

Publication List of IFRD: 2021

*At present, around **19 scientists** are working in the Institute of Fuel Research and Development (IFRD), Bangladesh Council of Scientific and Industrial Research (BCSIR). In 2021, IFRD scientists published a total of **24 Scopus Web of Science (SCI, SCIE & ESCI) Indexed Papers with 2.36 average impact factor** and obtained **2 IPs (1 Patent and 1 Copyright)**.*

1. Mohammad Shah Jamal, Khan Sobayel, Halina Misran, Taskina Nasrin, Khaled Althubeiti, Hend I. Alkhamash, Md. Shahiduzzaman, Kamaruzzaman Sopian, Nowshad Amin, and Md. Akhtaruzzaman, 'Effect of Selective Lateral Chromium Doping by RF Magnetron Sputtering on the Structural, and Opto-Electrical Properties of Nickel Oxide. Applied Sciences, MDPI (SCIE & Scopus Index Q2 Journal, Impact Factor: 2.67), DOI: <https://doi.org/10.3390/app112311546>
2. Mohammad Shah Jamal, M. Shahinuzzaman, S. M. A. Sujan, Md. Rakibul Hasan, M. R. Karim, M. A. Dar, R. Gul, Nowshad Amin & Md. Akhtaruzzaman, 'Effect of Compression Pressure and Coal Binding on the Fuel Properties of Biomass Pellet', Solid Fuel Chemistry, Springer (SCIE & Scopus Index Q2 Journal, Impact factor: 0.98), DOI: <https://doi.org/10.3103/S0361521921060070>
3. Mohammad Shah Jamal, Saraswati Bajgai, M Hossain, A Laref, Pankaj Kumar Jha, Kuaanan Techato, 'Comparative studies on the morphological, structural and optical properties of NiO thin films grown by vacuum and non-vacuum deposition techniques', Materials Research Express, IOP Publishing, (SCIE & Scopus Index Q2 Journal, Impact Factor: 1.62), DOI: <https://iopscience.iop.org/article/10.1088/2053-1591/ac4340/meta>
4. Shan Ali Raza, Naeem Hussain, Asad Ullah, Mohammad Shah Jamal, Kuaanan Techato, 'Assessment of Physicochemicals and Microbial Parameters of Different Supplies of Water In Koh E Suleman Dera Ghazi Khan Punjab, Pakistan', Fresenius Environmental Bulletin (Scopus Index), 2021
5. Mosharof Hossain, Nuzhat Muntaha, Lipiar Khan Mohammad Osman Goni, Mohammad Shah Jamal, Mohammad Abdul Gafur, Dipa Islam, and Abu Naieum Muhammad Fakhruddin, Triglyceride Conversion of Waste Frying Oil up to 98.46% Using Low Concentration K⁺/CaO Catalysts Derived from Eggshells', ACS Omega, (SCIE & Scopus Index Q1 Journal, Impact Factor: 3.512), DOI: <https://doi.org/10.1021/acsomega.1c05582>
6. Mosharof Hossain, Lipiar Khan Mohammad Osman Goni, Nuzhat Muntaha, Mohammad Shah Jamal, Mohammad Asaduzzaman Sujan, Shamim Ahmed, Dipa Islam, Riyadh Hossen Bhuiyan, Abu Naieum Muhammad Fakhruddin, Box–Behnken design-based optimization for biodiesel production from waste cooking oil using Mahogany (*Swietenia macrophylla*) fruit shell derived activated carbon as a heterogeneous base catalyst", Reaction Kinetics, Mechanisms and Catalysis, Springer (SCI & Scopus Index Journal, Impact factor: 1.52), DOI: <https://doi.org/10.1007/s11144-021-01995-w>
7. Mosharof Hossain, Shah Mohammad Asaduzzaman Sujan, Mohammad Shah Jamal, Md. Shahariar Chowdhury, Kuaanan Techato, Abu Naieum Muhammad Fakhruddina, "Abiding Effects of Phenolic Antioxidants on Oxidative Behaviour of Fatty Acid Methyl Esters Derived from Waste Cooking Oil, BioResources, (SCIE and Scopus Index Journal, Impact Factor: 1.614), Link: https://ojs.cnr.ncsu.edu/index.php/BioRes/article/view/BioRes_16_4_7021_Hossaina_Abiding_Phenolic_Antioxidants_
8. Samiya Mahjabin, Md. Mahfuzul Haque, Sobayel Khan, Vidhya Selvanathan, M. Shah Jamal, M.S. Bashar, Hend I. Alkhamash, Mohammad Ismail Hossain, Md. Shahiduzzaman, Nowshad Amin,

