

# Curriculum Vitae

## ASHIS BHATTACHARJEE

M.Sc., Ph. D. (Sc.)

Professor

Department of Physics, Institute of Science, Visva-Bharati University  
Santiniketan-731235, INDIA.

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Date of Birth: 10<sup>th</sup> January, 1962

ORCID ID: <https://orcid.org/0000-0002-0180-409X>

Scopus ID: 26431769600

Web of Science ID: AAT-3821-2020

Vidwan ID: <https://vidwan.inflibnet.ac.in/profile/48854>

ResearchGate ID: <https://www.researchgate.net/profile/Ashis-Bhattacharjee>

Google Scholar ID:

<https://scholar.google.com/citations?user=tqfREg4AAAAJ&hl=en>

Life Member of Learned Societies:

- Indian Physics Association
- Indian Physics Teachers Association
- Indian JSPS Alumni Association
- Indian Thermal Analysis Society
- Indian Association for the Cultivation of Science, Kolkata

Homepage (Official): [https://www.visvabharati.ac.in/Ashis\\_Bhattacharjee.html](https://www.visvabharati.ac.in/Ashis_Bhattacharjee.html)

(Personal): <https://phsatoton.wixsite.com/ashis-bhattacharjee>

### Subject Specialization

### Professional Experience

### Areas of Research

### Research Guidance

### Research Project Funding

### Publications

### Experimental Condensed Matter Physics

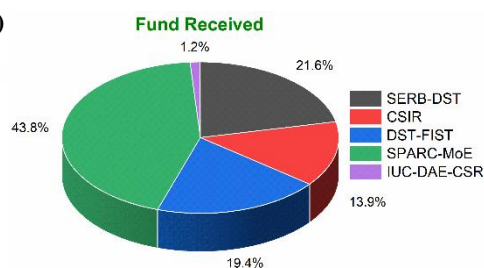
Teaching (since Nov' 1995)

Research (since Aug' 1988)

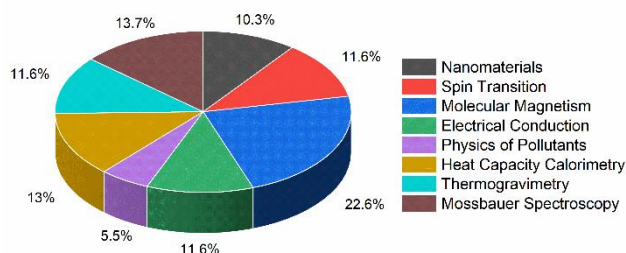
Molecular Magnetism • Thermal and Green Synthesis of Nanomaterials • Solid State Reactions • Mössbauer Spectroscopy • Heat Capacity Calorimetry • Dielectrics

- No. of Post-Doctoral Students – 02
- No. of Ph.D. students: Awarded – 6, Ongoing – 4,
- PhD Course-Work Dissertations: Awarded – 10
- M.Sc. Dissertations: Awarded – 22

₹113.16 Lacs (Till date)



### Areas of Publication



- Book Chapter: 05
- Research Papers: 125
- Conference Papers: 66
- *h*-index: 24
- *i*-10 index: 56

## Education

- **Ph.D. (Science) in Physics**, Indian Association for the Cultivation of Science (degree from Jadavpur University), 1992
- **M.Sc. in Physics**, North Bengal University, India, 1986. (Specialization: *Solid State Physics*)
- **B.Sc. (Honours) in Physics**, Ananda Chandra College, Jalpaiguri, (under University of North Bengal, India), 1984.

## Academic Positions Held

- **Professor of Physics**, Visva-Bharati University, Santiniketan, India: 2010-present
- **Visiting Professor**, Graduate School of Science, Osaka University, Japan: Sept. – Dec, 2015
- **Visiting Professor**, Saha Institute of Nuclear Physics, Kolkata, India: Feb-April, 2013
- **Associate Professor of Physics**, Visva-Bharati University, Santiniketan, India: 2007-2010
- **Reader in Physics**, Visva-Bharati University, Santiniketan, India: 2004-2007
- **Senior Lecturer in Physics**, St. Joseph's College (University Section), Darjeeling, India: 1999-2004
- **Lecturer in Physics**, St. Joseph's College (University Section), Darjeeling, India: 1995-1999

