



Resume of Dr. Jiban Podder, Ph.D

Professor (Grade-I)

Department of Physics
Bangladesh University of Engineering and Technology
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https://phy.buet.ac.bd/faculty_profile/8/dr-jiban-podder

https://www.researchgate.net/profile/Jiban_Podder

https://scholar.google.com/citations?user=vTBol_UAAAAJ&hl=en

Career Objective

- ❖ To serve the Institution with utmost sincerity that offers challenges to accomplish missions and to apply both analytical and theoretical knowledge in practical arena for being an innovative and successful professional.

Professional Research Expertise

- ❖ Synthesis and characterization of transparent conducting metal oxide thin films for solar cells, gas sensors, and optoelectronic applications.
- ❖ Nucleation and growth kinetics of organic & inorganic single crystals for nonlinear applications.
- ❖ Synthesis and characterization of carbon and carbonaceous materials, synthetic graphite and diamond like carbon materials, investigations of various types of coal, coal peat, and lignite, etc.
- ❖ Neutron radiography using TRIGA-Mark-II research reactor (3MW) and preparation of gamma and neutrons shielding materials and their characterizations.

Academic Degree Obtained:

- **Ph.D** (1995), Bangladesh University of Engineering and Technology (BUET) & Anna University (India) linkage program, Thesis title: **Precursor states for the graphitization of coal found in the northwestern zone of Bangladesh.**
- **M.Phil** (1986), Bangladesh University of Engineering and Technology, Thesis title: **The role of heteroatom on the carbonization and graphitization of poly-nuclear organic compounds.**
- **M.Sc.** (1981), in Physics, University of Dhaka, Bangladesh, Thesis title: **A. C conductivity and dielectric properties of jute fiber and lignin**, University of Dhaka, Bangladesh.
- **B.Sc.** (1980), Hon's in Physics, University of Dhaka, Bangladesh.
- **H.S.C.** (1977), Dhaka College, Dhaka, Bangladesh (Physics, Chemistry, Mathematics, Biology, Literature)
- **S.S.C.** (1975), Dhaka Board, Dhaka, Bangladesh (Physics, Chemistry, Mathematics, Biology, Literature)

Academic Contributions:

- **Scientific Officer** (June 1987 – February 1989)
Reactor and Neutron Physics Division,
Atomic Energy Research Establishment, Savar, Dhaka

- **Lecturer** (March 1989 – September 1992)
Department of Physics
Bangladesh University of Engineering and Technology, Dhaka, Bangladesh
- **Assistant Professor** (October 1992- December 1998)
Department of Physics
Bangladesh University of Engineering and Technology, Dhaka, Bangladesh
- **Associate Professor** (December 1998-August 2002)
Department of Physics
Bangladesh University of Engineering and Technology, Dhaka, Bangladesh
- **Professor (September 2002- till today)**
Department of Physics, <http://www.buet.ac.bd/phy/>
Bangladesh University of Engineering and Technology, Dhaka, Bangladesh
- **Visiting Professor** (June 2012- September 2015)
Department of Chemical and Biological Engineering
University of Saskatchewan
Saskatoon, Canada
- **Visiting Faculty** (September 2- 21, 2019)
The Bernal Institute
University of Limerick, Ireland
Under the Erasmus International Credit Mobility Program between BUET and University of Limerick.

Training and Post-Doctoral Research

- **January 1993 ~ June, 1993**
'COSTED-DST-Anna University' joint training program on crystal growth
Crystal Growth Center, Anna University, Madras, India
- **December 18 - 24, 1994**
'SAARC Short Course on Technology Assessment & Technology Diffusion',
Ministry of Science & Technology, Govt. of Bangladesh,
Institute of Appropriate Technology-BUET, Dhaka.
- **February 6 - 15, 1995**
'International School on Advanced Electronic Materials',
Crystal Growth Center, Anna University, India.
- **October 7 - 10, 1998**
International School on Powder Diffraction, Organized by the International Union of
Crystallography, Indian Association for the Cultivation of Science, Kolkata
- **January 24 - February 4, 2000**
'International School on Crystal Growth Methods and Processes',
Crystal Growth Center, Anna University, India.
- **June 2000 ~ June, 2001**
Post doc fellow-under **ICTP Fellowship**
Crystal Growth Center, Anna University, Madras, India
- **October 13 – 16, 2002**
'The Training Course for Potential Users of TRIGA Research Reactor Facility of BAEC', INST,
AERE, Savar, Dhaka.

- **August 1 - 7, 2004**
The 12th International Summer School on Crystal Growth (ISSCG-12), The German DGKK (Deutsche Gesellschaft für Kristallzüchtung und Kristallwachstum), Berlin, Germany.
- **August 2003 ~ August 2005**
Post doc fellow under **JSPS Fellowship**
Department of Electrical and Computer Engineering,
Nagoya Institute of Technology, Nagoya, Japan.
- **March 1 ~ April 7, 2011**
Visiting Researcher
Department of Physics and Engineering Physics,
University of Saskatchewan, Saskatoon, Canada.
- **March 17–25, 2016**
'Training Program on Electron Paramagnetic Resonance (EPR) Technique and Its Uses'
Department of Geology, University of Saskatchewan, Canada

Scientific Awards:

- (i) 'BAAS-Award' 1991 for best research presentation.
- (ii) 'BAAS-Award' 1998 for best research presentation.
- (iii) Young Scientist Award by ICCG-13 & ICVGE-11, (2001), Japan.
- (iv) ICTP Fellowship (International Centre for Theoretical Physics), (2000) Italy.
- (v) COSTED-Anna University-DST, Govt. of India, Fellowship, 1993.
- (vi) JSPS (Japan Society for the Promotion of Science) Fellowship, (2003-2005), Japan.
- (vii) 'ICRAAS-2016' award by Indian Spectro Physics Association and St. Peters University, 2016, India
- (viii) 'Life Time Achievement Award' by AMET and Indian Spectro Physics Association, 2018, India.

Professional Services in a Selection Board: Appointed by the Honorable Chancellor

- **Member:** Selection Board of the Appointment of Associate Professor/Professor, Department of Physics, Dhaka University of Engineering and Technology (DUET) (2019 and onward).
- **Member:** Selection Board of the Appointment of Associate Professor/Professor, Department of Physics, Chittagong University of Engineering and Technology (CUET) (2019 and onward).
- **Member:** Selection Board of the Appointment of Lecturer/Assistant Professor, Department of Physics, Rajshahi University, Rajshahi (20018 and onward).
- **Member:** Selection Board of the Appointment of Associate Professor/ Professor, Department of Applied Physics and Electronic Engineering, Rajshahi University (2009 to 2016).
- **Member:** Selection Board of the Appointment of Associate Professor/ Professor, Department of Physics, Bangladesh Agricultural University, Mymensingh (2009 and on ward).
- **Member:** Selection Board of the Appointment of Associate Professor/ Professor, Department of Physics, Rajshahi University of Engineering & Technology (2009 to 2015).

- **Member:** Selection Board of the Appointment of Lecturer/Assistant Professor, Department of Physics, Khulna University of Engineering & Technology (2007-2010).
 - **Member:** Selection Board of NSICT (National Science, Information & Communication Technology) fellowship, Ministry of Science & Technology (2008-2012), Govt. of Bangladesh.
 - **Member:** Board of Post Graduate Studies, Department of Physics, KUET, Khulna (2019 to onward).
 - **Member:** Inter-University Cultural Activities, on behalf of Bangladesh University of Engineering and Technology (2009-2010).
 - **Member:** Board of Residence and Discipline, Bangladesh University of Engineering and Technology (2005-2007).
 - **Member:** Academic Council of Bangladesh University of Engineering and Technology (1998 to till date).
- Foreign Country:**
- **Member:** Appointment as an external assessor for promotion/appointment at the University of Malaya, Malaysia (June 2020 to June 2023).

Teaching as Adjunct Faculty:

As guest faculty, teaching the basic Engineering Physics courses to few Private Universities located in Dhaka, Bangladesh at different periods.

