

DAFTAR PUSTAKA

- Afzal, U. (2024). *A Comprehensive Tutorial on Graphene Family X-ray Diffraction Analysis: Graphical Representation of Miller Indices*. 03(02), 96–105. <https://doi.org/10.58341/srj.v3i2.54>
- Agus Putra Dana, I. K., Jatmiko, P. D., Suharyadi, E., & Santoso, I. (2020). A compact, modular, multi-wavelength (200–850nm) rotating-analyzer ellipsometer for optical constant characterization of nanostructured materials. *European Journal of Physics*, 41(6). <https://doi.org/10.1088/1361-6404/ab9b3e>
- Al-Gamal, A. G., Elseman, A. M., Abdel-Shakour, M., Chowdhury, T. H., Kabel, K. I., Farag, A. A., Rabie, A. M., El-Sattar, N. E. A. A., Fukata, N., & Islam, A. (2023). Synergistic effect of integrating N-functionalized graphene and PEDOT:PSS as hole transporter bilayer for high-performance perovskite solar cells. *Advanced Composites and Hybrid Materials*, 6(3), 1–10. <https://doi.org/10.1007/s42114-023-00681-w>
- Albrahee, I., Li, Y., & Xing, G. (2025). Carbon-based Perovskite Solar Cells: From Current Fabrication Methodologies to Their Future Commercialization at Low Cost. *Innovation Discovery*, 1(4), 1. <https://doi.org/10.53964/id.2025001>
- Arumanayagam, T., & Murugakoothan, P. (2011). Optical Conductivity and Dielectric Response of an Organic Aminopyridine NLO Single Crystal. *Journal of Minerals and Materials Characterization and Engineering*, 10(13), 1225–1231. <https://doi.org/10.4236/jmmce.2011.1013095>
- Asmara, T. C., Santoso, I., & Rusydi, A. (2014). Self-consistent iteration procedure in analyzing reflectivity and spectroscopic ellipsometry data of multilayered materials and their interfaces. *Review of Scientific Instruments*, 85(12), 1–16. <https://doi.org/10.1063/1.4897487>
- Butler, K. T., Frost, J. M., & Walsh, A. (2015). Ferroelectric materials for solar energy conversion: Photoferroics revisited. *Energy and Environmental Science*, 8(3), 838–848. <https://doi.org/10.1039/c4ee03523b>
- Cao, F., Bian, L., & Li, L. (2024). Perovskite solar cells with high-efficiency exceeding 25%: A review. *Energy Materials and Devices*, 2(1), 9370018. <https://doi.org/10.26599/emd.2024.9370018>
- Castro Neto, A. H., Guinea, F., Peres, N. M. R., Novoselov, K. S., & Geim, A. K. (2009). The electronic properties of graphene. *Reviews of Modern Physics*, 81(1), 109–162. <https://doi.org/10.1103/RevModPhys.81.109>
- Chang, X., Li, W., Zhu, L., Liu, H., Geng, H., Xiang, S., Liu, J., & Chen, H. (2016). Carbon-Based CsPbBr₃ Perovskite Solar Cells: All-Ambient Processes and