## Awards & Fellowships

- **JSPS-BRIDGE Fellow**, Osaka University, Japan: 1-30 Oct, 2019
- **Research Associate (DFG)**, Johannes-Gutenberg University, Mainz, Germany:  
Nov 2009 – Jan 2010, Oct 2007 – Jan 2008, May-Aug 2006, March 2002 – Feb 2003
- **Japan Society for the Promotion of Science Fellow**, Osaka University, Japan: Oct 1998 - Sept 2000
- **Guest Scientist** at Hahn-Meitner-Institute, Berlin, Germany: Jan – Feb, 1998
- **Center of Excellence Researcher** (Science and Technology Agency, Japan), National Institute of Bioscience & Human-Technology, Tsukuba, Japan: Sept 1994 – March 1995
- **Science and Technology Agency Fellow** (Japan Research Development Corporation), National Institute of Bioscience & Human-Technology, Tsukuba, Japan: Feb 1993 – Aug 1994
- **Doctoral Fellowship (Junior & Senior)**, Indian Association for the Cultivation of Science, India: Aug 1987 – Jan 1993
- **Best Article Award** by Chemical Society of Japan (2004)
- **Silver Medal for University 2<sup>nd</sup> Rank** in M. Sc. in Physics, University of North Bengal, India (1986).

## Professional Expertise

- **Guest Editor**, Special Issue on "Advances in Molecular Spin Transition Materials -In Memory of Prof. Dr. Philipp Gütlich", Materials, MDPI (2023). [https://www.mdpi.com/journal/materials/special\\_issues/NT24D2P0T3](https://www.mdpi.com/journal/materials/special_issues/NT24D2P0T3) (proposed)
- **Editorial Board Member**: Current Material Science (Bentham Science Publishers), 2022~
- **Section Editor**: Current Indian Science (Bentham Science Publishers), 2022~
- **Reviewer** of Scientific Journals:  
CrystEngComm, Dalton Transactions, Journal of Materials Science,  
Journal of Materials Science for Electronics, Journal of Physics & Chemistry of Solids  
Materials Chemistry and Physics, Journal of Applied Physics  
International Journal of Chemical Kinetics, Journal of Alloys & Compounds,  
Inorganic Chem. Communications, Int. J. Modern Physics
- **Session Chair**, Nobel Laureate S&T Seminar Series (2<sup>nd</sup> Seminar) organized by IJAA, 17<sup>th</sup> May, 2022,  
Nobel Laureate S&T Seminar Series (1<sup>st</sup> Seminar) organized by IJAA, 6-7<sup>th</sup> Dec, 2021.
- **External Expert for Syllabus Review**, Sikkim University, Gangtok (2017).
- **Resource Person**, Refresher's Course, Academic Staff College, North Bengal University (2011)
- **Expert**, NIRF (MoE)
- **External Expert**, Selection Comm. for Faculty positions in Physics, Fakir Mohan University, Odisha (2015, 2016);  
Selection Comm. for Faculty positions in Physics, Gauhati University (2020);  
Selection Committee for Faculty positions in Physics, Manipur University (2022)

## Administrative Expertise

- **Member**, Academic Council, Visva-Bharati (2010 ~ till date)
- **President**, Indian JSPS Alumni Association (East Chapter), 2022~2025
- **General Secretary**, Indian JSPS Alumni Association (East Chapter), 2018-2021
- **Head**, Department of Physics, Visva-Bharati for three months (July-September, 2018)
- **Chairman**, Board of Studies, Department of Physics, Visva-Bharati for three months (July-September, 2018)
- **Member**, PG Board of Studies, Burdwan University, Burdwan (2019~ till date).
- **Vice-Principal**, Institute of Science, Visva-Bharati (August, 2012 – September, 2016)

- **Member**, Central Admission Committee, Visva-Bharati (2012-2013)
- **Member**, Research Board, Visva-Bharati (2007 – 2012)
- **Member**, Syllabus Committee, Institute of Science, Visva-Bharati (2010)
- **Member**, Routine Committee, Institute of Science, Visva-Bharati (2009 – 2016)
- **Member**, Siksha-Bhavana NAAC Committee, Visva-Bharati (2019 – 2020)
- **Member**, DST-FIST Committee, Department of Physics, Visva-Bharati (2011 – 2016)
- **Member**, Purchase Committee, Department of Physics, Visva-Bharati (2006 – till date)
- **Convener**, Syllabus Committee, Department of Physics, Visva-Bharati (2010 – 2011)
- **Convener**, Syllabus Committee, Department of Physics, Visva-Bharati (2014 – 2015)
- **Director**, Under-Graduate Committee, Department of Physics, Visva-Bharati (2007-2012)
- **Secretary**, Physics Alumni Association, Department of Physics, Visva-Bharati (2011-2013)
- **Organizer**, International Virtual Conference on Advances in Molecular Materials Research (AMMR 2021), Santiniketan, 3 – 5 February, 2021
- **Organizing Secretary**, International Conference on Advancement in Science & Technology (ICAST-2018), Santiniketan, 3-4 September, 2018.

