet of Things (IoT), ” *JTE.*, vol. 11, no. 2, pp. 236-245, 2022.
- [17] Raharja W. K., R. Ramadhon, “Purwarupa Alat Pendeteksi Kebakaran Jarak Jauh Menggunakan Platform Thinger.Io,” *J. Elektro Luceat*, vol. 7, no. 2, pp. 188–206, 2021.
- [18] Usman, A. R. Idris, Sofyan, and I. Syamsuddin, “Pemodelan dan Simulasi Photovoltaic Menggunakan Pendekatan Model Tiga Diode,” *J. Nas. Tek. Elektro dan Teknol. Inf.*, vol. 9, no. 4, pp. 423–429, 2020, doi:

- 10.22146/jnteti.v9i4.688.
- [19] Ramli M. A. M., E. Prasetyono, R. W. Wicaksana, N. A. Windarko, K. Sedraoui, Y. A. Al-Turki, “On the investigation of photovoltaic output power reduction due to dust accumulation and weather conditions,” *Renew. Energy*, vol. 99, pp. 836–844, 2016, doi: 10.1016/j.renene.2016.07.063.
- [20] Tino A. A., “Dampak Debu Terhadap Kinerja Modul Photovoltaik di Kampus Politeknik Negeri Kupang,” *J. Ilm. Flash*, vol. 2, no. 1, p. 26, 2016, doi: 10.32511/jiflash.v2i1.21.
- [21] Suwarti, Wahyono, B. Prasetyo, “Analisis Pengaruh Intensitas Matahari, Suhu Permukaan & Sudut Pengarah Terhadap Kinerja Panel Surya,” *Eksergi*, vol. 14, no. 3, p. 78, 2019, doi: 10.32497/eksergi.v14i3.1373.
- [22] Mirrahman H., I. D. Sara, and M. Gapy, “Pengukuran dan Pemantauan Performansi Modul Surya,” *Kitektro*, vol. 2, no. 2, pp. 44–50, 2017.
- [23] Yousuf H. *et al.*, “A Review on Degradation of Silicon Photovoltaic Modules,” *New Renew. Energy*, vol. 17, no. 1, pp. 19–32, 2021, doi: 10.7849/ksnre.2021.2034.
- [24] de Oliveira M. C. C., A. S. A. Diniz Cardoso, M. M. Viana, and V. de F. C. Lins, “The causes and effects of degradation of encapsulant ethylene vinyl acetate copolymer (EVA) in crystalline silicon photovoltaic modules: A review,” *Renew. Sustain. Energy Rev.*, vol. 81, no. July, pp. 2299–2317, 2018, doi: 10.1016/j.rser.2017.06.039.
- [25] Wiengmoon B., K. Kirtikara, C. Jivacate, and D. Chenvidhya, “PV modules deterioration with less than 15 years installation in Thailand,” *Adv. Mater. Res.*, vol. 931–932, pp. 1068–1072, 2014, doi: 10.4028/www.scientific.net/AMR.931-932.1068.
- [26] Safitri N., P. N. Lhokseumawe, T. Rihayat, and P. N. Lhokseumawe, *NO . ISBN 978-623-91323-0-9*, no. July. 2019.
- [27] Pagan S. E. P., I. D. Sara, and H. Hasan, “Komparasi Kinerja Panel Surya Jenis Monokristal Dan Polykristal Studi Kasus Cuaca Banda Aceh,” *Jurnal Online Teknik Elektro*, vol. 3, no. 4, pp. 19–23, 2018.
- [28] Pulungan A. B., D. S. Goci, “Penggunaan Sistem Data logger Dalam Pencatatan Data Parameter Panel Surya berbasis Mikrokontroler,” *JTEV*

- (*Jurnal Tek. Elektro dan Vokasional*), vol. 7, no. 2, p. 337, 2021, doi: 10.24036/jtev.v7i2.115052.
- [29] Mungkin M., H. Satria, J. Yanti, G. B. A. Turnip, and S. Suwarno, “Perancangan Sistem Pemantauan Panel Surya Polycrystalline Menggunakan Teknologi Web Firebase Berbasis IoT,” *INTECOMS J. Inf. Technol. Comput. Sci.*, vol. 3, no. 2, pp. 319–327, 2020, doi: 10.31539/intecom.v3i2.1861.
- [30] Sianturi Y., “Pengukuran dan Analisa Data Radiasi Matahari di Stasiun Klimatologi Muaro Jambi,” *Megasains*, vol. 12, no. 1, pp. 40–47, 2021, doi: 10.46824/megasains.v12i1.45.
- [31] Sawidin S. *et al.*, “Kontrol dan Monitoring Sistem Smart Home Menggunakan Web Thinger.io Berbasis IoT,” *Prosiding The 12th Ind. Res. Work. Natl. Semin.*, pp. 464–471, 2021, [Online]. Available: www.arduino.cc.
- [32] Santhakumari M., N. Sagar, “A review of the environmental factors degrading the performance of silicon wafer-based photovoltaic modules: Failure detection methods and essential mitigation techniques,” *Renew. Sustain. Energy Rev.*, vol. 110, no. June 2018, pp. 83–100, 2019, doi: 10.1016/j.rser.2019.04.024.