- High Thermal Stability. *ACS Applied Materials and Interfaces*, 8(49), 33649–33655. <https://doi.org/10.1021/acsami.6b11393>
- Chen, C., Wu, D., Yuan, M., Yu, C., Zhang, J., Li, C., & Duan, Y. (2021). Spectroscopic ellipsometry study of CsPbBr₃ perovskite thin films prepared by vacuum evaporation. *Journal of Physics D: Applied Physics*, 54(22), 224002. <https://doi.org/10.1088/1361-6463/abe821>
- Chen, X., Wang, Y., Song, J., Li, X., Xu, J., Zeng, H., & Sun, H. (2019). Temperature Dependent Reflectance and Ellipsometry Studies on a CsPbBr₃ Single Crystal. *Journal of Physical Chemistry C*, 123(16), 10564–10570. <https://doi.org/10.1021/acs.jpcc.9b01406>
- Dou, J., Tan, J., He, B., Duan, J., & Tang, Q. (2023). Charge transfer doping of graphene oxide with nickel oxide nanoparticles for stable and efficient carbon-based, all-inorganic CsPbBr₃ perovskite solar cells. *Dalton Transactions*, 52(18), 6146–6151. <https://doi.org/10.1039/D3DT00662J>
- Ezzeldien, M., Al-Qaisi, S., Alrowaili, Z. A., Alzaid, M., Maskar, E., Es-Smairi, A., Vu, T. V., & Rai, D. P. (2021). Electronic and optical properties of bulk and surface of CsPbBr₃ inorganic halide perovskite a first principles DFT 1/2 approach. *Scientific Reports*, 11(1), 1–12. <https://doi.org/10.1038/s41598-021-99551-y>
- Fox, M. (2001). Optical Properties of Solid. *Oxford University Press, New York*, 1–23.
- Fujiwara, H. dan Collins, R. W. (2018). Spectroscopic Ellipsometry for Photovoltaics Volume 1: Fundamental Principles and Solar Cell Characterization. Spectroscopic Ellipsometry for Photovoltaics. *Switzerland: Springer Cham.*, 1, 1–16. <https://doi.org/10.1007/978-3-319-75377-5>
- Fujiwara, H. (2007a). Spectroscopic Ellipsometry: Principles and Applications. UK: John Wiley & Sons, Ltd. <https://books.google.co.id/books?id=tTMnONKcpjsC>
- Fujiwara, H. (2007b). Spectroscopy Ellipsometry. Principles and Applications. UK: John Wiley & Sons, Ltd., 369. <https://www.wiley.com/en-us/Spectroscopic+Ellipsometry%3A+Principles+and+Applications-p-9780470016084>
- Gao, P., Grätzel, M., & Nazeeruddin, M. K. (2014). Organohalide lead perovskites for photovoltaic applications. *Energy and Environmental Science*, 7(8), 2448–2463. <https://doi.org/10.1039/c4ee00942h>
- Geim, A. K., & Novoselov, K. S. (2007). The rise of graphene PROGRESS. *Nature Materials*, 6(3), 183–191.

- Guerrero-Contreras, J., & Caballero-Briones, F. (2015). Graphene oxide powders with different oxidation degree, prepared by synthesis variations of the Hummers method. *Materials Chemistry and Physics*, *153*, 209–220. <https://doi.org/10.1016/j.matchemphys.2015.01.005>
- Jackson, J.D. (1962). Classical Electrodynamics. In *Jhon Wiley and Sons, New Jersey* (pp. 159–195). https://doi.org/10.1007/978-3-662-61262-0_8
- Jena, A. K., Numata, Y., Ikegami, M., & Miyasaka, T. (2018). Role of spiro-OMeTAD in performance deterioration of perovskite solar cells at high temperature and reuse of the perovskite films to avoid Pb-waste. *Journal of Materials Chemistry A*, *6*(5), 2219–2230. <https://doi.org/10.1039/c7ta07674f>
- Kim, H. S., Lee, C. R., Im, J. H., Lee, K. B., Moehl, T., Marchioro, A., Moon, S. J., Humphry-Baker, R., Yum, J. H., Moser, J. E., Grätzel, M., & Park, N. G. (2012). Lead iodide perovskite sensitized all-solid-state submicron thin film mesoscopic solar cell with efficiency exceeding 9%. *Scientific Reports*, *2*, 1–7. <https://doi.org/10.1038/srep00591>
- Kulbak, M., Cahen, D., & Hodes, G. (2015). How Important Is the Organic Part of Lead Halide Perovskite Photovoltaic Cells? Efficient CsPbBr₃ Cells. *Journal of Physical Chemistry Letters*, *6*(13), 2452–2456. <https://doi.org/10.1021/acs.jpcllett.5b00968>
- Kumar, N., Rani, J., & Kurchania, R. (2021). Advancement in CsPbBr₃ inorganic perovskite solar cells: Fabrication, efficiency and stability. *Solar Energy*, *221*(May), 197–205. <https://doi.org/10.1016/j.solener.2021.04.042>
- Li, D., Cui, J., Li, H., Huang, D., Wang, M., & Shen, Y. (2016). Graphene oxide modified hole transport layer for CH₃NH₃PbI₃ planar heterojunction solar cells. *Solar Energy*, *131*, 176–182. <https://doi.org/10.1016/j.solener.2016.02.049>
- Li, D., Müller, M. B., Gilje, S., Kaner, R. B., & Wallace, G. G. (2008). Processable aqueous dispersions of graphene nanosheets. *Nature Nanotechnology*, *3*(2), 101–105. <https://doi.org/10.1038/nnano.2007.451>
- Li, M., Huang, P., & Zhong, H. (2023). Current Understanding of Band-Edge Properties of Halide Perovskites: Urbach Tail, Rashba Splitting, and Exciton Binding Energy. *Journal of Physical Chemistry Letters*, *14*(6), 1592–1603. <https://doi.org/10.1021/acs.jpcllett.2c03525>
- Liang, J., Wang, C., Wang, Y., Xu, Z., Lu, Z., Ma, Y., Zhu, H., Hu, Y., Xiao, C., Yi, X., Zhu, G., Lv, H., Ma, L., Chen, T., Tie, Z., Jin, Z., & Liu, J. (2016). All-Inorganic Perovskite Solar Cells. *Journal of the American Chemical Society*, *138*(49), 15829–15832. <https://doi.org/10.1021/jacs.6b10227>