- ✓ AIUB-American International University of Bangladesh
- ✓ North South University
- ✓ Military Institute of Science and Technology
- ✓ University of Asia Pacific
- ✓ Eastern University
- ✓ University of Information Technology and Sciences (UITS)
- ✓ South East University

Professional Voluntary Services:

- Vice President: Bangladesh Physical Society (2018-2020)
- Secretary: Bangladesh Physical Society (2009-2011)
- Joint Secretary: Bangladesh Physical Society (2005-2007)
- Joint Secretary: Bangladesh Physical Society (1999-2001)
- President: Section-III, BAAS (2016-2020)

Administrative Position:

- Provost: Titumir Hall, BUET (23th March'2018 – Till today)
- Moderator-Satyen Bose Science Club-BUET, since 2018.
- Director, Directorate of Student's Welfare, BUET (16th June-27th Sept'2010)
- Provost: Dr. M. A. Rashid Hall, BUET (23th March'2010 – 20th Feb'2011)
- Head, Department of Physics, BUET (3rd December 2005 ~ 2nd December 2007)
- Assistant Provost- Chattri hall, BUET (Sept`2001~ Jan`2003)
- Assistant Provost-Shahid Smrity Hall, BUET (Sept`1998~May`2000)

Volunteering Services (as Member/Reviewer) for National/International Journals

- Editor-in-Chief: The Bangladesh Journal of Scientific Research (2019 ~)
- Member: Editorial Board, Bangladesh Journal of Physics (2018 ~)
- Member: Editorial Board, Bangladesh Journal of Scientific Research (2007-2018)
- Associate Editor: International Journal of Macro and Nano Physics (2016~)

As Reviewer

- ✓ Journal of Crystal Growth (Elsevier)
- ✓ Crystal Growth & Design (ACS Publications)
- ✓ Thin Solid Films (Elsevier)
- ✓ Physica B (Elsevier)
- ✓ Materials Letters (Elsevier)
- ✓ Energy & Fuels (ACS Publications)
- ✓ Journal of Alloys and Compounds (Elsevier)
- ✓ Journal of Physics and Chemistry of Solids (Elsevier)
- ✓ Material Science & Engineering B (Elsevier)
- ✓ Indian Journal of Physics (Springer)
- ✓ Journal of Scientific Research (Bangladesh)
- ✓ Bangladesh Journal of Physics (Bangladesh)
- ✓ Journal of Engineering and Science

❖ Extra Curriculum & Activities: Hobbies and dreams:

Participation in BTV Program - মহাবিশ্বের পথে পথে-Mohabissher Pothe Pothe: for Popularizing Science.

Giving scientific talk in TV and engaging in creative and artistic pursuits, singing Tagore Songs, devotional and patriotic songs, learning world geography, cultures and music.

- ✓ A talk on NASA's various exploration programs for peaceful application in space science (17th September, 2020)
- ✓ A talk on 'Natural Sub-Planet-Moon' (25th August, 2020)
- ✓ 'Ray Chaudhuri Equation on General Relativity' (14th October, 2019)
- ✓ 'Allotropes' of Carbon and It's Applications' (15th July, 2019)
- ✓ '5th States of Matter' (15th April, 2019)
- ✓ 'Gravitational Waves' (5th November 2018)
- ✓ 'Neutron Radiography' (5th September 2018)
- ✓ 'Natural Fusion Energy' (8th August 2018)
- ✓ 'Reason of Lightning and Thundering' (22nd May 2018)
- ✓ 'Lightning Safety' (June 12th 2017)

- ✓ 'Evolution of Nuclear Reactors' (April 20th 2017)

Projects and Grants

Research projects are granted by the Bangladesh University of Engineering and Technology, University Grants Commission of Bangladesh and Ministry of Science and Technology, Government of Bangladesh.

- Title of the Project: Construction of a Gas Sensitivity Measurement Setup and Testing Gas Sensitivity of Metal Oxide Nanostructured Thin Films, Grant from the Bangladesh University of Engineering and Technology-2020 as **Principal Investigator**.
- Title of the Project: 'Synthesis, characterization and fabrication of nanostructured thin films based gas sensor for environmental applications' (MOST/2019-2020)-as **Principal Investigator**.
- Title of the Project: 2nd phase: 'Set-up of a spin coating system for multifunction nanostructured thin film for high efficiency solar cells and gas sensor applications' (MOST/2018-2019)-as **Principal Investigator**.
- Title of the Project: 1st phase: 'Set-up of a spin coating system for multifunction nanostructured thin film for high efficiency solar cells and gas sensor applications' (MOST/2017-2018)-as **Principal Investigator**.
- Title of the Project: 'Role of Transition Metal Doping on the Structural, Optical, Electrical and Magnetic Properties of CuO Nano-particles' (UGC/2017-2018)-as **Principal Investigator**.
- Title of the Project: 'Up-gradation of the spray pyrolysis deposition unit and electrical measurement set up for synthesis and characterization of semiconductor thin films for photo-voltaic applications' (MOST/2009-2010)-as **Principal Investigator**.

Conducted Conference:

- **Organizing Co-Chair:** 'Two days International Virtual Conference on Advanced Functional Nanomaterial's and Their Applications' (ICAFNTA-2020), jointly organized by the Universitas Islam Indonesia, University of Malaya and Bangladesh University of Bangladesh and Technology, July 9-10, 2020.
- **Organizing Secretary:** 'International Conference on Physics of Today, BUET, Dhaka, by Bangladesh Physical Society, 15-17 March 2012.
- **Organizing Secretary:** 'National Conference on Physics for Development, BUET, Dhaka, by Bangladesh Physical Society, 10-11 Feb. 2011.
- **Organizing Chair:** National Conference cum Workshop on Material Science & Technology, On the Occasion of Celebrating 60 years of Engineering Education in Bangladesh, BUET, 2 - 4 Dec. 2007.
- **Organizing Joint Secretary:** Annual Conference: Physics Education and Employment, Organized by Bangladesh Physical Society, BUET, Dhaka, May 04-05, 2007.
- **Organizing Secretary:** Workshop on Physics for Overall Development, Organized by Bangladesh Physical Society, BUET, Dhaka, 31 Jan, 2003.
- **Organizing Secretary:** Workshop on Medical Physics in Radiotherapy and Nuclear Medicine, Organized by the Department of Physics, BUET, Dhaka, Dec. 5 - 10, 1999.
- **Organizing Joint Secretary:** Workshop on Medical Physics in Cancer Diagnosis and Therapy, Organized by DGMP-BUET-Delta medical Center Ltd, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, November 3-9, 1997.

➤ **Membership of Learned Bodies / Academic Societies**

- (i) **Fellow**, Bangladesh Physical Society (**F 0068**)
- (ii) **Life Member**, Bangladesh Association for Advancement of Science (BAAS), **LM-796**
- (iii) **Life member**, Indian Association for Crystal Growth (**L-265**)
- (iv) **Life Member**, Bangladesh Association of Scientists & Scientific Professions (**L-338**).

❖ **Thesis Supervision (Ph.D) and Degree Conferred:**

1. “Growth of Some Non-linear Optical Single Crystals from Aqueous Solutions and Characterization for Opto-electronic Applications”, Shahan Ara Begum, 04031407, 2009.
2. “Growth and Characterization of Organic and Semi-organic Non-linear Optical Single Crystals: Ferdousi Akhter”, 10061406 F (Oct/06), 2011.
3. “Growth of Tiglycine Sulphate Crystal Doped with Alkali and Transition Metal Ions and Study of their Different Physical and Optical Properties”, Farhana Khanum, 2012.
4. “Synthesis and Characterization of Mg and Al Doped Fe₂O₃ Thin Films for Gas Sensing Application”, Mehnaz Sharmin, 2019.
5. “Synthesis of spray pyrolysed transition and rare earth metal oxides (Co₃O₄, MnO₂, WO₃, CeO₂) thin films and their characterization”, Muslima Zahan, 2020.