## Courses Teach/Taught

### Theory

- Pre-Doctoral: Techniques of Material Characterization, Thermogravimetry  
 Post-Graduate: Condensed Matter Physics (General & Advanced); Mathematical Methods in Physics  
 Under-Graduate: Electricity & Magnetism; Heat & Thermodynamics

### Laboratory

- Post-Graduate: Advanced Condensed Matter Physics  
 Under-Graduate: Physical Optics, Electricity & Magnetism, Solid State Physics, Thermal Physics

## Research Projects Implemented/Ongoing

1. ‘Investigations into the Multifunctionality of Some Molecular Materials and their Application Potential’.  
Amount: Rs. 24.49 Lacs, funded by SERB, DST, Govt. of India, Sept’2007-Feb’2011.
2. ‘Electrical, Magnetic and Microstructural Characterization of some Composite Biopolymers’.  
Amount: Rs. 15.74 Lacs funded by CSIR, Govt. of India, July, 2011 – June, 2014.
3. ‘Study of Kinetics of Thermal Decomposition of some Molecular and Metallocene Precursors leading to Nano-Scale Metal-Oxides’.  
Amount: Rs 22 Lacs for TG- DSC Set-up, funded through DST-FIST to Dept. of Physics, April, 2011 – September, 2016.
4. ‘Single Molecule Magnets and Molecular Magnetic Coolers from Lanthanide-based Metal-Organic Framework Materials’  
Amount: Rs. 49.58 Lacs; Indo-Japan Collaborative Project under SPARC, MoE, Govt. of India, May’2019 – Sept, 2023.
5. ‘Synthesis and Characterization of Iron Oxide Nanoparticles Through One-Step Thermal Protocol for Biomedical Applications’  
Amount: Rs. 0.45 Lacs@yr. (Revenue); IUC-DAE CSR, April’2023 – March, 2026.

## Research Guidance

### Post-Doctoral (2)

1. Dr. Gohei Hayashi (Fukushima Medical University, Japan; DST-JSPS Fellow, 3.12.2018 – 18.1.2019)
2. Dr. Puspendu Barik (Research Associate under CSIR Project, 28.5.2012 - 31.10.2013)

### Doctoral (Degree Awarded: 6; Ongoing: 4)

1. Mr. Debasis Roy, Thesis entitled “Study of Thermal Decomposition of Some Oxalate-Based Molecular Materials Leading to Metal Oxides”, 2013. (**Awarded**)
2. Mr. Haradhan Mandal, Thesis entitled “Investigations into the nature of some solid waste pollutants through different physical techniques”, 2014. (**Awarded**)
3. Mr. Amlan Roj, Thesis entitled “Investigation into the thermal decomposition of ferrocene in different reaction atmosphere”, 2016. (**Awarded**)
4. Mr. Dhanajay Bhakat, Thesis entitled “Investigations into the effect of ‘guest’ molecules on the electrical properties of some ‘host’ polymers”, 2017. (**Awarded**)
5. Ms. Bratati Das, Thesis entitled “Study on the Thermal Decomposition of a Ferrocene Compound for Solventless Synthesis of Iron-Oxide”, 2018. (**Awarded**)
6. Ms. Anubha Dey, “Solid State Synthesis and Characterization of Iron Oxides using Organometallic Compounds as Precursor”, 2021 (**Awarded**).
7. Mr. Subhas Chandra Tudu, “Characterization of Metal Sulphide Nanoparticles Synthesized by Green Chemical Routes” (**Ongoing**)
8. Ms. Manisha Chakraborty, “Study on Solid State Synthesis and Characterization of Iron Oxides using Some

- Ferrocene Compounds vis-à-vis Reaction Kinetics”, (**Ongoing**)
- Mr. Toton Sarkar, “Characterization of Some Metal Oxide Nanoparticles Synthesized through Green Chemical Routes” (**Ongoing**)
  - Mr. Sani Kundu, “Investigations in to the Effect of Organic Co-Precursor on the Thermal decomposition of Organo-Iron Precursor Leading to Different Iron Oxides’ (**Ongoing**)

**PhD Course-Work (Degree Awarded: 10)**

- Mr. Debasis Roy, Department of Physics, Visva-Bharati University, 2009.
- Mr. Haradhan Mandal, Department of Physics, Visva-Bharati University, 2009.
- Mr. Amlan Rooj, Department of Physics, Visva-Bharati University, 2009.
- Mr. Dhanajay Bhakat, Department of Physics, Visva-Bharati University, 2009.
- Ms. Bratati Das, Department of Physics, Visva-Bharati University, 2014.
- Ms. Anubha Dey, Department of Physics, Visva-Bharati University, 2015.
- Mr. Subhas Chandra Tudu, Department of Physics, Visva-Bharati University, 2017
- Mr. Sani Kundu, Department of Physics, Visva-Bharati University, 2019
- Mr. Toton Sarkar, Department of Physics, Visva-Bharati University, 2019
- Ms. Manisha Chakraborty, Department of Physics, Visva-Bharati, 2019.