Kamaruzzaman Sopian, Md.Akhtaruzzaman, “Effects of oxygen concentration variation on the structural and optical properties of reactive sputtered WO_x thin film, Solar Energy, Elsevier (SCI & Scopus Index Q1 Journal, Impact Factor: 5.74), DOI: <https://doi.org/10.1016/j.solener.2021.05.031>

9. M. S. Chowdhury, Kazi Sajedur Rahman, Vidhya Selvanathan, A. K. Mahmud Hasan, M. Shah Jamal, Nurul Asma Samsudin, Md. Akhtaruzzaman, Nowshad Amin and Kuaanan Techato, “Recovery of FTO coated glass substrate via environment-friendly facile recycling perovskite solar cells”, RSC Advances (SCIE & Scopus Index Q1 Journal, Impact Factor: 3.2) DOI: <https://doi.org/10.1039/D1RA00338K>
10. Chila Kaewpraek, Liaqat Ali, Md. Arefin Rahman, Mohammad Shakeri, M. S. Chowdhury, M. Shah Jamal, Md. Shahin Mia, Jagadeesh Pasupuleti, Le Khac Dong, Kuaanan Techato, “The Effect of Plants on the Energy Output of Green Roof Photovoltaic Systems in Tropical Climates”, Sustainability (SCIE & Scopus Index Q2 Journal, Impact Factor: 2.57) DOI: <https://www.mdpi.com/2071-1050/13/8/4505>
11. Abu Kowsar, Md. Saidul Islam, Sumon Chandra Debnath, Md. Masum Billah, Khaledun Nahar Babi, Ali Newaz Bahar, Syed Farid Uddin Farhad, ‘Simulation and performance optimization of high efficiency triple-junction solar cells using an advanced MSCS-1D simulator’, International Journal of Renewable Energy Research (ESCI & Scopus Index Journal, Impact Factor: 5.12), Link: <https://www.ijrer.org/ijrer/index.php/ijrer/article/view/12474>
12. Abu Kowsar, Sumon Chandra Debnath, Md. Saidul Islam, Al Newaz Bahar, Syed Farid Uddin Farhad, “Numerical Simulation of the High Efficiency Triple Junction Concentrator Photovoltaic Cells Using MSCS-1D” 48th IEEE PVSC, USA, IEEE Xplore (Scopus Index), DOI: 10.1109/PVSC43889.2021.9518975.
13. Md. Saidul Islam, Mashudur Rahaman, Md. Azizul Hoque, Sumon Chandra Debnath, Md. Sadequul Azam, Abu Kowsar, ‘An Energy-Efficient Microcontroller-Based Smart Light Controlling System’, Journal of Electrical and Electronics (Scopus Index), Pp-25-30, 2021
14. Shuai Wua, Ajoy Kanti Mondal, Preparation and characterization of super hydrophobic aerogels derived from tunicate cellulose nanocrystals, Carbohydrate Research, Elsevier (SCIE & Scopus Index Journal, Impact Factor: 2.1), DOI: <https://doi.org/10.1016/j.carres.2021.108488>.
15. Ajoy Kanti Mondal, Shuai Wu, Dezhong Xu, Qiuxia Zou, Lihui Chen, Liulian Huang, Fang Huang, Yonghao Ni, “Preparation of lignosulfonate ionic hydrogels for supercapacitors, sensors and dye adsorbent applications,” International Journal of Biological Macromolecules, Elsevier (SCI & Scopus Index Q1 Journal, Impact Factor: 6.95), DOI: <https://doi.org/10.1016/j.ijbiomac.2021.07.021>
16. Shahrar Ahmed, A. K. M. Sarwar Hossain Faysal, M.N.I Khan, M.A. Basith, Muhammad Shahriar Bashar, H.N. Das, Tarique Hasan, Imtiaz ahmed, ‘Room temperature ferroic orders in Zr and (Zr, Ni) doped SrTiO₃, Results in Physics, Elsevier (SCIE and Scopus Index Q2 journal, Impact Factor: 4.72), DOI: <https://doi.org/10.1016/j.rinp.2021.104940>
17. Muhammad Shahriar Bashar, Rummana Matin, Munira Sultana, Ayesha Siddika, M.A. Gafur, Ahmed Farid, ‘Growth Optimization and Study on Structural, Morphological, Optical and Electrical Properties of As-Deposited Zinc Sulfide Thin Films Fabricated by Radio-Frequency Magnetron Sputtering Technique at Room Temperature’, Journal of Nano Research, (ESCI and Scopus Index), DOI: <https://doi.org/10.4028/www.scientific.net/JNanoR.70.27>

