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Biography

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Md. Kamal Hossain

Assistant Professor

Research Area Density Functional Theory
Experimental Physics Computational Physics

Education

M.S.

Jahangirnagar University, Bangladesh (2018)

B. SC.

Jahangirnagar University, Bangladesh (2017) Group: Physics,

HSC

Government Science College, Bangladesh (2013) Group: Science,

SSC

Hazi Ashraf Ali High School, Bangladesh (2011) Group: Science,

Service Records

- **Department/Section:** EEE
Green University of Bangladesh From 01-01-1970 to 01-01-1970
Working Area: Physics

Research Interest

Density Functional Theory

CASTEP, Scilab, SCAPS-1D

Experimental Physics

Nanomaterial Synthesis and Characterizations

Computational Physics

Perovskite Materials for Photovoltaic Applications

Publication

Books

Journals

5. Hossain, K., Rabu, R. A., Khanom, M., Hossain, M. K. and Ahmed, F. (March 2023), " First-Principles Calculations to Investigate Effect of X+ Cations Variation on Structural, Mechanical, Electronic and Optical Properties of the XCdCl₃ Chloroperovskites," **Materials Science and Engineering: B**, vol289, pp.116228
4. Fakhera, F., Hossain, K., Khanom, M. S., Hossain, M. K. and Ahmed, F. (February 2023), " Understanding the impact of Y₂₊ (YMn, Fe, and Co) cations on physical properties of SrYGe₂O₆ clinopyroxene: A DFT insight," **Journal of Physics and Chemistry of Solids**, Elsevier, vol173, pp.111112
3. Roman, Z., Rahman, M. M., Hossain, K., Das, S. and Ahmed, F. (2022), " Development of high-performance ScS₂ monolayer as cathode material: A DFT analysis," **Solid State Communications**, Elsevier, vol352, no.114828
2. Hossain, K., Rabu, R. A., Khanom, M. S., Hossain, M. K. and Ahmed, F. (2022), " First-principles study of structural, mechanical, lattice dynamics, superconducting and optoelectronic properties of the Pd₃Pb₂Se₂ shandite under hydrostatic pressure," **Physica B: Condensed Matter**, Elsevier, vol637, no.15 July 2022, pp.413920
1. Hossain, K., Khanom, M. S., Israt, M. F., Hossain, M. K. and Ahmed, F. (2020), " First-principles study on structural, mechanical and optoelectronic properties of lead-free mixed Ge²⁺/Sn hybrid organic-inorganic perovskites," **Solid State Communications**, Elsevier, vol320, no.114024

Conference

3. Hossain,K. ,Ahmed,P. D. F. and Sikder,P. D. S. S. (2022) , "Semiconducting to Metallic Phase Transition in AgCdCl₃ Perovskite under Hydrostatic Pressure," **International Conference on Physics-2022** , Bangladesh Physical Society, pp.93
2. Hossain,K. ,Ahmed,P. D. F. and Sikder,P. D. S. S. (2022) , "Ab Initio Study of Structural and Physical Properties of Cd-Based Chloroperovskite X₂Y₂Z₄ (X=Ag, K) Structures," **International Conference on Physics-2022** , Bangladesh Physical Society, pp.87
1. (2020) , "Structural, Mechanical, and Optoelectronic Properties of Mixed-Metal Iodide (MAGe_{0.125}Sn_{0.875}I₃) Perovskites: A First- Principles Study," **International Conference on Physics** , Bangladesh Physical Society