**M.Sc. Dissertation (Degree Awarded: 22)**

- Manjira Bagchi, 2013, Visva-Bharati University
- Algama Masud, 2013, Visva-Bharati University
- Partha Kumbhakar, 2014, Visva-Bharati University
- Sudam Saha, 2014, Visva-Bharati University
- Ayan Kumar, 2014, Indian School of Mines, Dhanbad
- Jhinuk Das, 2015, Visva-Bharati University
- Partha Pratim Hazra, 2015, Visva-Bharati University
- Surajit Goldar, 2015, Visva-Bharati University
- Sumanta Hembam, 2018, Visva-Bharati University
- Soumit Patra, 2019, Visva-Bharati University
- Priyadarshini Roy, 2019, Visva-Bharati University
- Tandrima Ghosh, 2019, Visva-Bharati University
- Manjistha Ghosh, 2020, Visva-Bharati University
- Priyanka Pramanik, 2020, Visva-Bharati University
- Sambita Mukherjee, 2021, Visva-Bharati University
- Sk Soyel, 2021, Visva-Bharati University
- Mou Garai, 2022, Visva-Bharati University
- Chayanika Mahata, 2022, Visva-Bharati University
- Sudip Chell, 2022, Visva-Bharati University
- Himdri Das, 2023, Visva-Bharati University
- Ivy Sen, 2023, Visva-Bharati University
- Shreya Koley, 2023, Visva-Bharati University

**Achievements**

- Collaboration with foreign research groups in: **Osaka University, Japan; University of Silesia, Poland; University of Mainz, Germany; Yogyakarta State University, Indonesia; Hahn-Meitner Institute, Berlin, Germany; National Institute of Bioscience & Human-Technology, Tsukuba, Japan.**
- Collaboration with national research groups in: **Jadavpur University, Kolkata; NISER, Bhubaneswar; IUC-DAE CSR, Indore; Saha Institute of Nuclear Physics, Kolkata.**
- **One Indo-Japan collaborative project** under SPARC, Ministry of Education, Govt. of India was sanctioned on Metal-Organic Framework Materials during May’2019 – March, 2023.
- Sponsored research projects under CSIR, SERB, DST, MoE, UGC.
- Ph. D. / M. Phil. Thesis Adjudicator: Jadavpur University, Gauhati University, Burdwan University, Sikkim University, North Bengal University, Saha Institute of Nuclear Physics (Kolkata).
- Subject Expert for Project Proposals: SERB, UGC
- Expert, NIRF (MoE)
- Paper-Setter, External Examiner: Burdwan University, Gauhati University, Cotton College (Gauhati), Vidyasagar University, North Bengal University

**Research Collaborators**

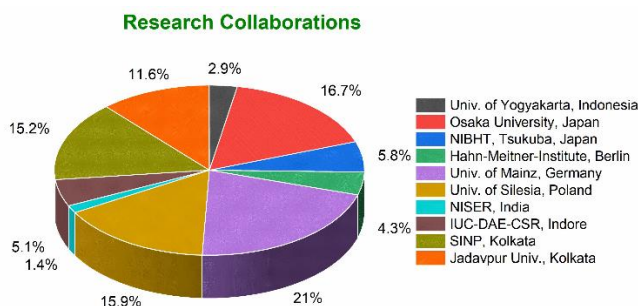
**Present**

- Prof. Y. Nakazawa, Graduate School of Science, Osaka University, Japan
- Prof. J. Kusz, Institute of Physics, University of Silesia, Poland.

- Prof. K. H. Sugyarto, Department of Chemistry Education, Yogyakarta State University, Indonesia.
- Dr. H. Akutsu, Graduate School of Science, Osaka University, Japan
- Dr. V. Raghavendra Reddy, IUC DAE CSR, Indore, India
- Dr. M. Zubko, Institute of Materials Science, University of Silesia, Poland.
- Dr. P. K. Sahoo, NISER-Bhubaneswar, Odisha, India.