18. S.M. Amir-Al Zumahi, Nourin Arobi, M. Mahbubur Rahman, Md. Kamal Hossain, Meshkat Ara Jahan Rozy, M. Shahariar Bashar, Amun Amri, Humayun Kabir, Md. Abul Hossain, Farid Ahmed, "Understanding the optical behaviours and the power conversion efficiency of novel organic dye and nanostructured TiO₂ based integrated DSSCs", *Solar Energy*, Elsevier (SCI & Scopus Index Q1 Journal, Impact Factor: 5.74), DOI: <https://doi.org/10.1016/j.solener.2021.07.024>
19. Md. Ferdous Rahman, Md. Mahabub Alam Moon, Md. Hasan Ali, Shamim Ahmmed, Samia Tabassum, Jaker Hossain, Abu Bakar Md. Ismail, "A systematic study of how annealing conditions lead to the application-based microstructural, crystallographic, morphological, and optical features of spin-coated CdS thin-films", *Optical Materials*, Elsevier (SCI & Scopus Index Q1 Journal, Impact Factor: 2.779), DOI: <https://doi.org/10.1016/j.optmat.2021.111136>
20. Shamim Ahmmed, Asma Aktar, Samia Tabassum, Md. Hafijur Rahman, Md. Ferdous Rahman, Abu Bakar Md. Ismail, "CuO based solar cell with V₂O₅ BSF layer: Theoretical validation of experimental data", *Superlattices and Microstructures*, Elsevier (SCIE & Scopus Index Q2 Journal, Impact Factor: 2.1), DOI: <https://doi.org/10.1016/j.spmi.2021.106830>
21. Md. Hafijur Rahman, Shamim Ahmmed, Samia Tabassum, and Abu Bakar Md. Ismail, "Epitaxial deposition of LaF₃ thin films on Si using deep eutectic solvent based facile and green chemical route", *AIP Advances* (SCIE & Scopus Index Q2 Journal, Impact Factor: 1.627), DOI: <https://doi.org/10.1063/5.0039733>
22. Jehadin, F., Rabeya, T., Asad, M.A., Adekunle, A.E., M. Saiful Islam, Efficient conversion of cornstalk to bioethanol using dilute H₂SO₄ pretreatment, *International Journal of Energy and Environmental Engineering*, (Scopus Index), DOI: <https://doi.org/10.1007/s40095-020-00371-z>
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24. Md Saiful Islam, Zeju Zhang, Song-Ben Qu, Chun-Lei Liu, Chen Guo, Chun-Zhao Liu, *Biomass and Bioenergy*, Elsevier (SCIE & Scopus Index Q1 Journal, Impact Factor: 2.1), DOI: <https://doi.org/10.1016/j.biombioe.2020.105923>