


KALIPADA GHOSH TARAI MAHAVIDYALYA, BAGDOGRA

TEACHER PROFILE

NAME: Dr. Koyel Bhattacharya	
DESIGNATION: Assistant Professor and HOD of Physics	
DEPARTMENT: Physics	
ACADEMIC QUALIFICATIONS: MSc (Physics), PhD (Science) from Jadavpur University	
CONTACT INFO.: (Email)- koyel21stapril@gmail.com (Mobile)- 9064174007	

DATE OF JOINING	1 st April, 2015
SPECIALIZATION	Solid State Physics, Nano-crystalline Silicon materials and Photo-voltaic Applications, Renewable Energy Resources, Glass-Nanocomposites
TEACHING EXPERIENCE	15 years [8 years in Mathabhanga College, Mathabhanga, Coochbehar, West Bengal (21 st March, 2007 - 31 st March, 2015) and 7 years in Kalipada Ghosh Tarai Mahavidyalaya, Bagdogra, West Bengal (1 st April, 2015 - Present)]
AWARD/ FELLOWSHIP	Research Fellow of Indian Association for the Cultivation of Science, Kolkata during 2003 - 2007
MEMBERSHIP	NA

RESEARCH AREA: Nano-crystalline Silicon materials and Photo-voltaic Applications, Glass-Nanocomposites

SEMINAR/ WORKSHOP:

Paper Presented in Symposium/conferences/ workshop

1. Nanocrystalline Silicon network grown at low H₂-dilution and low substrate temperature

Koyel Bhattacharya and Debajyoti Das

17th AGM of the Material Research Society of India (MRSI)

(13th -15th February, 2006) organised by University of Lucknow, Lucknow and MRSI-Lucknow Chapter

2. Characterization of Nanocrystalline Silicon network prepared using H₂-dilution

Koyel Bhattacharya and Debajyoti Das

Proceedings of the National Symposium on Spectroscopy and its Applications (18th - 20th January, 2006) held on

Indian Association for the Cultivation of Science, Jadavpur, Kolkata-700032

Participation of Symposium/conferences/ workshop/Webinar

1. UGC- Sponsored National Seminar on “Media Ethics in the Information Age” (3rd & 4th September, 2013) at Mathabhanga College, Mathabhanga, Coochbehar, West Bengal, India-736146 organised by Department of Philosophy, Mathabhanga College, In Collaboration with Department of Philosophy, University of North Bengal
2. UGC- Sponsored National Conference on “Realizing The Right To Development In India: The Challenges of Universal elementary Education” (25th -26th March, 2010) organised by Department of Political Science,

Mathabhanga College, Mathabhanga, Coochbehar, West Bengal, India-736146

3. National Symposium on “Spectroscopy and its Applications” (18th - 20th January, 2006) held on Indian Association for the Cultivation of Science, Jadavpur, Kolkata-700032
4. 17th AGM of the Material Research Society of India (MRSI) (13th -15th February, 2006) organised by University of Lucknow, Lucknow and MRSI-Lucknow Chapter
5. Introductory Seminar on Astrophysics and Cosmology (September 16th, 2020) Organized by IUCAA Centre for Astronomy Research and Development (ICARD), Physics Department, North Bengal University
6. Webinar on “Journey of solar cells from Silicon to Perovskite” Organised by Research & Development Committee, Siliguri Institute of Technology on July 8, 2020
7. International Webinar on “Impact of COVID-19 on Higher Education and a Quest for Possible Alternatives” (22-24 June, 2020) Organized by Sukanta Mahavidyalaya, Dhupguri, West Bengal
8. 1st International e-Conference on Recent Advances in Physics & Materials Science-2020 (IC-RAPMS-2020) (9-10th July, 2020) Organized by Kurseong College, Darjeeling, West Bengal, India-734203 In collaboration with St. Joseph's College, Darjeeling, West Bengal, India-734104
9. Webinar on “Managing Emotions and Self-Care in times of Uncertainty” (30th June, 2020) Organized by Department of Clinical Psychology, Mizoram University
10. One day International Webinar on “COVID-19: Facts on the Bench- Where are we?” (31st August, 2020) Organized by Department of Chemistry and IQAC, Kalipada Ghosh Tarai Mahavidyalaya, Bagdogra