#### Former

- Prof. (Emeritus) Michio Sorai, Osaka University, Japan.
- Dr. S. Iijima, National Institute of Bioscience & Human-Technology, Tsukuba, Japan. (Retired)
- Prof. M. Steiner, Hahn-Meitner-Institut, Berlin, Germany. (Retired)
- Late Prof. (Emeritus) Philipp Gütllich, Johannes-Gutenberg Universität, Mainz, Germany.
- Late Prof. M. Roy, Saha Institute of Nuclear Physics, Kolkata, India.
- Prof. S. Koner, Jadavpur University, Kolkata, India



#### International Research/Academic Exposure

Sl. No.	Place of Visit	Purpose	From	To	Duration
1.	Osaka University, Japan	Research Collaboration as JSPS-BRIDGE Fellow	01.10.2019	30.10.2019	1 month
2.	Fukuoka University, Japan	Plenary Talk at 53 <sup>rd</sup> Japanese Conference on Calorimetry & Thermal Analysis	02.11.2017	6.11.2017	6 days
3.	Osaka University, Japan	Visiting Professor	01.09.2015	30.11.2015	3 months
4.	Johannes-Gutenberg University, Germany	Research as Research Associate under DFG project	01.11.2009	30.01.2010	3 months
5.	Johannes-Gutenberg University, Germany	Research as Research Associate under DFG project	18.10.2007	16.01.2008	3 months
6.	Johannes-Gutenberg University, Germany	Research as Research Associate under DFG project	18.05.2006	17.8.2006	3 months
7.	Johannes-Gutenberg University, Germany	Research as Research Associate under DFG project	07.03.2002	28.2.2003	1 year
8.	Technical University, Darmstadt, Germany	Talk at 5 <sup>th</sup> Int. Conf. on Relaxation Phenomena in Dielectric and Magnetic Materials	02.10.2002	6.10.2002	5 days
9.	Valencia, Spain	Paper presentation at X <sup>th</sup> Int. Conf. on Molecule-Based Magnetism	Aug'02		3 days
10.	Halifax, Nova Scotia, Canada	Paper presentation at 16 <sup>th</sup> IUPAC Conf. on Chemical Thermodynamics & 55 <sup>th</sup> Calorimetry Conf.	Oct' 2000		4 days
11.	San Antonio, Texas, USA	Paper presentation at VII <sup>th</sup> Int. Conf. on Molecule-Based Magnetism	Aug'00		3 days
12.	Osaka University, Japan	Research as Japan Society for the Promotion of Science Fellow	01.10.1998	30.09.2000	2 years
13.	Darmstadt University of Technology, Germany	Visit of the Laboratory of Prof. W. Haase	January, 1998		2 days
14.	Hahn-Meitner-Institute, Berlin, Germany	Guest Scientist	01.01.1998	31.01.1998	1 month
15.	National Institute of Bioscience & Human-Technology, Tsukuba, Japan	Research as Center of Excellence (COE) Researcher of Science and Technology Agency, Japan	01.09.1994	31.03.1995	7 months

16.	National Institute of Bioscience & Human-Technology, Tsukuba, Japan	Research as Science and Technology Agency (STA) Fellow, Japan	01.02.1993	31.08.1994	1 year 6 months
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## Scientific Talks Delivered

### International

1. Int. Conf. on Recent Trends in Physics, Devi Ahilya University, Indore, 17-18 Feb, 2023. (Invited Talk)
2. Graduate School of Science, Osaka University, Japan, 9<sup>th</sup> October, 2019.
3. 53<sup>rd</sup> Japan Conference on Calorimetry and Thermal Analysis, Fukuoka, 4-6 Nov, 2017. (Plenary Lecture).
4. Int. Conf. on Crystal Ball Vision on Societal Upliftment organized by IJAA, Goa, 7-8 Aug, 2017. (Invited Talk)
5. Graduate School of Science, Osaka University, Japan, 18<sup>th</sup> November, 2015. (Invited Talk)
6. Graduate School of Science, Osaka University, Japan, 14<sup>th</sup> September, 2015. (Invited Talk)
7. 5<sup>th</sup> International Conference on Relaxation Phenomena in Dielectric and Magnetic Systems, Darmstadt Technical University, Germany, October 2 – 6, 2002 (Invited Talk).
8. Institut für Anorganische Chemie und Analytische Chemie, Johannes Gutenberg Universität, Germany. 2002.
9. Hahn-Meitner-Institut, Berlin, Germany. 1998 (Invited Talk).
10. Institute of Physical Chemistry, Darmstadt Technical University, Darmstadt, Germany. 1998 (Invited Talk).
11. Research Center for Molecular Thermodynamics, Osaka University, Osaka, Japan. 1998.
12. Dept. of Bio-Molecular Engineering, NIBH, Tsukuba, Japan. 1993.

### National

1. Conference on Modern Trends in Materials Science, Univ. of North Bengal, 5-6<sup>th</sup> Feb'2015 (Invited Talk).
2. Saha Institute of Nuclear Physics, Kolkata, 12<sup>th</sup> April, 2013 (Invited Talk).
3. Refreshers Course, University of North Bengal, Nov'2011.
4. Recent Trends in Condensed Matter Physics (RTCMP-2006) – Indian Association for the Cultivation of Science, Kolkata, India, December 6<sup>th</sup>, 2006 (Invited Talk).
5. Dept. of Spectroscopy, IACS, Calcutta, India. 1995.
6. Condensed Matter Physics Division, SINP, Calcutta, India. 1995.

