

CURRICULUM VITAE



DR. MD. LOKMAN ALI

Contact Address:

Department of Physics, Pabna University of Science and Technology, Pabna, Bangladesh.

+8801747929123(Private)

+8807-3164898(Office)

lokman.ali@pust.ac.bd

lokman.cu12@gmail.com

Career Objective

Keen to enrich my knowledge by doing original research work with world-class researchers where success comes through creativity, hardworking and sincerity.

Academic Qualifications

Doctor of Philosophy (Ph.D):

- * Institute : Osaka University, Japan.
- * Department : Department of Mechanical Science and Bio-engineering
- * Year of awarded : 2021

Master of Science (M.S.):

- * Institute : University of Chittagong, Bangladesh.
- * Department : Physics
- * Year of Passing : 2013
- * Result : 3.93 out of 4.00 (1st position among the 110 students of the batch)

Bachelor of Science (B.Sc.):

- * Institute : University of Chittagong, Bangladesh
- * Department : Physics
- * Year of Passing : 2011
- * Result : 3.72 out of 4.00 (1st position among the 110 students of the batch)

Awards and Achievements

- * 2013 : **Distinction Award** (in recognition of outstanding Results in

- M.S. degree)
 ✨ 2011 : **Distinction Award** (in recognition of Excellent Results in B.Sc. (honor's) degree)

Scholarships

- ✨ 2018 : **Japanese Government (MEXT) Scholarship** to pursue PhD degree from Osaka University, Japan

Professional Experience

Profession	Organization	Position	Experience
Teaching	Dept. of Physics, Pabna University of Science and Technology	Associate Professor	06/08/2022 To date
Teaching	Dept. of Physics, Pabna University of Science and Technology	Assistant Professor	25/11/2016 05/08/2022
Teaching	Dept. of Physics, Pabna University of Science and Technology	Lecturer	25/11/2014 To 24/11/2016

Areas of Research Interest

Multi-scale modeling, Theoretical solid mechanics, Computational materials science, Multi-principal elements alloys,

Research Experiences

First principle calculations, Density functional theory (DFT), Molecular dynamics (MD), LAMMPS,

Conference presentations (International and national)

The 9th international conference on Multiscale Materials Modeling, Oct. 28 to Nov. 2, 2018, Osaka, Japan.




Supervision Experience (Bachelor's and Master's levels)

- ✨ Successfully supervised a master's (thesis) research
- ✨ Successfully supervised total eighteen (12) bachelors' and master's level research projects

Professional Training

- The 9th international conference on Multiscale Materials Modeling, Oct. 28 to Nov. 2, 2018, Osaka, Japan
- IEEE Authorship workshop, 7 to 8 June-2019 Venue: Suntory Memorial Hall, 5F,Bldg C3, Division of Advanced Science and Biotechnology, Graduate School of Engineering, Suita Campus, Osaka University, Japan

Scientific Association

-  Google Scholar: <https://scholar.google.com/citations?user=agk7avEAAA&hl=en>
-  ResearchGate: <https://www.researchgate.net/profile/Md-Lokman-Ali>
-  ORCID: <https://orcid.org/0000-0001-5750-9412>

Publications

- * Total Papers: 26
(Research Papers: 26, Review Papers: 01)

Research Scores and Citation

- * Google Scholar : Citations # 249, h-index # 10, i10-index # 10
- * Research Gate : Citations # 219, h-index # 8,

Other Skills:

- * Analytical Tools (Experimental): SEM, XRD, UV-Visible Spectrophotometer, Precision Impedance Analyzer, Four Probe Technique, TGA, DSC and Bomb calorimeter.
- * Analytical Tools (Simulation): LAMMPS, CASTEP code
- * Sigma Plot, Origin, MS Word, MS Excel, MS PowerPoint, GRADS

List of My Selected Publications:

1	Md. Nadim Mahamud Nobin, Mithun Khan, Md. Sayed Saiful Islam, Md. Lokman Ali*, Pressure-induced physical properties in topological semi-metal TaM ₂ (M = As, Sb); Journal: RSC Advances, Publisher's: Royal Society of Chemistry (RSC); Status: Accepted Impact factor: 4.132
2	Rubayet Akter ¹⁺ , Mithun Khan ¹⁺ , Md. Nadim Mahmud Nobin ¹ , Md. Shahajan Ali ¹ , Md. Mukter Hossain ² , Md. Zahidur Rahaman ³ , Md. Lokman Ali ^{1*} "Effects of grain boundary and chemical short-range order on mechanical properties of NiCoCr multi- principal element alloys: A molecular dynamics simulations", Materials Today Communications; Accepted; Publisher's: Elsevier
3	Mithun Khan; Md. Zahidur Rahaman; Md. Lokman Ali, Pressure-Induced Band Gap Engineering of Nontoxic Lead-Free Halide Perovskite CsMgI ₃ for Optoelectronic Applications; ACS Omega, (2023), Impact factor: 4.10, Publisher's: American Chemical Society(ACS); DOI: https://doi.org/10.1021/acsomega.3c01388
4	M.H. Kabir, M.M. Hossain, M.A. Ali, M.M. Uddin, M.L. Ali, M.Z. Hasan, A. K. M. A Islam, S.H. Naqib, First principles study of mechanical, thermal, electronic, optical and superconducting properties of C40-typegermanide-based MGe ₂ (M = V, Nb and Ta), Results in Physics, 106701 (2023); Publisher's : Elsevier, Impact factor: 4.65 DOI: https://doi.org/10.1016/j.rinp.2023.106701
5	Md. Lokman Ali, Marof Billah, Mithun Khan, Md. Nadim Mahamud Nobin, Md. Zahidur Rahaman, "Pressure-induced Physical Properties of Alkali Metal Chlorides Rb ₂ NbCl ₆ : A Density Functional Theory Study; Journal: AIP Advances; Accepted; Publishers: American Institute of Physics

6	Md. Lokman Ali, Md. Farhanul Islam, Md. Nadim Mahamud Nobin, Mithun Khan & Md. Zahidur Rahaman, Pressure-Induced Superconductivity in CsFe ₂ As ₂ , Journal of Superconductivity and Novel Magnetism, 2023 Accepted: 29 April Publishers: Springer Doi: https://link.springer.com/article/10.1007/s10948-023-06573-w
7	Nadim Mahamud Nobin, Mithun Khan , Md Lokman Ali, An atomistic modeling study of high-throughput RVO ₃ (R=La, Nd) perovskites for efficient solar energy conversion materials; Journal Name: Physica B: Condensed Matter; Publisher's: Elsevier; Published Year: 2023; Impact factor: 2.998 DOI: https://doi.org/10.1016/j.physb.2023.414879
8	Md. Lokman Ali, Md. Farhanul Islam, Nadim Mahmud Nabin, Mithun Khan, Md. Zahidur Rahaman, Pressure-Induced Superconductivity in CsFe ₂ As ₂ ; Journal name: Journal of Superconductivity and Novel Magnetism; Publisher's: Springer; Impact factor: 1.675 Year: 2023; Accepted
9	Md. Lokman Ali, Mithun Khan & Md. Zahidur Rahaman, First-Principles Studies in Pd-Based RRPPdd2PP2 (R = Pr and Nd) Superconductors Under Pressure, Journal name: Journal of superconductivity and Noble Magnetism; Publisher's: Springer; Impact factor: 1.675 Published year: 2023 DOI: 10.1007/s10948-022-06476-2
10	Md Atikur Rahman, Kamrunnahar Mousumi, Md Lokman Ali, Md Zillur Rahman, Sayed Sahriar Hasan, Wakil Hasan, Md Rasheduzzaman, Md Zahid Hasan, First-principles calculations to investigate elastic, electronic, optical and thermodynamic properties of Pt ₃ X (X = Ti, Cu), Results in Physics, Impact factor: 4.565, Publishers: Elsevier , Year: 2022, DOI: https://doi.org/10.1016/j.rinp.2022.106141
11	Md. Nurul Islam, Jiban Podder, Md. Lokman Ali, The effect of metal substitution in CsSnI ₃ perovskite with enhanced optoelectronic and photovoltaic properties. RSC Advances, 11, 39553-39563 (2021) Publisher's: Royal Society of Chemistry (RSC). DOI: https://doi.org/10.1039/D1RA07609D
12	Md. Lokman Ali* , Enhanced lattice distortion, yield strength, critical resolved shear stress, and improving mechanical properties of transition-metals doped CrCoNi medium entropy alloy, <i>RSC Advances</i> , 2021, Vol. 11, No.: 138, pages: 23719 - 23724, ISSN: 2046-2069 (online), Impact factor: 3.361 , Publisher's: Royal Society of Chemistry, DOI: 10.1039/D1RA02073K .
13	Md. Lokman Ali , Shuhei Shinzato, Vei Wang, Shen Zeki, Jun-Ping Du, Shigenobu Ogata, An atomistic modeling study of the relationship between critical resolved shear stress and atomic structure distortion in fcc high entropy alloys – Relationship in random solid solution and chemical short range order alloys-, <i>Materials Transactions</i> , Vol. 61, No. 4, Pages: 605-609, 2020, ISSN: 1345-9678 (print), 1347-5320 (online), Impact factor: 1.389 , Publishers: The Japan Institute of Metals and Materials, DOI: https://doi.org/10.2320/matertrans.MT-MK2019007
14	Md. Majibul Haque Babu, Jiban Podder*, Rabeya Rahman Tofa, Md. Lokman Ali , Effect of Co doping in tailoring the crystallite size, surface morphology and optical bandgap of CuO thin films prepared via thermal spray pyrolysis, <i>Surfaces and Interfaces</i> , Vol. 25, Pages: 101269, 2021, ISSN: 2468-0230, Impact Factor: 4.837 ,