PUBLICATIONS:

GOOGLE SCHOLAR CITATION:

https://scholar.google.com/citations?hl=en&user=AMYLJB4AAAAJ&view_op=list_works&sortby=pubdate

1. [Physical and electrical properties of promising chalcogenide glassy system doped with Ag₂S](#)

A Chamuah, Koyel Bhattacharya, C K Ghosh, S Bhattacharya

2022; *Materials Today: Proceedings* Volume 66, Part 7, 2022, Pages 3218-3223; Publisher: Elsevier

2. [AC conductivity and electrical relaxation of a promising Ag₂S-Ge-Te-Se chalcogenide glassy system](#)

Anil Chamuah, Swarupa Ojha, Koyel Bhattacharya, Chandan Kumar Ghosh, Sanjib Bhattacharya

2022; *Journal of Physics and Chemistry of Solids*; Volume 166, July 2022, 110695; Publisher: Elsevier

3. [Highly conducting nanophases of Ag₂S-Se-Ge chalcogenide glassy systems: Explanations via computational descriptions](#)

Swarupa Ojha, Shayeri Das, Anil Chamuah, Madhab Roy, Koyel Bhattacharya, Tanmoy Chakraborty, Prabhat Ranjan, Sanjib Bhattacharya

2022; *Physica B: Condensed Matter*; Volume 643, 15 October 2022, 413794; Publisher: Elsevier

4. [Transport properties of CdI₂-doped silver ion conducting system: validation with first-principle DFT estimations](#)

Asmita Poddar, Shayeri Das, Madhab Roy, Koyel Bhattacharya, Sanjib Bhattacharya

2022; *Ionics*; volume 28, pages 2285–2292 (2022); Publisher: Springer Berlin Heidelberg

5. [Density of states, DC conductivity and physical properties of Ag₂S-Ge-Te-Se chalcogenide glassy system](#)

Anil Chamuah, Koyel Bhattacharya, Mir Sahidul Ali, Chandan Kumar Ghosh, Dipankar Chattopadhyay and Sanjib

Bhattacharya

2021; **Applied Physics A** volume 127, Article number: 656 (2021); Publisher: Springer

6. [Charge carrier transport and electrochemical stability of Li₂O doped glassy ceramics](#)
Amartya Acharya, **Koyel Bhattacharya**, Chandan Kumar Ghosh, Achintesh Narayan Biswas, Sanjib Bhattacharya
2020; **Materials Science and Engineering: B**; Volume: 260; Page: 114612; Publisher: Elsevier
7. [Electrical transport of chalcogenide glassy system: interpretation by Hunt's model and microstructure](#)
Swarupa Ojha, Madhab Roy, Anil Chamuah, **Koyel Bhattacharya**, Sanjib Bhattacharya
2020; **SN Applied Sciences**; Volume: 2; Page: 1; Publisher: Springer International Publishing
8. [Microstructures and charge carrier transport of some Li₂O doped glassy ceramics](#)
Amartya Acharya, **Koyel Bhattacharya**, Chandan Kumar Ghosh, Sanjib Bhattacharya
2020; **Materials Letters**; Volume: 265; Page: 127438; Publisher: North-Holland (Elsevier)
9. [Transport phenomena of Cu-S-Techalcogenidenanocomposites: frequency response and AC conductivity](#)
Swarupa Ojha, Madhab Roy, Anil Chamuah, **Koyel Bhattacharya**, Sanjib Bhattacharya
2020; **Physical Chemistry Chemical Physics**; Volume: 22; Page: 24600; Publisher: Royal Society of Chemistry
10. [AC conductivity and dielectric behavior of Cu-S-Techalcogenide glassy system](#)
Swarupa Ojha, Madhab Roy, Anil Chamuah, **Koyel Bhattacharya**, Sanjib Bhattacharya
2020; **Materials Letters**; Volume: 258; Page: 126792; Publisher: North-Holland (Elsevier)
11. [Lithium ion conductivity in Li₂O-P₂O₅-ZnO glass-ceramics](#)
Sanjib Bhattacharya, Amartya Acharya, AnindyaSundar Das, **Koyel Bhattacharya**, Chandan Kumar Ghosh
2019; **Journal of Alloys and Compounds**; Volume: 786; Page: 707; Publisher: Elsevier
12. [Micromechanical hardness study and the effect of reverse indentation size on heat-treated silver doped zinc-molybdate glass nanocomposites](#)
Sanjib Bhattacharya, Ranadip Kundu, **Koyel Bhattacharya**, Asmita Poddar, Debasish Roy
2019; **Journal of Alloys and Compounds**; Volume: 770; Page: 136; Publisher: Elsevier
13. [Anomalous electrical conductivity in selenite glassy nanocomposites](#)
Arun Kr Bar, **Koyel Bhattacharya**, Ranadip Kundu, Debasish Roy, Sanjib Bhattacharya
2017; **Materials Chemistry and Physics**; Volume: 199; Page: 322; Publisher: Elsevier
14. [Electrical relaxation and grain boundary effect in CdI₂ doped glass-nanocomposites](#)
Arun Kr Bar, **Koyel Bhattacharya**, Ranadip Kundu, Debasish Roy, Sanjib Bhattacharya
2016; **Journal of Non-Crystalline Solids**; Volume: 452; Page: 169; Publisher: North-Holland (Elsevier)
15. [Evolution of nc-Si network and the control of its growth by He/H₂ plasma assistance in SiH₄ at PECVD](#)
Debajyoti Das, Debnath Raha, **Koyel Bhattacharya**