❖ **M.Phil. Thesis Supervision**

1. “Structural Studies of Barapukuria Coal by Infrared Spectroscopy”, Sarfuddin Ahmed Tarek, 93683, 1997.
2. ‘Growth and Characterization of Single Crystals of KDP Doped with KCl from Aqueous Solution’, Md. Khairul Hassan Bhuiyan, 92681, 1998.
3. ‘Growth and Characterization of Single Crystals of KDP Doped with K₂CrO₄ from Aqueous Solution of Different pH Values’, Ms. Mehrun Nahar, 9414009, 1999.
4. ‘A Study of Electrical Properties of Permian Gondwana Coal of Barapukuria of North-Western Bangladesh’, Sunirmal Majumder, 2000.
5. ‘Growth of ADP, KDP and ADP-KDP Mixed Crystals from Aqueous Solution by the Slow Evaporation Method’, Ms. Tuhin Akther, 9414021, 2000.
6. ‘Studies on the Growth of Thiourea (H₂NCSNH₂) Single Crystals from Low Temperature Solutions and Its Characterization’, Shahan Ara Begum, 2003.
7. ‘Influence of Impurities on the Growth Kinetics of Epsomite from Low Temperature Aqueous Solutions’, Sayeda Ferdous, 0404539, 2007.
8. ‘Studies on the Nucleation of Ammonium and Potassium Oxalate Single Crystal for Non-linear Optical Applications’, Farhana Khanum, 2007.
9. ‘Development of a Spray Pyrolysis System and Characterization of Deposited II-VI Semiconductor Thin Films (CdO)’, Md. Maidul Islam, 0405545, 2007.

10. 'A Study on the Distribution of Trace Elements in Barapukuria Coal by Neutron Activation Analysis and Its Impact on the Environment', Mohammad Amirul Islam, 2008.
11. Structural, Optical and Electrical Properties of ZnO and Zn_{1-x}Cd_xO Thin Films Deposited by Spray Pyrolysis Technique, Muhammad Rakibul Islam, 2009.
12. Effect of Additives on the Metastable Zone Width and Growth Kinetics of Some Nonlinear Optical Crystals, Md. Anisur Rahman, 2009.
13. Synthesis and Characterization of Tin Oxide and Cu Doped Tin Oxide Thin Films by Spray Pyrolysis, Sonjit Sen Roy, 2009.
14. Structural, Optical and Electrical Properties of Pb Doped CdS Thin Films Deposited by Spray Pyrolysis Technique, Ranajit Kumar Dutta, 100614003, 2009.
15. Preparation and Characterization of II-VI Semiconductor Thin Films by Spray Pyrolysis, Kamal Uddin Azad, 100614031, 2010.
16. Investigations of the Electrical, Optical and Mechanical Properties of Alkaline Doped Triethylamine Sulphide Single Crystals, Harinarayan Das, 2011.
17. Characterization of CoS and Co_{1-x}Cd_xS Thin Films Deposited by Spray Pyrolysis Technique, Tamjida Rahman Luna, 2011.
18. Structural, Optical and Electrical Properties of Cobalt Doped Zinc Oxide Thin Films Prepared by Spray Pyrolysis, Mahjabin Taskin, 0409143013, 2011.
19. Synthesis and Characterization of Spray Pyrolysed Al-doped CdS Thin Films, Abul Hasnat Rubel, 100614012, 2011.
20. Structural, Optical and Electrical Characterization of Indium Doped ZnS Thin Films by Spray Pyrolysis, Fahmida Rahman, 100614023, 2011.
21. An Investigation of Radioactivity Level in Heavy Minerals of Cox's Bazaar Beach Sand by Neutron Activation Analysis, Mohammad Abdur Rouf, 100614029, 2012.
22. Study of Structural, Optical and Electrical Properties of Zn_{1-x}Mn_xO Thin Films by Pyrolysis Technique, Md. Khorshed Alam, 1009143001, 2012.
23. Synthesis and Characterization of Zn_{1-x}Mn_xO Thin Films Deposited by Spray Pyrolysis Technique, Mst. Muslima Zahan, 1009143017, 2012.P
24. Characterization of Structural, Optical and Electrical Properties of Pure and Al doped ZnO Thin Films Prepared by Spray Pyrolysis, Jewel Kumer Saha, 0409143001, 2012.
25. Characterization of Structural, Optical and Electrical Properties of Ni Doped ZnO Thin Films, Sonjoy Chandra Das, 2012.
26. Synthesis and Characterization of Copper Doped Zinc Oxide Thin Films Deposited by Spray Pyrolysis Technique, Maksuda Akhter, 1009143008, 2012.
27. Structural, Electrical and Optical Characterization of Fe and Zn Doped TiO₂ Thin Films Prepared by Spray Pyrolysis Technique, Tapash Chandra Paul, 2018.

28. Structural, Morphological and Opto-electrical Characterization of Manganese and Cobalt Doped CuO Thin Films, Rabeya Rahman, 2019.
29. Structural, Optical and Electrical Characteristics of Cu and Zn Doped Bi₂O₃ Nanoparticles Deposited by Spray Pyrolysis, Banalota Sonia (in Progress-2020).
30. Role of Ag and Fe Doping on the Band Gap Tuning of BaTiO₃ Thin Films Deposited by Spray Pyrolysis, Dulal Ganguly (in progress-2020).

❖ **M.Sc. Thesis Supervision**

1. Preparation and Characterization of CuS Thin Films Deposited by Spray Pyrolysis Method, Srabony Sardar (NU), 2007.
2. Crystallization and Structural, Thermal and Optical Characterization of Zinc Sulphate Single Crystals Grown from Isothermal Evaporation Method, Jewel Kumar Saha (SUST), 2008.
3. Preparation and Characterization of ZnS Thin Films Deposited by Spray Pyrolysis Method, Nupur Jahan Mukta (NU), 2008.
4. Structural and Optical Properties of MnO₂ Thin Films Prepared by Spray Pyrolysis Method, Shawly Nazneen (CU), 2009.
5. Structural and Optical Properties of CdS Thin Films Deposited by Spray Pyrolysis, Jyotirmoy Malakar (CU), 2010.
6. Synthesis, Structural and Optical Characterization of Magnesium Doped Zinc Oxide Thin Films Deposited by Spray Pyrolysis Technique, Mitali Biswas (DU), 2011.
7. Study of Structural, Optical and Electrical Properties of Undoped and Manganese Doped Copper Oxide Thin Films by Spray Pyrolysis Method, Priyanka Datta (DU), 2017.
8. Synthesis and Characterization of Boron Doped Bismuth Oxide Thin Film by Spray Pyrolysis for a Fuel Cell Application, Bidhan Chandra Dev (BUET), 2017.
9. A Study on the Effect of the Fe Doping on SnO₂ Nanoparticles Prepared by Spray Pyrolysis Technique for Gas Sensing Applications, Md. Majibul Haque Babu (BUET), 2017.
10. Study of Structural, Optical and Electrical Properties of Spray Deposited Undoped and Zinc (Zn) Doped Bismuth Oxide (Bi₂O₃) Thin Films, Fateen Basharat (DU), 2018.
11. Effect of Impurities on the Crystallization of Epsomite Single Crystals Grown by Natural Evaporation Technique, Farhana Afrose Sonia (DU), 2018.
12. Study of Structural, Optical and Electrical Properties of Undoped and Zinc (Zn) Doped Titanium Dioxide (TiO₂) Thin Films by Spray Pyrolysis Method, Faria Anjum (DU), 2018.
13. Synthesis and Characterization of ZnO/SnO₂ Nanocomposite Via a Two-step Spray Pyrolysis Route, Walia Binte Tarique (BUET), 2019.
14. The Role of Aluminum, Cobalt co-doping on the Band Gap Turning of TiO₂ Thin Films Deposited by Spray Pyrolysis, Md Nurul Islam (BUET), 2019.
15. Investigation of Structural, Electrical and Optical Properties of Calcium Substituted Barium Titanate Thin Films for Application in Hard Tissue Engineering, Abdul Barik (in progress-2020).
16. Effect of Lithium Ion on the Structural, Morphological, Optical and Electron Transport Properties of TiO₂ Thin Films Synthesized by Spray Pyrolysis, Protima Rani (in progress-2020).