	Publishers: Elsevier, DOI: https://doi.org/10.1016/j.surfin.2021.101269
15.	Md. Nurul Islam, Jiban Podder*, Md. Lokman Ali , The effect of metal substitution in CsSnI ₃ perovskites with enhanced optoelectronic and photovoltaic properties. <i>RSC Advances</i> , 2021, Accepted, ISSN: 2046-2069 (online), Impact factor: 3.361 , Publisher's: Royal Society of Chemistry,
16	Md. Lokman Ali* , Enamul Haque, Md. Zahidur Rahaman, Pressure- and temperature-dependent physical metallurgy in a face-centered cubic NiCoFeCrMn high entropy alloy and its subsystems, <i>Journal of Alloys and Compounds</i> , Vol. 873, pages: 159843, 2021, ISSN: 0925-8388, Impact factor: 5.316 , Publishers: Elsevier, DOI: https://doi.org/10.1016/j.jallcom.2021.159843
17	Khandaker Monower Hossen, Md. Zahid Hasan, Md. Lokman Ali* , Narrowing bandgap and enhanced mechanical and optoelectronic properties of perovskite halides: Effects of metal doping, <i>AIP Advances</i> , Vol. 11, Pages: 015052, 2021, ISSN: 2158-3226, Impact factor: 1.579 , Publishers: American Institute of Physics (AIP), DOI: https://doi.org/10.1063/5.0039308
18	Khandaker Monower Hossen, Md. Zahid Hasan, Md. Lokman Ali* , Understanding the influences of Mg doping on the physical properties of SrMoO ₃ perovskite, <i>Results in Physics</i> , Vol. 19, Pages: 103337, 2020, ISSN: 2211-3797, Impact factor: 4.476 , Publishers: Elsevier, DOI: https://doi.org/10.1016/j.rinp.2020.103337
19	Md. Atikur Rahman, Md. Zahidur Rahaman, Md. Lokman Ali , Md. Shahjahan Ali, The physical properties of ThCr ₂ Si ₂ - type nickel-based superconductors BaNi ₂ T ₂ (T = P, As): An ab-initio study, <i>Chinese Journal of Physics</i> , 2019, Vol. No.: 59, Pages: 58-69. ISSN: 0577-9073, Impact factor: 3.31 , Publisher's: Elsevier, DOI: 10.1016/j.cjph.2018.12.026.
20	Md. Lokman Ali , Md. Tosaddek Hossen, Shahin Alam, Jakiul Islam, Sm. Rubayetul Islam, The Physical properties of ThCr ₂ Si ₂ -type superconductors MPd ₂ P ₂ (M = Y, La): A theoretical investigation, <i>International Journal of Modern Physics B</i> , Vol. 32, No. 28, Pages: 1850312, 2018, ISSN: 0217-9792 (print), ISSN: 1793-6578, Impact factor: 1.219 , Publisher's: World Scientific, DOI: https://doi.org/10.1142/S0217979218503125
21	Md. Lokman Ali , Md. Zahidur Rahaman, Investigation on different physical aspects such as structural, elastic, mechanical, optical properties and Debye temperature of Fe ₂ ScM (M = P and As) semiconductors: a DFT based first principles study, <i>International Journal of Modern Physics B</i> , Vol. 32, No. 18, Pages: 1850121, 2018, ISSN: 0217-9792 (print), ISSN: 1793-6578, Impact factor: 1.219 , Publisher's: World Scientific, DOI: https://doi.org/10.1142/S0217979218501217