- Liu, R., Qiu, R., Zou, T., Liu, C., Chen, J., Dai, Q., Zhang, S., & Zhou, H. (2019). SnO₂-rGO nanocomposite as an efficient electron transport layer for stable perovskite solar cells on AZO substrate. *Nanotechnology*, 30(7), 075202. <https://doi.org/10.1088/1361-6528/aaf2ad>
- Liu, X., Xie, B., Duan, C., Wang, Z., Fan, B., Zhang, K., Lin, B., Colberts, F. J. M., Ma, W., Janssen, R. A. J., Huang, F., & Cao, Y. (2018). A high dielectric constant non-fullerene acceptor for efficient bulk-heterojunction organic solar cells. *Journal of Materials Chemistry A*, 6(2), 395–403. <https://doi.org/10.1039/c7ta10136h>
- López-Díaz, D., Merchán, M. D., & Velázquez, M. M. (2020). The behavior of graphene oxide trapped at the air water interface. *Advances in Colloid and Interface Science*, 286, 1–10. <https://doi.org/10.1016/j.cis.2020.102312>
- Lundie, M., Šljivančanin, Ž., & Tomić, S. (2015). Electronic and optical properties of reduced graphene oxide. *Journal of Materials Chemistry C*, 3(29), 7632–7641. <https://doi.org/10.1039/c5tc00437c>
- Mannino, G., Deretzis, I., Smecca, E., La Magna, A., Alberti, A., Ceratti, D., & Cahen, D. (2020). Temperature-Dependent Optical Band Gap in CsPbBr₃, MAPbBr₃, and FAPbBr₃ Single Crystals. *Journal of Physical Chemistry Letters*, 11(7), 2490–2496. <https://doi.org/10.1021/acs.jpcclett.0c00295>
- Ni, Z. H., Wang, H. M., Kasim, J., Fan, H. M., Yu, T., Wu, Y. H., Feng, Y. P., & Shen, Z. X. (2007). Graphene thickness determination using reflection and contrast spectroscopy. *Nano Letters*, 7(9), 2758–2763. <https://doi.org/10.1021/nl071254m>
- Niu, G., Guo, X., & Wang, L. (2015). Review of recent progress in chemical stability of perovskite solar cells. *Journal of Materials Chemistry A*, 3(17), 8970–8980. <https://doi.org/10.1039/c4ta04994b>
- Owen, T. (2000). *Fundamentals of UV-visible spectrophotometry*. 67–68.
- Pei, S., & Cheng, H. M. (2012). The reduction of graphene oxide. *Carbon*, 50(9), 3210–3228. <https://doi.org/10.1016/j.carbon.2011.11.010>
- R. M. A. Azzam, N. M. B. (1987). *Ellipsometry and Polarized Light*. North-Holland Publishing Company, 1977.
- Robinson, J. W., Frame, E. S., & dan Frame II, G. M. (2015). *Undergraduate Instrumental Analysis*. 6th Ed. New York: Marcel Dekker.
- Rodová, M., Brožek, J., Knížek, K., & Nitsch, K. (2003). Phase transitions in ternary caesium lead bromide. *Journal of Thermal Analysis and Calorimetry*, 71(2), 667–673.