## Outreach Activities

- Delivered popular lecture in a science workshop at Bahiri High School, Birbhum, 2017.

## Research Publications

### Book Chapters

1. ‘**Multifunctional Prussian Blue Analogues**’, Ed. P. Somani (Applied Science Innovations, Pune, India, **2010**). “*Understanding of Phase Transitions and Thermally-Induced Metal-to-Metal Electron Transfer in a Mixed-Valence Prussian Blue Analogue*”. ISBN : 978-81-906027-2-3. Chapter 4.
2. ‘**Mössbauer Spectroscopy and Transition Metal Chemistry: Fundamentals and Applications**’, Eds. P. Gülich, E. Bill and A. X. Trautwein, (Springer, Heidelberg, Berlin, **2011**). ISBN 978-3-540-88427-9, DOI: 10.1007/978-3-540-88428-6, Chapter 8.
3. ‘**Nanomaterials in Bio-Medical Applications : A Novel Approach**’, Ed. Bichitra Nandi Ganguly (Materials Research Forum LLC, **2018**). “*Synthesis of Nanoparticles through Thermal Decomposition of Organometallic Materials and Application for Biological Environment*”, Ashis Bhattacharjee and Madhusudan Roy. ISBN : 978-1-945291-72-2. Chapter 3.
4. ‘**Advances in Materials Science Research**. Volume 55, Ed. Maryann C. Wythers (Nova Science Publishers Inc., USA, **2022**). ‘*Ferrocene – Precursors for the Synthesis of Potentially Useful Iron Oxide Nanoparticles through Solid State Thermal Decomposition*’, Ashis Bhattacharjee, ISBN: 979-8-88697-213-9, Chapter 4. <https://novapublishers.com/shop/advances-in-materials-science-research-volume-55/>
5. ‘**Nanofillers: Fabrication, Characterization & Applications of Inorganic Nanofillers**’, Ed. Bhasha Sharma & Others (CRC Press, Taylor and Francis Group, **August 2023**). ‘*The integral postulation of inorganic nanofillers derived polymers applications in agriculture*’, Puspendu Barik and Ashis Bhattacharjee. ISBN 9781032245898, Chapter 11. <https://www.routledge.com/Nanofillers-Fabrication-Characterization-and-Applications-of-Inorganic/Das-Shekhar-Chaudhary-Sharma/p/book/9781032245898#>

## Scientific Papers Published in Journal

### 2023

1. Kundu, S., Sarkar, T., **Bhattacharjee, A.**, ‘Dielectric and Electrical Characterization of Hematite ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>) Nanomaterials Synthesized by Thermal Decomposition of Iron(III)citrate’ **Applied Physics A**, **129 (2023) 723-735**. <https://doi.org/10.1007/s00339-023-07000-6>

2. Kundu, S., Chakrabarty M., **Bhattacharjee, A.**, ‘Solid-state reaction of ferrocene controlled by co-precursor and reaction atmosphere leading to hematite and cohenite nanomaterials: A reaction kinetic study’ **J. Phys. Chem C** **127** (2023) 18397–18408. <https://doi.org/10.1021/acs.jpcc.3c04772>
3. Fitriani F., Mulyani I., Onggo D, Sugiyarto K. H., **Bhattacharjee A.**, Akutsu H., Santria A., ‘Synthesis, characterization, and magnetic properties of iron(II) complex with 2,6-bis(pyrazol-3-yl)pyridine ligand and tetracyanonickelate anion’ **Indones. J. Chem.** **23** (2023) 1152 – 1160. <https://doi.org/10.22146/ijc.81625>
4. **Bhattacharjee, A.**, ‘Comments on - A novel approach for determination of nucleation rates and interfacial energy of metallic magnesium nanoclusters at high temperature using non-isothermal TGA models, by P. Srivastava et al. published in *Chemical Engineering Science* 265 (2023) 11822.’ **Chemical Engineering Science** **280** (2023) 119043. <https://doi.org/10.1016/j.ces.2023.119043>
5. Chakraborty, M., Kundu, S., Das, B., **Bhattacharjee, A.**, ‘Thermal transformation of 1-(Ferrocenyl)ethanol to iron oxide nanoparticles based on reaction atmosphere: Analysis of the decomposition reaction using non-isothermal thermogravimetry’ **Journal of Thermal Analysis & Calorimetry** **148**, (2023) 8915–8931. [10.1007/s10973-023-12306-x](https://doi.org/10.1007/s10973-023-12306-x)
6. Sarkar, T., Kundu, S., Ghorai, G., Sahoo, P. K. Sahoo, **Bhattacharjee, A.**, ‘Structural, spectroscopic and morphology studies on green synthesized ZnO nanoparticles’ **Advances in Natural Science: Nanoscience & Nanotechnology**, **14** (2023) 035001. DOI 10.1088/2043-6262/acd8b6
7. Kundu, S., Sarkar, T., Ghorai, G., Sahoo, P. K., Zubko, M., Reddy, V. R., Weselski, M., **Bhattacharjee, A.**, ‘Study on co-precursor driven solid state thermal conversion of iron(III)citrate to iron oxide nanomaterials’ **Applied Physics A**, **129**, (2023) 264. <https://doi.org/10.1007/s00339-023-06559-4>