❖ List of Publications:

Book, Book Chapters:

1. Applied Engineering Physics: Electricity and Magnetism, Dr. Jiban Podder, Published by New Progati Prokashani, Dhaka, Bangladesh, May 2017, ISBN: 978-984-92386-4-5.
2. 'রূপপুর ও পরমাণু বিশ্বে বাংলাদেশ' রুশো তাহের সম্পাদিত বইয়ের একটি অধ্যায়: " নিউক্লিয়ার রিয়াক্টরের বিবর্তন ও শক্তিপূর্ণ ব্যবহার"
Book Chapter: Photocatalysis: Perspective, Mechanism & Applications, Published by Nova Science Publishers, USA.
3. Md. Rakibul Hasan, Zaria Zaman Chowdhury, Suresh Sagadevan, Rahman Faizur Rafique, Wan Jefry Basiron, Md. Abdul Khaleque, **Jiban Podder**, 'A Brief Overview on Physio-Chemical Aspects of TiO₂ & its Nano-carbon Composites for Enhanced Photocatalytic Activity', **Nova Science Publishers, Inc, NY 11788 USA, (2019), pp. 269-290.**
4. Suresh Sagadevan, K. Pradeev Raj, Zaira Zaman Chowdhury, Mohd. Rafie Bin Johan, Fauziah Abdul Aziz, Preeti Singh, J. Anita Lett, and **Jiban Podder**, Article, 'Controlled Chemical Synthesis of Nanomaterials-A fundamental necessity for photocatalysis', **Nova Science Publishers, Inc., NY 11788 USA, (2019), pp. 141-158.**

Major Publications in Peer Reviewed Journals

[2020]

5. M. Zahan, **J. Podder**, 'Role of Fe doping on structural and electrical properties of MnO₂ nanostructured thin films for glucose sensing performance', **Materials Science in Semiconductor Processing**, **117 (2020) 105109**.<https://doi.org/10.1016/j.mssp.2020.105109>
6. Muslima Zahan, **Jiban Podder**, "Structural, Optical and Electrical Properties of Cu: MnO₂ Nanostructured Thin Films for Glucose Sensitivity Measurements", **SN Applied Sciences**, (2020) **2:385** | <https://doi.org/10.1007/s42452-020-2191-8>
7. M. H. Babu, **J. Podder**, B. C. Dev, M. Sharmin, 'p to n-type transition with wide blue shift optical band gap of spray synthesized Cd doped CuO thin films for optoelectronic device applications', **Surfaces and Interfaces**, Article number, **100459, 2020**, [10.1016/j.surfin.2020.100459](https://doi.org/10.1016/j.surfin.2020.100459).
8. M. Vidhya, P. Raja, R. Archana, K. Sadayandi, Suresh Sagadevan, S. Gunasekaran, **Jiban Podder**, Faruq Mohammad, Hamad A. Al-Lohedan, Won Chun Oh, "Comparison of sunlight-driven photocatalytic activity of semiconductor metal oxides of tin oxide and cadmium oxide nanoparticles", **Optik-International Journal for Light and Electron Optics** **217 (2020) 164878** <https://doi.org/10.1016/j.ijleo.2020.164878>.
9. M.Muthukumar, G. Dhinakaran, K.Venkatachalam, Suresh Sagadevan, S. Gunasekaran, **Jiban Podder**, Faruq Mohammad, M. M. Shahid, Won Chun Oh, "Green synthesis of cuprous oxide nanoparticles for environmental remediation and enhanced visible-light photocatalytic activity", **Optik-International Journal for Light and Electron Optics** **214 (2020) 164849**, <http://doi.org/10.1016/j.ijleo.2020.164849>
10. R. Archana, S. Sudhahar, Suresh Sagadevan, Faruq Mohammad, **Jiban Podder**, "Synthesis, growth and physicochemical characterization of 8-hydroxyquinolinium 3, 4 dimethoxybenzoate, a novel organic nonlinear optical crystal", **Applied Physics A**, **2020**. 126:188, <https://doi.org/10.1007/s00339-020-3366-2>.

11. A. Subashini, K. Rajarajan, Suresh Sagadevan, Preeti Singh, **Jiban Podder**, Faruq Mohammad, "Enhanced properties of cadmium mercury thiocyanate bis (*N*-methyl formamide): A promising non-linear optical crystal, **Chinese Journal of Physics**, 67 (2020) 52–62. <https://doi.org/10.1016/j.cjph.2019.12.017>.
12. Tapash Chandra Paul, **JibanPodder**, Majibul Haque Babu, "Optical constants and dispersion energy parameters of Zn-doped TiO₂ thin films prepared by spray pyrolysis technique", **Surfaces and Interfaces**, Available online 3 October 2020, 100725, <https://doi.org/10.1016/j.surfin.2020.100725>
13. M. N. Islam, **J. Podder**, K. S. Hossain and S. Sagadevan, "Band gap tuning of p-type Al-doped TiO₂ thin films for gas sensing applications", **Thin Solid Films**, Available online 2 October 2020, 138382, <https://doi.org/10.1016/j.tsf.2020.138382>
14. **M. N. Islam, J. Podder**, "The role of Al and Co co-doping on the band gap tuning of TiO₂ thin films for applications in photovoltaic and optoelectronic devices", **Materials Science in Semiconductor Processing**, Volume 121, January 2021, 105419, 2020. <https://doi.org/10.1016/j.mssp.2020.105419>.
15. Archana Rajendran, S. Sudhahar, K. Sadayandi, M.Vidhya, Suresh Sagadevan, Faruq Mohammad, **Jiban Podder**, "Investigation of the optical, photoluminescence, and dielectric properties of P-Toluidinium picrate single crystals", **Chinese Journal of Physics**, 67 (2020) 283–292, <https://doi.org/10.1016/j.cjph.2020.07.010>
16. Tapash Chandra Paul, **Jiban Podder**, Majibul Haque Babu, Bidhan Chandra Dev, Sapan Kumar Sen, Surovi Islam, "Influence of Fe³⁺ ions doping on TiO₂ thin films for optoelectronic applications: defect generation, d-d transition and band gap tuning", **Physica B** (Communicated, 2020).
17. Muslima Jahan, **Jiban Podder**, "Fe Doped MnO₂ Nanostructured Thin Films: Synthesis and Characterization for Bio Sensor Applications", **Bangladesh Journal of Physics**, 27, 1-10, June 2020.
18. Mehnaz Sharmin, A. H. Bhuiyan, **Jiban Podder**, Khandker S. Hossain, "Influence of boron doping on the properties of spray pyrolysed ZnO thin films: morphological evolution, structural modification, band gap tuning, p-type transition in conductivity", **Applied Surface Science** (Communicated, 2020).
19. M. H. Babu, **J. Podder**, "Bond length controlling opto-structural properties of Mn doped CuO thin films: An experimental and theoretical study", **Materials Science in Semiconductor Processing**, (communicated, 2020).
20. Priyanka Datta, Mehnaz Sharmin, **Jiban Podder**, Shamima Choudhury, 'Effect of substrate temperature on the morphological, structural, optical and electrical properties of CuO thin films synthesized by spray pyrolysis technique', (Communicated, JOAM), 2020.
21. M. Zahan, **J. Podder**, "Synthesis and characterizations of Cu doped Co₃O₄ nanostructured thin films using spray pyrolysis for glucose sensor applications", (Communicated, Applied Physics A, 2020).
22. Md. Khorshed Alam, Mehnaz Sharmin and **Jiban Podder**, Band gap tuning in nano-fibers ZnO and enhanced n-type properties through Mn doping synthesized by a simple spray pyrolysis, **International Journal of Modern Physics, B**, 2020 (Communicated).

[2019]