- Song, C., Wang, J., Meng, Z., Hu, F., & Jian, X. (2018). Density Functional Theory Calculations of the Quantum Capacitance of Graphene Oxide as a Supercapacitor Electrode. *ChemPhysChem*, 19(13), 1579–1583. <https://doi.org/10.1002/cphc.201800070>
- Sui, M., Zhang, J., Zhou, L., Wu, H., Lin, Z., Li, P., Zhang, J., Hao, Y., & Chang, J. (2024). Bottom-Up Passivation Strategies toward High-Efficiency Carbon-Based All-Inorganic CsPbBr₃ Perovskite Solar Cells. *ACS Materials Letters*, 101–122. <https://doi.org/10.1021/acsmaterialslett.4c01890>
- Sujith, P., Pratheek, M., Parne, S. R., & Predeep, P. (2023). Growth and Characterization of High-Quality Orthorhombic Phase CsPbBr₃ Perovskite Single Crystals for Optoelectronic Applications. *Journal of Electronic Materials*, 52(1), 718–729. <https://doi.org/10.1007/s11664-022-10042-w>
- Tong, G., Chen, T., Li, H., Song, W., Chang, Y., Liu, J., Yu, L., Xu, J., Qi, Y., & Jiang, Y. (2019). High Efficient Hole Extraction and Stable All-Bromide Inorganic Perovskite Solar Cells via Derivative-Phase Gradient Bandgap Architecture. *Solar RRL*, 3(5), 1–9. <https://doi.org/10.1002/solr.201900030>
- Wan, X., Huang, Y., & Chen, Y. (2012). Focusing on energy and optoelectronic applications: A journey for graphene and graphene oxide at large scale. *Accounts of Chemical Research*, 45(4), 598–607. <https://doi.org/10.1021/ar200229q>
- Wang, K., Jin, Z., Liang, L., Bian, H., Bai, D., Wang, H., Zhang, J., Wang, Q., & Shengzhong, L. (2018). All-inorganic cesium lead iodide perovskite solar cells with stabilized efficiency beyond 15%. *Nature Communications*, 9(1), 1–8. <https://doi.org/10.1038/s41467-018-06915-6>
- Wang, P., Zhang, X., Zhou, Y., Jiang, Q., Ye, Q., Chu, Z., Li, X., Yang, X., Yin, Z., & You, J. (2018). Solvent-controlled growth of inorganic perovskite films in dry environment for efficient and stable solar cells. *Nature Communications*, 9(1), 1–7. <https://doi.org/10.1038/s41467-018-04636-4>
- Wang, X., Fan, Y., Wang, L., Chen, C., Li, Z., Liu, R., Meng, H., Shao, Z., Du, X., Zhang, H., Cui, G., & Pang, S. (2020). Perovskite Solution Aging: What Happened and How to Inhibit? *Chem*, 6(6), 1369–1378. <https://doi.org/10.1016/j.chempr.2020.02.016>
- Wang, Y., Ibrahim Dar, M., Ono, L. K., Zhang, T., Kan, M., Li, Y., Zhang, L., Wang, X., Yang, Y., Gao, X., Qi, Y., Grätzel, M., & Zhao, Y. (2019). Thermodynamically stabilized b-CsPbI₃-based perovskite solar cells with efficiencies >18%. *Science*, 365(6453), 591–595. <https://doi.org/10.1126/science.aav8680>
- Welyab, G., Abebe, M., Mani, D., Thankappan, A., Thomas, S., Aga, F. G., & Kim,