## 2022

8. Chakraborty, M., Dey, A., **Bhattacharjee, A.**, ‘Insights into the Thermal Decomposition of Organometallic Compound Ferrocene Carboxaldehyde as Precursor for Hematite Nanoparticles Synthesis’ **Zeitschrift für Physikalische Chemie**, **236** (2022) 1137-1161. <https://doi.org/10.1515/zpch-2021-3175>
9. Roy, D., Zubko, M., Kusz, J., **Bhattacharjee, A.**, ‘Effect of Substitution at the Di- and Trivalent Sites of  $\{N(n-C_4H_9)_4[Fe^{II}Fe^{III}(C_2O_4)_3]\}_\infty$  on the Nature of Solid State Decomposition Reaction Leading to Various Metal Oxides’ **Current Physical Chemistry**, **12** (2022) 216-232. <https://doi.org/10.2174/1877946812666220820162805>

## 2021

10. Tudu, S. C., Zubko, M., Kusz, J., **Bhattacharjee, A.**, ‘Structural, optical and dielectric studies of wurtzite-type CdS quantum dots green synthesized using *Ocimum Sanctum (Tulsi)* leaf extract’ **Adv. Nat. Sci.: Nanosci. Nanotechnol.** **12** (2021) 035010-035021. <https://doi.org/10.1088/2043-6262/ac2732>.
11. Sugiyarto, K. H., Onggo, D., Akutsu, H., Reddy, V. R., Sutrisno, H., Nakazawa, Y., **Bhattacharjee, A.**, ‘Structural, Magnetic and Mössbauer Spectroscopic Studies of  $[Fe(3-bpp)_2](CF_3COO)_2$  Complex: Role of Crystal Packing Leading to An Incomplete Fe(II) High Spin  $\rightleftharpoons$  Low Spin Transition’ **Cryst. Eng. Comm.** (2021) **23**, 2854–2861. <https://doi.org/10.1039/D0CE01687J>
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### **Participation in Symposium/Conference**

#### **International**

1. International Conference on Frontier Areas of Science and Technology (ICFAST-2023), Shivaji University, Kolhapur, September 8-9, 2023 (2 papers)
2. Int. Conf. on Advanced Physics (IEMPHYS 2023), IEM, Kolkata, 1st-3rd September, 2023.
3. Int. Conf. on Women in Physics, Indian Physics Association & TIFR, 10- 14 July, 2023.
4. Int. Conf. on Frontier Areas of Science & Technology, University of Hyderabad, 9-10 September, 2022. (3 Papers)
5. Int. Conf. on Emerging Advancement in Science & Technology, SSPL, Delhi, 5-6 September, 2019.
6. Int. Conf. on Advancement in Science & Technology, Visva-Bharati, Santiniketan, 3-4 September, 2018. (3 Papers)
7. Int. Conf. on Global Scenario in Environment and Energy, MANIT, Bhopal, India, 14-16<sup>th</sup> March 2013.
8. Int. Conf. on Recent Advances in Composite Materials, Goa (Org. by BHU), Feb 18-21, 2013,
9. Int. Workshop on Nanomaterials, Jadavpur University, 14-15 Dec, 2012. (2 Papers)
10. Int. Conf. on Physics of Emerging Functional Materials (PEFM-2010), BARC, Mumbai, 22-24 Sept, 2010
11. Int. Conf. on Fundamentals and Applications of Nanoscience & Technology, Jadavpur Univ., Kolkata, 9-11 Dec., 2010. (2 Papers)
12. Int. Symposium on the Industrial Application of the Mössbauer Effect, 17-22 August, 2008, Budapest
13. 6<sup>th</sup> Seeheim Workshop on Mössbauer Spectroscopy, Seeheim, Germany, June 9 – 13, 2003.
14. X<sup>th</sup> Int. Conf. on Molecule-Based Magnets at Valencia, Spain, October 5 – 10, 2002. (2 Papers)