23. M. N. Islam, M. A. Hadi , and **J. Podder**, ‘Influence of Ni doping in a lead-halide and a lead-free halide perovskites for optoelectronic applications’, **AIP Advances** **9**, 125321 (2019); <https://doi.org/10.1063/1.5132985>.
24. Tapash Chandra Paul, **Jiban Podder**, “Synthesis and characterization of Zn incorporated TiO₂ thin films impact of crystallite size on X-ray line broadening and band gap tuning”, **Applied Physics A**, **152** (12), November 2019, DOI: 10.1007/s00339-019-3112-9.
25. Mehnaz Sharmin, **Jiban Podder**, “Band Gap Tuning, n-type to p-type Transition and Ferrimagnetic Properties of Mg Doped α -Fe₂O₃ Nanostructured Thin Films”, **Journal of Alloys and Compounds**, <https://doi.org/10.1016/j.jallcom.2019.152850>, 2019.
26. Bidhan Chandra Dev, Majibul Haque Babu, **Jiban Podder**, Suresh Sagadevan, Abdullah Zubair, “Low temperature synthesis of α - and β -phase Bi₂O₃ thin film via B doping: tailoring optical band gap and n- to p-type Bi₂O₃”, **J of Materials Science: Materials in Electronics**, August 2019, Vol. 30, Issue 16, pp 15670–15682, <https://doi.org/10.1007/s10854-019-01950-5>.
27. P. Suchitra, A. Kala, Suresh Sagadevan, V. Bharathi Devi and **Jiban Podder**, Synthesis and characterisation of bis(2 methyl-8-hydroxyquinoline) zinc nanoparticles for organic light emitting diode applications, **Molecular Simulation**, 45(2019)1-7. <https://doi.org/10.1080/08927022.2019.1594418>, ISSN: 0892-7022 (Print) 1029-0435 (Online).
28. Muslima Zahan, **Jiban Podder**, ‘Surface morphology, optical properties and Urbach tail of spray deposited Co₃O₄ thin films’, **J of Materials Science: Materials in Electronics**, 2019, 30:4259–4269. <https://doi.org/10.1007/s10854-019-00717-2>.
29. Sapan Kumar Sen, Tapash Chandra Paul, M.S. Manir, Supria Dutta, M.S. Hossain, **Jiban Podder**, “Effect of Fe-doping and post annealing temperature on the structural and optical properties of MoO₃ nanosheets”, **J of Materials Science: Materials in Electronics**, 2019. DOI: 10.1007/s10854-019-01805-z.
30. Majibul Haque Babu, Bidhan Chandra Dev, **Jiban Podder**, “Texture coefficient and band gap tailoring of Fe-doped SnO₂ nanoparticles via thermal spray pyrolysis”, **Rare Metals**, 2019. <https://doi.org/10.1007/s12598-019-01278-3>.
31. Muhammad R. Islam, Mukhlasur Rahman, S.F.U. Farhad, **J. Podder**, “Structural, optical and photocatalysis properties of sol–gel deposited Al-doped ZnO thin films”, **Surfaces and Interfaces**, 16 (2019) 120–126.
32. Mehnaz Sharmin and **Jiban Podder**, “Influence of Al Doping on the Structure and Properties of Fe₂O₃ Thin Films: High Transparency, Wide Band Gap, Ferromagnetic Behavior”, **Semicond. Sci. Technol.**, 2019, <https://doi.org/10.1088/1361-6641/ab2790>.
33. Venilla Selvaraj, Suresh Sagadevan, Lakshmipathy Muthukrishnan, Mohd. Rafie Johan, **Jiban Podder**, “Eco-friendly approach in synthesis of silver nanoparticles and evaluation of optical, surface morphological and antimicrobial properties”, **Journal of Nanostructure in Chemistry**, (2019) 9:153–162, <https://doi.org/10.1007/s40097-019-0306-9>. (ISI-Indexed).
34. Suresh Sagadevan, Zaira Zaman Chowdhury, Mohd. Rafie Bin Johan, Fauziah Abdul Aziz, L. Selva Roselin, **Jiban Podder**, J. Anita Lette, and Rosilda Selvin, Cu-Doped SnO₂ Nanoparticles: Synthesis and Properties, **J. Nanosci. Nanotechnol.** **19**, 7139–7148 (2019).

[2018]

35. Suresh Sagadevan, K. Pradeev raj, Fauziah Abdul Aziz, Zaira Zaman Chowdhury, Mohd. Rafie Bin Johand, and **Jiban Podder**, Structure, Properties, Photocatalytic and Antibacterial activity and Applications of Zinc Oxide Nanoparticles-an Overview, **Journal of Nanobioscience**, Vol. **12**, 457-468, 2018.

36. M. Zahan, M R Islam and **J Podder**, ‘Influence of annealing temperature on tuning the band gap of Mn-doped ZnS thin films deposited by spray pyrolysis technique’, **Indian J Phys** <https://doi.org/10.1007/s12648-018-1325-y>, **2018**.
37. B. Majibul Haque, D. Bidhan Chandra, **P. Jiban**, I. Nurul, Z. Abdullah, “Influence of Fe²⁺/Fe³⁺ ions in tuning the optical band gap of SnO nanoparticles synthesized by TSP method: Surface morphology, structural and optical studies”, **Materials Science in Semiconductor Processing** **89**, 223–233 (**2018**).
38. Suresh Sagadevan, Zaira Zaman Chowdhury, Md Enamul Hoque and **Jiban Podder**, Chemically stabilized reduced graphene oxide/zirconia nanocomposite: synthesis and characterization, **Mater. Res. Express** **4** (**2018**) 115031.

[2017]

39. **J. Podder**, Lin, J., Sun, W., Botis, S. M., Tse, J., Chen, N., Hu, Y., Li, D. & Seaman, J., and Y. Pan, "Iodate in Calcite and Vaterite: Insights from Synchrotron X-ray Absorption Spectroscopy and First Principles Calculation", **Geochimica et Cosmochimica Acta**, **198**, 218-228, **2017**.
40. R. Khan, M. A. Rouf, S. Das, U. Tamim, K. Naher, **J. Podder**, S. M. Hossain, Spatial and multi-layered assessment of heavy metals in the sand of Cox’s-Bazar beach of Bangladesh, **Regional Studies in Marine Science**, **16**, 171-180, **2017**, Elsevier.
41. Subashini, K. Rajarajan, Suresh Sagadevan, Preeti Singh, **Jiban Podder**, “Preparation and characterization of a bis thiourea sodium iodide (BTSI) A potential NLO crystal”, **J Therm Anal Calorim**, DOI 10.1007/s10973-017-6829-8, 17 November, **2017**.
42. Suresh Sagadevan, Isha Das, Preeti Singh, **Jiban Podder**, Synthesis of tungsten carbide nanoparticles by hydrothermal method and its Characterization, **J. Mater. Sci. Mater. Electron**, **28**(1), 1136-1141, **2017**, Springer US.
43. S. Sagadevan, K. Pal, Z. Z. Chowdhury, **J. Podder**, CBD progression of Ti-doped ZnO thin film spectroscopic characterizations, **J. Mater. Sci. Mater. Electron**, **28** (21), 16554-16560, **2017**, Springer US.
44. S. Sagadevan, **J. Podder**, I Das, Synthesis and Characterization of CuInSe₂ Nanoparticles by Hydrothermal Method, **Recent Trends in Materials Science and Applications**, **189**, 89-98, **2017**, Springer.
45. S. Sagadevan, **J. Podder**, I. Das, Synthesis and Characterization of Cobalt Ferrite (CoFe₂O₄) Nanoparticles Prepared by Hydrothermal Method, **Recent Trends in Materials Science and Applications**, 145-152, **2017**, Springer.

[2016]

46. M. Biswas, M. Sharmin, C. Das, S. Choudhury and **J. Podder**, “Structural and Optical Characterization of Magnesium Doped Zinc Oxide Thin Films Deposited by Spray Pyrolysis”, **Dhaka Univ. J. Sci.**, 64(1), 37-42, **2016**.
47. Suresh Sagadevan, **Jiban Podder**, "Investigation on Structural, Surface Morphological and Dielectric Properties of Zn Doped SnO₂ Nanoparticles", **Materials Research**, **19**(2), 420-425, **2016**, DOI:<http://dx.doi.org/10.1590/1980-5373-MR-2015-0657>.
48. Suresh Sagadevan, **Jiban Podder**, and Isha Das, "Structural, morphological, optical and electrical properties of PbSe thin films grown by chemical bath deposition", **Adv. Mater. Lett.** **7**(5), 410-413, **2016**. DOI: 10.5185/amlett.2016.5949.