2009; **Journal of nanoscience and nanotechnology**; Volume: 9; Page: 5614; Publisher: American Scientific Publishers

16. [Effect of deposition temperature on the growth of nanocrystalline silicon network from helium diluted silane plasma](#)

Koyel Bhattacharya, Debajyoti Das

2008; **Journal of Physics D: Applied Physics**; Volume: 41; Page: 155420; Publisher: IOP Publishing

17. [Nanocrystalline silicon prepared at high growth rate using helium dilution](#)

Koyel Bhattacharya, Debajyoti Das

2008; **Bulletin of Materials Science**; Volume: 31; Page: 467; Publisher: Springer-Verlag

18. [Superior nanocrystalline silicon network at enhanced growth rate](#)

Debajyoti Das, Koyel Bhattacharya

2007; **Japanese Journal of Applied Physics**; Volume: 46; Page: L1006; Publisher: IOP Publishing

19. [Nanocrystalline silicon films prepared from silane plasma in RF-PECVD, using helium dilution without hydrogen: structural and optical characterization](#)

Koyel Bhattacharya, Debajyoti Das

2007; **Nanotechnology**; Volume: 18; Page: 415704; Publisher: IOP Publishing

20. [Characterization of the Si: H network during transformation from amorphous to micro-and nanocrystalline structures](#)

Debajyoti Das, Koyel Bhattacharya

2007; **Journal of applied physics**; Volume: 100; Page: 103701; Publisher: American Institute of Physics

21. [Structural studies on the microcrystallization of Si:H network developed by hot-wire CVD](#)

KoyelChakraborty, DebajyotiDas

2006; **Solar Energy Materials and Solar Cells**; Volume: 90; Page: 849; Publisher: Elsevier

RESEARCH PROJECT/COLLABORATION/GUIDANCE:

Co-PI of major research project funded by SERB, Govt. of India (20-Mar-2019 - 12-Jun-2022)

Title: INVESTIGATIONS OF ELECTRICAL AND DIELECTRIC PROPERTIES OF CHALCOGENIDE GLASSY ALLOYS

File No: CRG/2018/000464

Current Status: Completed

Ph.D. Guidance: 2 (Ongoing)

ANY OTHER INFORMATION/ADDITIONAL RESPONSIBILITY:

1. Co-coordinator of IQAC of Kalipada Ghosh Tarai Mahavidyalaya
2. Convener of "Service Book and Pension Committee" of Kalipada Ghosh Tarai Mahavidyalaya
3. Member of Academic Committee of Kalipada Ghosh Tarai Mahavidyalaya
4. Member of Purchase Committee of Kalipada Ghosh Tarai Mahavidyalaya
5. Member of Routine Committee of Kalipada Ghosh Tarai Mahavidyalaya
6. Member of Budget Committee of Kalipada Ghosh Tarai Mahavidyalaya