- J. Y. (2023). All-Inorganic CsPbBr₃ Perovskite Nanocrystals Synthesized with Olive Oil and Oleylamine at Room Temperature. *Micromachines*, *14*(7), 1–14. <https://doi.org/10.3390/mi14071332>
- Whitcher, T. J., Zhu, J. X., Chi, X., Hu, H., Zhao, D., Asmara, T. C., Yu, X., Breese, M. B. H., Castro Neto, A. H., Lam, Y. M., Wee, A. T. S., Chia, E. E. M., & Rusydi, A. (2018). Importance of Electronic Correlations and Unusual Excitonic Effects in Formamidinium Lead Halide Perovskites. *Physical Review X*, *8*(2), 1–10. <https://doi.org/10.1103/PhysRevX.8.021034>
- Widianto, E., Shobih, Nursam, N. M., Hanna, M. Y., Triyana, K., Rusydi, A., & Santoso, I. (2023). Electronic correlations enhance optical absorption in graphene oxide-modified methylammonium lead iodide perovskite. *Journal of Alloys and Compounds*, *947*, 169634. <https://doi.org/10.1016/j.jallcom.2023.169634>
- Wu, T., Qin, Z., Wang, Y., Wu, Y., Chen, W., Zhang, S., Cai, M., Dai, S., Zhang, J., Liu, J., Zhou, Z., Liu, X., Segawa, H., Tan, H., Tang, Q., Fang, J., Li, Y., Ding, L., Ning, Z., ... Han, L. (2021). The Main Progress of Perovskite Solar Cells in 2020–2021. *Nano-Micro Letters*, *13*(1). <https://doi.org/10.1007/s40820-021-00672-w>
- Xu, Y., Duan, J., Yang, X., Du, J., Wang, Y., Duan, Y., & Tang, Q. (2020). Lattice-tailored low-temperature processed electron transporting materials boost the open-circuit voltage of planar CsPbBr₃perovskite solar cells up to 1.654 v. *Journal of Materials Chemistry A*, *8*(23), 11859–11866. <https://doi.org/10.1039/d0ta04366d>
- Zhang, S., Guo, R., Zeng, H., Zhao, Y., Liu, X., You, S., Li, M., Luo, L., Lira-Cantu, M., Li, L., Liu, F., Zheng, X., Liao, G., & Li, X. (2022). Improved performance and stability of perovskite solar modules by interface modulating with graphene oxide crosslinked CsPbBr₃ quantum dots. *Energy & Environmental Science*, *15*(1), 244–253. <https://doi.org/10.1039/D1EE01778K>
- Zhang, X., Ji, G., Xiong, D., Su, Z., Zhao, B., Shen, K., Yang, Y., & Gao, X. (2018). Graphene oxide as an additive to improve perovskite film crystallization and morphology for high-efficiency solar cells. *RSC Advances*, *8*(2), 987–993. <https://doi.org/10.1039/c7ra12049d>
- Zhao, D., Chen, C., Wang, C., Junda, M. M., Song, Z., Grice, C. R., Yu, Y., Li, C., Subedi, B., Podraza, N. J., Zhao, X., Fang, G., Xiong, R. G., Zhu, K., & Yan, Y. (2018). Efficient two-terminal all-perovskite tandem solar cells enabled by high-quality low-bandgap absorber layers. *Nature Energy*, *3*(12), 1093–1100. <https://doi.org/10.1038/s41560-018-0278-x>
- Zhao, D., Yu, Y., Wang, C., Liao, W., Shrestha, N., Grice, C. R., Cimaroli, A. J.,

Guan, L., Ellingson, R. J., Zhu, K., Zhao, X., Xiong, R. G., & Yan, Y. (2017). Low-bandgap mixed tin-lead iodide perovskite absorbers with long carrier lifetimes for all-perovskite tandem solar cells. *Nature Energy*, 2(4). <https://doi.org/10.1038/nenergy.2017.18>

Zhao, Y., & Zhu, K. (2016). Organic-inorganic hybrid lead halide perovskites for optoelectronic and electronic applications. *Chemical Society Reviews*, 45(3), 655–689. <https://doi.org/10.1039/c4cs00458b>