49. Suresh Sagadevan, **Jiban Podder**, and Isha Das, "Synthesis and characterization of CoWO₄ nanoparticles via chemical precipitation technique", **J. Mater. Sci. Mater. Electron**, **27**(9), 9885-9890, **2016**, DOI: 10.1007/s 10854-016-5057-5, **Springer US**.
50. Suresh Sagadevan, **Jiban Podder**, Isha Das, "Hydrothermal Synthesis of Zirconium Oxide Nano Particles and Its Characterization", **J. Mater. Sci. Mater. Electron**, **27**(6), 5622-5627, **2016**, **Springer US**.
51. Suresh Sagadevan, Isha Das and **Jiban Podder**, "Synthesis of lead titanate nanoparticles via sol-gel technique and its characterization", **J. Mater. Sci. Mater. Electron**, **27**(12), 13016-13021, **2016**, DOI: 10.1007/s 10854-016-5442-0, **Springer US**.
52. J. K. Saha, and **J. Podder**, "Effect of aluminum doping on the structural and optical properties of ZnO thin films synthesized by spray pyrolysis technique", *Jagannath University Journal of Science*, ISSN 2224-1698 , Vol 5, NO. I, pp-31-41, **2016**

[2015]

53. Suresh Sagadevan and **Jiban Podder**, "Investigation of Structural, SEM, TEM and Dielectric Properties of BaTiO₃ nanoparticles", **Journal of Nano-and Electronic Physics**, Vol. 7, No. 4, 4pp., **2015**.
54. Suresh Sagadevan and **Jiban Podder**, "Optical and electrical properties of nanocrystalline SnO₂ thin films synthesized by chemical bath deposition method", **Soft Nanoscience Letters**, Vol. 5, pp. 55-64, **2015**.
55. A. H. Rubel and **J. Podder**, "Optical properties of spray pyrolysis CDS:Al thin films", **J. Bangladesh Academy of Sciences**, Vol.39, No.1, pp. 25-30, **2015**.
56. Suresh Sagadevan and **Jiban Podder**, " Investigations on structural, optical, morphological and electrical properties of nickel oxide nanoparticles", **International Journal of Nanoparticles**, Vol. 8(Nos. 3/4), pp.289 - 301, **2015**.
57. **Podder J.**, Ritwik Basu, Richard W. Evitts, Robert W. Besant, "Surface morphology and microstructural characterization of KCl crystals grown in halite-sylvite solutions by back scattered diffraction techniques", **Surface Review and Letters**, Vol. 22, No. 1 (**2015**), (9 pages) DOI: 10.1142/S0218625X15500122.
58. S. S. Roy, A. H Bhuiyan, J. Podder, Optical and Electrical Properties of Copper Oxide Thin Films Synthesized by Spray Pyrolysis Technique, **Sensors & Transducers**, Vol. 191, Issue 8, August 2015, pp. 21-27.
59. M. A. Rahman, M. M. Rahman, **J. Podder**, Investigation on the structure, optical constants and growth aspects of EDTA doped ADP crystals for optoelectronics applications, **Bangladesh Journal of Physics**, **17**, 23-30, 2015.

[2014]

60. Mahjabin Taskin, **Jiban Podder**, "Structural, Optical and Electrical Properties of Pure and Co-Doped ZnO Nano Fiber Thin Films Prepared by Spray Pyrolysis", **App. Sci. Report**. 2 (3), **2014**: 107-113, DOI: 10.15192/PSCP.ASR.2014.2.3.107113.
61. **Podder J.**, Shaoyu. G., Richard W. Evitts, Robert W. Besant and D. Matthews, "Synthesis of carnallite crystal from KCl-MgCl₂ solutions and its characterization", **Int. J. Mater. Res.**, Vol. 105 (3), page 308-313, **2014**, DOI:10.3139/146.111013.
62. **Podder J.**, Richard W. Evitts, Robert W. Besant, "Effect of lead chloride on the growth and surface properties of potassium chloride crystals from aqueous solutions", **Surface Review and Letters**, Vol. 21, No.3 (**2014**) 1450044 (8 pages).

63. M. Kamruzzaman, Kamal Uddin Azad, **Jiban Podder**, "Synthesis and characterization of Zn_{1-x}Cd_xS thin films prepared by the spray pyrolysis Technique", **Asian J. Applied Sciences**, 7(7):607-620, **2014**.

[2013]

64. F. Rahman, **J. Podder**, and M. Ichimura, "Structural, optical and electrical characterization of spray pyrolysed Indium sulfide thin films", **Surface Review and Letters**, Vol. 20, No. 2, (**2013**) 1350014 (7 pages).
65. S. M. Salaken, E. Farzana and **J. Podder**, "Effect of Fe-doping on the structural and optical properties of ZnO thin films by spray pyrolysis", **J. of Semiconductor**, Vol. 34, No. 7, **2013**.
66. S. C. Das, R. J. Green, **J. Podder**, T. Z. Regier, G. S. Chang and A. Moewes, "Band gap tuning in ZnO through Ni doping via spray pyrolysis", **J. Physical Chemistry C**, 117, 12745-12753, **2013**.
67. F. Rahman, M. Zahan, and **J. Podder**, "Synthesis of nanocrystalline ZnS thin films via spray pyrolysis for optoelectronic devices", **Sensors & Transducers**, Vol. 149, No.2, pp. 54-59, February **2013**.
68. A. H. Rubel and **J. Podder**, "Optical and electrical characteristics of pure CdS thin films for different thickness", **J. Bangladesh Academy of Sciences**, Vol. 37, No. 1, 33-41, **2013**.
69. M. Hossain, S.A. Begum, and **J. Podder**, "Growth, structural, thermal and optical properties of Mg²⁺- Co²⁺ doped potassium acid phthalate crystals", **J. Bangladesh Academy of Sciences**, Vol. 37, No.2, pp.167-172, **2013**.
70. K. Senthil, S. Kalainathan, A. Rubankumar, V. Ramkumar, and **J. Podder**, "2-[(E)-2-(4-Methoxyphenyl) ethenyl]-1-methylpyridinium iodine", **Acta Crystallographica E**, E69, o1848, **2013**.
71. H. N. Das and **J. Podder**, "Studies on growth and characteristics of triglycine sulphate (TGS) crystals doped with potassium chloride", '**J. Optoelectronics and Advanced Materials**', Vol. 15, No. 7-8, pp. 1142-1146, **2013**.
72. R. K. Balachandar, S. Kalainathan, P. G. Aravindan, Shibu M. Eappen and **J. Podder**, "4-[2-(4-Ethoxyphenyl) ethenyl]-1-methylpyridinium naphthalene-2-sulfonate", **Acta Crystallographica E**, E69, o722, **2013**.
73. R. K. Balachandar, S. Kalainathan, Shibu M. Eappen and **J. Podder**, "4-Methyl-N-[4-(dimethyl amino) benzylidene] aniline", **Acta Crystallographica E**, E69, o905, **2013**.
74. R. K. Balachandar, S. Kalainathan, Shibu M. Eappen and **J. Podder**, "4-Fluoro-N-[(1E)-(3, 4, 5-trimethoxy phenyl) methylene] aniline", **Acta Crystallographica E**, E69, o1234, **2013**.

[2012]

75. **J. Podder** and M. R. Islam, "Deposition of nano fiber ZnO and Zn_{1-x}Cd_xO thin films grown by a simple spray pyrolysis and characterization for optoelectronic application", **Advanced Materials Research**, Vol. 545, pp 100-104, **2012**.
76. M. Kamruzzaman, R. Dutta, and **J. Podder**, "Synthesis and characterization of as-deposited Cd_{1-x}Pb_xS thin films prepared by spray pyrolysis technique", **Semiconductors**, Vol. 46, No. 7, pp **957-961**, **2012**.
77. M. Kamruzzaman, T. R. Luna, **J. Podder** and M. G. M. Anowar, "Synthesis and characterization of Cd_{1-x}Co_xS thin films prepared using the spray pyrolysis technique", **Semicond. Sci. Technol.** **27** (**2012**) 035017 (6pp).