15. 5<sup>th</sup> Int. Conf. on Relaxation Phenomena in Dielectric and Magnetic Materials at Darmstadt Technical University, Germany, October 2 – 6, 2002.
16. 5<sup>th</sup> Seeheim Workshop on Mössbauer Spectroscopy, Seeheim, Germany, May 21 – 25, 2002.
17. 16<sup>th</sup> IUPAC Conf. on Chemical Thermodynamics & 55<sup>th</sup> Calorimetry Conf., Halifax, Canada. 2000.
18. VII<sup>th</sup> Int. Conf. on Molecule-Based Magnetism, Texas, USA, 2000.
19. Int. Symposium on Condensed Matter Physics at IACS, Kolkata, India, 2000.
20. COE Conf. at Nagoya University, Japan, 1999.
21. 4<sup>th</sup> Int. and 2<sup>nd</sup> Japan-China Conf. on Calorimetry and Thermal Analysis, Tsukuba, Japan. 1999.
22. 49<sup>th</sup> Japanese Annual Meeting on Coordination Chemistry at Hokkaido University, Japan, 1999.
23. 35<sup>th</sup> Annual Meeting of Japanese Society of Calorimetry and Thermal Analysis, Tokyo University, Japan, 1999. (2 Papers)
24. Int. Symp. on Molecular Design and Functionalities of Assembled Metal Complexes at Kyoto, Japan, 1999.
25. Int. Conf. on Magnetic Materials at SINP, Kolkata, India, Dec. 2000.
26. 41<sup>st</sup> Spring Meeting of Japan Society for Applied Physics at Tokyo, 1994.
27. 67<sup>th</sup> Annual Meeting of Chemical Society of Japan at Tokyo, 1994

#### **National**

1. 66<sup>th</sup> SSP-DAE Symposium, BIT Mesra, Ranchi, Dec 18-22, 2022. (3 papers)
2. 5<sup>th</sup> Regional Science & Technology Congress, Bankura University & Department of Science and Technology and Bio-Technology, Govt. of West Bengal, 9-10 Jan, 2023. (2 papers)
3. 29<sup>th</sup> National Conf. on Condensed Matter Physics, December 10-12, 2021, Central University of Jharkhand, Ranchi.
4. National Seminar on Recent Trends in Advanced Functional Materials, Midnapore College, 13 – 14<sup>th</sup> January, 2020.
5. National Conf. on Frontiers of Material Science and Photonics: Issues and Developments, March 05- 06, 2020, SKBU, Purulia.
6. National Seminar on Condensed Matter Physics including Laser Applications, Burdwan University, 27-28 Feb, 2019.
7. 25<sup>th</sup> West Bengal Science & Technology Congress-2018, Kolkata, 4-5<sup>th</sup> March, 2018.
8. West Bengal Science & Technology Congress (Regional), 2017 10-11 Nov, 2017, Burdwan
9. West Bengal Science & Technology Congress (Regional), 2016 7-8 Nov, 2016, Bankura. (2 papers)
10. Bi-Annual Conf. of Indian Thermal Analysis Society, 18-20<sup>th</sup> Jan, 2016, IIT-Banaras.
11. Condensed Matter Days-2015, 28-30 Aug, 2015, Visva-Bharati. (2 papers)
12. NSCMPLA-2015, Burdwan University, WB, 27-28 Feb, 2015
13. Condensed Matter Days-2014, 28-30 Aug, 2014, Kolkata.
14. THERMANS 2013, BARC 19-21 Dec, 2013.
15. NSNMRN 2013, Ooty, 25-27 August, 2013. (2 papers)
16. National Seminar on Condensed Matter Physics including Laser Applications, Burdwan Univ., 5-7 March, 2013.
17. National Seminar on Condensed Matter Physics including Laser Applications, Burdwan Univ. 2012.
18. National Conf. on Physics, (PANE-2010), Manipur University, Imphal, Oct 5-6, 2010.
19. Condensed Matter Days (CMDAYS-2010), Kalyani University, Kalyani, Aug 28-30, 2010.
20. SSP-DAE Symposium, BARC, Mumbai, Dec 16-20, 2008
21. CMMP-07, Rajasthan University, Jaipur, 1-3 Feb, 2007.
22. RTCMP-2006, IACS, Kolkata, Dec 4, 2006 (Invited Talk).
23. CMDAYS 2004, NEHU, Shillong, India, August 25-27.
24. Symposium on Condensed Matter Physics (SCMP-99) at IACS, Calcutta, 1999.
25. 38<sup>th</sup> DAE Solid State Physics Symposium at IACS, Calcutta, 1995.

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(Updated on 10.10.2023)