22	Md. Zahidur Rahaman, Md. Lokman Ali , Insight into the physical properties of two niobium-based compounds Nb_3Be and Nb_3Be_2 via first principles calculations, <i>Chinese Journal of Physics</i> , 2019, Vol. No.: 59, Pages: 58-69. ISSN: 0577-9073, Impact factor: 3.31 , Publisher's: Elsevier, DOI: https://doi.org/10.1016/j.cjph.2018.05.016
23	Md. Zahidur Rahaman, Md. Lokman Ali , Md. Atikur Rahman, Pressure dependent mechanical and thermodynamic properties of newly discovered cubic Na_2He , <i>Chinese Journal of Physics</i> , 2018, Vol. No.: 56, Pages: 231-237. ISSN: 0577-9073, Impact factor: 3.31 , Publisher's: Elsevier, DOI: 10.1016/j.cjph.2017.12.024 .
24	Md. Lokman Ali* , Md. Zahidur Rahman, Md. Atikur Rahman, The structural, elastic and optical properties of SCM (M = Rh, Cu, Ag, Hg) intermetallic compounds under pressure by ab initio simulations, <i>International Journal of Computational Materials Science and Engineering</i> , Vol. 5, No. 4, Pages: 1650024, ISSN: 2047-6841 (print), 2047-685X (online), Impact factor: 1.32 , DOI: https://doi.org/10.1142/S204768411650024X
25	Md. Afjalur Rahman, Md. Atikur Rahman, Uttam Kumar Chowdhury, MTH Bhuiyan, Md. Lokman Ali , Md. Abdur Razzaque Sarker, First principles investigation of structural, elastic, electronic and optical properties of Abi_2O_6 (A = Mg, Zn) with trirutile-type structure, <i>Cogent Physics</i> , Vol. 3, No. 1, Pages: 1257414, 2016, ISSN: 2331-1940, Publishers: Taylor and Francis, DOI: 10.1080/23311940.2016.1257414
26	Uttam Kumar Chowdhury, Md. Atikur Rahman, Md. Afjalur Rahman, MTH Bhuiyan, Md. Lokman Ali , Ab initio study on structural, elastic, electronic, and optical properties of cuprate based superconductor, <i>Cogent Physics</i> , Vol. 3, No. 1, Pages: 1231361, 2016, ISSN: 2331-1940, Publisher's: Taylor and Francis, DOI: 10.1080/23311940.2016.1231361

Core Courses

Bachelor of Science (B.Sc.)

Mechanics, Electromagnetism, Properties of Matter Waves & Vibration, Heat & Thermodynamics, Optics, Classical Mechanics, Elementary Quantum Theory, Quantum Mechanics, Classical Electrodynamics, Atomic & Molecular Physics, Basic Electronics, Relativity: Special & General, Nuclear Physics, Mathematical physics, Solid State physics, Radiation & Statistical Mechanics, Digital Electronics, Reactor Physics, Medical physics.

Master of Science (M.S.)

Advanced solid state physics

Course Taught

Quantum Physics, Elementary Quantum Theory, Computational Physics, General and Special, Reactor Physics, Radiation & Statistical Physics, Heat & Thermodynamics.

Language proficiency

Good reading, writing and speaking skill in both Bangla & English.

Personal Details

- * Father's Name : Md. Hitullah Khan.
- * Mother's name : Noorjahan.
- * Date of Birth : 22th July, 1987
- * Sex : Male
- * Marital Status : Married
- * Nationality : Bangladeshi by birth
- * Height : 5'-7"
- * Permanent address : Village+ Post Office: Kamarer Char, Police Station: Sherpur Sadar, District: Sherpur, Country: Bangladesh.

References

Dr. Shigenobu Ogata Professor Department of Mechanical Science and Bioengineering, Graduate School of Engineering Science, Osaka University, Japan Phone: +81-6-6850-6197 Email: Ogata@me.es.osaka- u.ac.jp	Dr. Md. Sayeedul Islam Associate Professor, Department of Bio-logical Science, Graduate School of Science, Osaka University, Japan Phone: +819042751713 E-mail: sayeed0009@yahoo.com	Dr. Md. Nasim Hasan Professor Department of Physics University of Chittagong, Bangladesh Phone: +8801727-472804 Email: nhasan72bd@yahoo.com
---	--	---

I hereby declare that the information given above is correct to the best of my knowledge.

Sincerely yours,

Dr. Md. Lokman Ali

Date: 29/05/2022