78. K. M. A. Hussain, **J. Podder**, D. K. Saha, M. Ichimura, Structural, optical and electrical characterization of CuInS₂ thin films by spray pyrolysis, **Ind. J. Pure and Appl. Phys.** Vol. 50, pp. 117-122, **2012**.
79. A. H. Rubel and **J. Podder**, “Structural and electrical transport properties of CdS and Al-doped CdS thin films deposited by spray pyrolysis”, **J. Sci. Res.** **4** (1), 11-19, **2012**.
80. A. H. Rubel and **J. Podder**, "Effect of annealing temperature on structural, optical and electrical properties of pure CdS thin films deposited by spray pyrolysis technique", **Advances in Materials Physics and Chemistry**, 2, pp. 226-231, **2012**.
81. A. H. Rubel and **J. Podder**, "Effect of molar concentration on the optical and surface properties of CdS Thin film", **Bangladesh Journal of Physics**, 12, pp. 9-14, **2012**.
82. A. H. Rubel and **J. Podder**, "Dielectric properties of spray pyrolyzed Aluminum doped Cadmium sulfide (Al-doped CdS) thin films", **Int. Journal of Physical Sciences** Vol. 7(47), pp 6158-6161, 2012, DOI: 10.5897/IJPS12.539 ISSN 1992–1950, **2012** Academic Journals.
83. H. N. Das and **J. Podder**, “Investigations on thermal, electrical, mechanical and etching studies of KCl doped Triglycine sulphate single crystals”, **J. Thermal Analysis and Calorimetry**, 110:1107-1112, **2012**.
84. F. Khanum and **J. Podder**, “Growth and Electrical Transport Properties of Pure and LiSO₄ Doped Triglycine Sulphate Crystal from Low Temperature Solution”, **International Journal of Optics**, Volume **2012**, Article ID 803797.
85. A. Rahman and **J. Podder**, “Effect of EDTA on the metastable zone width and growth kinetics of ADP crystal”, **Indian J. Physics**, 86(1): 15-21, **2012**.
86. A. Rahman and **J. Podder**, “The effect of EDTA on the nucleation kinetics and mechanical properties of KDP crystal”, **J. Sci.. Res.**, **4** (3), 533-540, **2012**.
87. F. Akhtar and **J. Podder**, “Investigation of structural properties and optical band gap in L-alanine single crystal for electro-optic devices” **Research Journal of Physics** **6**(2):31-40, **2012**.
- [2011]**
88. M. A. Islam, Sk. A. Latif, S. M. Hossain, M. S. Uddin, **J. Podder**, “The Concentration and Distribution of Trace Elements in Coals and Ashes of the Barapukuria Thermal Power plant, Bangladesh”, **Energy Sources, Part A: Recovery, Utilization, and Environmental Effects**, 1556-7230, Volume 33, Issue 5, Pages 392 – 400, **2011**.
89. F. Khanum and **J. Podder**, Crystallization and Characterization of Triglycine Sulfate (TGS) Crystal Doped with NiSO₄”, **J. Crystallization Process and Technology**, **3**, 49-54, **2011**.
90. F. Akhtar and **J. Podder**, A Study on Structural, Optical, Electrical and Etching Characteristics of Pure and L-Alanine Doped Potassium Dihydrogen Phosphate Crystals”, **J. Crystallization Process and Technology**, **3**, 55-62, **2011**.
91. F. Akhtar and **J. Podder**, ‘Studies on the effect of L-alanine on the structural, optical and thermal properties of potassium acid phthalate crystals’, **J. Applied Sciences**, 11 (6): 2974-2983, **2011**.
92. F. Khanum and **J. Podder**, ‘Structural and optical properties of triglycine sulfate single crystals doped with potassium bromide’, **J. Crystallization Process and Technology**, **1**, 26-31, **2011**.

93. F. Akhtar and **J. Podder**, 'Structural, Optical, Electrical and Thermal Characterizations of Pure and L-alanine Doped Ammonium Dihydrogen Phosphate, **J. Crystallization Process and Technology**, 1, 18-25, **2011**.
94. J. K. Saha and **J. Podder**, "Crystallization of zinc sulphate single crystals and its structural, thermal and optical characterization", **J. Bangladesh Academy of Sciences**, Vol. 35, No.2, 203-210, **2011**.
95. M. Kamruzzaman, T. R. Luna, **J. Podder**, "Elemental, Structural and Optical Properties of Cd_{1-x}CoxS Thin Films Prepared by Spray Pyrolysis Technique", **Innovative Systems Design and Engineering**, ISSN 2222-1727, Vol 2, No. 5, **2011**.
96. F. Rahman, **J. Podder** and M. Ichimura, "Studies on structural and optical characterization of In-Zn-S ternary thin films prepared by spray pyrolysis" **Int. J. Optics and Photonics**, Vol. 5, no. 2, pp.79-86, **2011**.
97. **J. Podder** and S. S. Roy," An investigation of structural and electrical properties of nano crystalline SnO₂: Cu thin films deposited by spray pyrolysis", **Sensors & Transducers**, Vol. 134, Issue 11, pp. 155-162, **2011**.
98. M. R. Islam, **J. Podder**, S.F.U. Farhad and D. K. Saha "Effect of annealing on the structural and optical properties of nano fiber ZnO films deposited by spray pyrolysis", **Sensors & Transducers**, Vol. 134, Issue 11, pp. 170-176, **2011**.
99. R. I. Chowdhury, **J. Podder**, and A. B. M. O. Islam "Synthesis and characterization of manganese sulphide thin films deposited by spray pyrolysis", **Cryst. Res. Technol.** **46**, No. **3**, 267 – 271, **2011**.

[2010]

100. S. S. Roy and **J. Podder**, "Synthesis and optical characterization of pure and Cu doped SnO₂ thin films deposited by spray pyrolysis", **J. Optoelectronics and Advanced Materials**, Vol. 12. p 1479- 1484, **2010**.
101. M. M. Islam, **J. Podder**, and M.R.Islam "Effect of molar concentration on the optical and Surface properties of CdO thin films deposited by spray pyrolysis", **Optoelectronics and Advanced Materials-Rapid Communication**, Vol. 4, ISS.7, p 968-972, **2010**.
102. A. Rahman and **J. Podder** "Effect of EDTA on the Growth Kinetics and Structural and Optical Properties of KDP Crystal", **International Journal of Optics**, Volume **2010**, Article ID 978763, 5 pages.

[2009]

103. M.R.Islam and **J. Podder**, "Optical properties of ZnO nano fiber thin films grown by spray pyrolysis of zinc acetate precursor", **Cryst. Res. Technol.** 44, No. 3, p 286 – 292, **2009**.
104. K. M. A. Hussain, J. L. Sullivan, **J. Podder**, and A. K. M. Fazlul Hoque, " Characteristics of diamond like carbon deposited under different experimental conditions", **The Bangladesh J. Scientific Research**, Vol. 22, No.(1 & 2), 1-11, **2009**.
105. S.A. Begum and **J. Podder**., "Influence of co-doped bimetallic impurities on the metastable zonewidth and induction period for nucleation of KDP from aqueous solutions", **Trends in Applied Sciences Research**, Vol.4 (4), p 241-247, **2009**.
106. S.A. Begum, **J. Podder**, "Effect of co-doped bimetallic impurities on the growth and nucleation kinetics of potassium acid phthalate (KAP)", **J. Bangladesh Academy of Sciences**, Vol. 33, No.2, **2009**.
107. S. A. Begum, M. Hossain, **J. Podder**, "An investigation on the growth and characterization of thiourea single crystals grown from aqueous solutions", **J. Bangladesh Academy of Sciences**, Vol. 33, No.1, 59-66, **2009**.

108. S. Ferdous, **J. Podder**, "Growth and characterization of epsomite single crystals doped with KCl from low temperature aqueous solutions", **J. Bangladesh Academy of Sciences**, Vol. 33, No.1, 43-50, **2009**.
109. K. M. A. Hussain, J. L. Sullivan, **J. Podder**, and A. K. M. Fazlul Hoque, " Characteristics of diamond like carbon deposited under different experimental conditions", **The Bangladesh J. Scientific Research**, Vol. 22, No.(1 & 2), 1-11, **2009**.
- [2008]
110. M.M.Islam, M.R.Islam and **J. Podder**, "Optical and electrical properties of CdO thin films deposited by spray pyrolysis method", **J. Bangladesh Academy of Sciences**, Vol.32, No. 1, pp 97-105, **2008**.
- [2007]
111. **J. Podder**, Rusop M., Soga T. and Jimbo T., "Structural and optical characterization of boron nitrogen doped amorphous carbon films deposited by r.f. PECVD", **Modern Physics Letters B**, Vol. 21 No. 8, p 455-466, **2007**.
- [2006]
112. Rusop M., Abdullah S., **J. Podder**, Soga T. and Jimbo T., "Effect of gas pressure on the boron doped hydrogenated amorphous carbon thin films grown by radio frequency plasma enhanced chemical vapor deposition", **Surface Review and Letters**, Vol.13, No. 1, p 7-12, **2006**.
113. Rusop M., Abdullah S., **J. Podder**, Soga T. and Jimbo T., "Optical and structural properties of nitrogenated diamond like carbon film prepared by r.f.PECVD", **Surface Review and letters**, Vol.13, No. 1, p 1-6, **2006**.
- [2005]
114. **J. Podder**, Rusop M., Soga T. and Jimbo T., "Boron-doped amorphous carbon thin films grown by r.f. PECVD under different partial pressure", **Diamond & Related Materials**, Vol.14, Issues 11-12, p 1799-1804, **2005**.
115. **J. Podder**, Miyawaki T and Ichimura M, "Preparation and characterization of CuInS₂ thin films from aqueous solutions by novel photochemical deposition technique", **J. Crystal Growth** Vol.275, p 937-942, **2005**.
116. **J. Podder**, Kobayashi R and Ichimura M, "Photochemical deposition of Cu_xS thin films from aqueous solutions", **Thin Solid films**, Vol. 472, p 71-75, **2005**.
- [2004]
117. **J. Podder**, S. A. Tarek and T. Hossain, "Study of trace elemental analysis in Permian Gondana coals of Bangladesh by PIXE technique, **Int. J. of PIXE**, Vol. 14 No. 3 & 4, p 89-97, **2004**.
- [2003]
118. S. Ramalingom, **J. Podder**, S. N. Kalkura, "Habit modification of epsomite in presence of urea", **J. Crystal Growth**, Vol. 247, p 523 -529, **2003**.
- [2002]
119. **J. Podder**, and T. Hosain, "X-ray diffraction studies and its application on the examination of defect and growth mechanism of some laser host materials", **Malaysian Journal of Science**, Vol.21 A, p 7-11, **2002**.
120. **J. Podder**, "The study of impurities effect on the growth and nucleation kinetics of Potassium dihydrogen phosphate", **J. Crystal Growth**, Vol. 237-239, p 70-75, **2002**.
121. **J. Podder**, and T. Hossain, "Study of heteroatom effect on graphitic carbons derived from Anthracene-Phenanthrene sulphur systems by thermal and optical Analysis", **Indian J. Physics**, 76A, p 537-540, **2002**.

122. **J. Podder**, S. Ramalingom, and S. N. Kalkura, and P. Ramasamy, "Investigation on the crystallization and morphology of (β) K_2SO_4 from aqueous solutions", **Indian J. Physics**, 76 A (3), p 255-259, **2002**.

[2001]

123. **J. Podder**, S. Ramalingom, and S. N. Kalkura, "An investigation of lattice distortion in urea and KCl doped KDP crystals grown from low temperature aqueous solutions", **Crystal Res. Technol.**, Vol.36, p 551-558, **2001**.
124. S. Ramalingom, **J. Podder** and S. N. Kalkura, "Crystallization and characterization of orthorhombic $MgSO_4 \cdot 7H_2O$ ", **Crystal Res. Technol.**, 36 (12) p 1357-1364, **2001**.
125. **J. Podder**, and S. Majumder, "A study on the thermal and electrical characterization on the Barapukuria coal of Northwestern of Bangladesh", **Thermochimica Acta**, 372, p 113-118, **2001**.

[2000]

126. **J. Podder**, and Md Khairul Hassan Bhuiyan, "Growth and Characterization of single crystals of KDP and KCl doped KDP from aqueous solution", **J. Bangladesh Academy of Sciences**, Vol. 26, No.1, p 42-53, **2000**.

[1999]

127. **J. Podder**, S. A. Tarek, and T. Hossain, "Structural studies of Permian 'Gondwana' coals of Barapukuria by Infrared Spectroscopy", **Indian Journal of Physics**, 73A (3), p 283-293, **1999**.
128. **J. Podder**, and T. Hossain, "Fourier transform Infrared (FT-IR) spectroscopic studies of Bangladeshi coal", **Chemical Engineering Research Bulletin**, Vol. I 1, p 51-61, **1999**.

[1998]

129. **J. Podder**, and T. Hossain, "Petrographic studies of Permian Gondwana coals from the boreholes of Barapukuria and Khalaspir of Northwestern Bangladesh", **J. Bangladesh Academy of Sciences**, Vol.22, No.1, p71-78, **1998**.
130. T. Hossain and **J. Podder**, "Investigation of graphitizing carbons from organic compounds by various experimental techniques", **Indian Journal of Physics**, 72A (3), p 1 -8, **1998**.
131. **J. Podder**, Hossain T., and Kalkura S. N., "Characterization of pure KDP single crystals grown in silica gel medium", **Bangladesh Journal of Scientific Research**, 16(1): pp 59-64, **1998**.

[1996]

132. **J. Podder**, and T. Hossain, "A study of graphitizing coal by X-ray diffraction", **Indian Journal of Physics** 71 A (2), p 225-229, **1996**.
133. **J. Podder**, and T. Hossain, "Anisotropic crystalline growth developed in Bangladeshi coking coal during mesophase transformation", **Thermochimica Acta**, 284, p 279-287, **1996**.

[1995]

134. **J. Podder**, T. Hossain, and Kh. M. Mannan, "An investigation into the thermal behaviour of Bangladeshi coal", **Thermochimica Acta**, 255, p 221-226, **1995**.

[1994]

135. **J. Podder**, and T. Hossain, Kh. M. Mannan, and D. A. Begum, "Characterization of Barapukuria and Khalaspir coal found in the Northwestern zone of Bangladesh", **Fuel Science and Technology**, Vol. 13 No. 3, p 93 -101, **1994**.

[1987-1989]

136. T. Hossain, and **J. Podder**, "The role of heteroatom on the carbonization and graphitization of polynuclear organic compounds", **Thermochimica Acta**, 139, p 225-232, **1989**.
137. Mofiz U. A. and **J. Podder**, "Solitons in strongly magnetized electron-positron plasmas and pulsar microstructure", **Physical Review A**. Vol. 36, No. 4, p1811-1814, **1987**.
- ❖ **Published in the Reviewed Proceedings of the International Conference:**
138. **J. Podder**, M. Zahan, 'Synthesis, Processing and Characterization of Fe doped MnO₂ nanostructured thin films for gas sensing performance', **17th IEEE International symposium on Electrets**', Bernal Institute, University of Limerick, Ireland, September 2- 6, 2019, Proceeding of the Symposium, P-
139. Fariha Anjum, Muhammad Samir Ullah, Jiban Podder, Md. Shahjahan, Md. Mizanur Rahman, "Electrical and Optical Properties of Zinc doped Titanium dioxide Thin Films", 2018 International Conference on Innovations in Science, Engineering and Technology, 27-28 Oct. 2018, (ICISSET)DOI: 10.1109/ICISSET.2018.8745637, Publisher: IEEE.
140. **J. Podder**, Shaoyu.G., Richard W. Evitts, Robert W. Besant and D. Matthews, "Crystallization and growth kinetics of binary mixed alkali metal halides from aqueous solutions and natural evaporation processes", **Proc. of the 24th Canadian Congress on Applied Mechanics**, Paper MS03, pp.MS-9-MS-12, June 2-5, **2013**, University of Saskatchewan, Canada.
141. **J. Podder** and Hossain T., "Surface, optical and electrical characterization of Zn_{1-x}Cd_xS thin films by spray pyrolysis", **Proc. of the INSC 2011**, July 4-5, **2011**, Seri Kembangan, Selangor, Kuala Lumpur, Malaysia.
142. **J. Podder** and Hossain T., "Deposition of some transparent conducting oxide thin films by a simple spray pyrolysis technique and their characterizations for optoelectronic applications", **Proc. of the ICXRI-2010** (Int.conf. on X-ray and Related Techniques in Research and Industry), pp 46-50, June 9 - 10, 2010, Langkawi, Malaysia. *This paper has been selected as one of the five best papers presented at the ICXRI, June 9 - 10, **2010**, Langkawi, Malaysia.
143. K. M. A. Hussain, J. L. Sullivan and **J. Podder**, "Structural and mechanical properties of diamond like carbon thin films semiconductors", **Proc. of the Int. Conf. on Magnetism and Advanced Materials (ICMAM-2010)**, pp 283-287, 03-07 March **2010**, Dhaka, Bangladesh.
144. S. S. Roy and **J. Podder**, "Studies on tin oxide (SnO₂) and Cu doped SnO₂ thin films deposited by spray pyrolysis technique for window materials in solar cells", **Proc. of the 8th International Conference on Mechanical Engineering (ICME)**, ICME09-RT-14, Page 1-6, Dec 26-28 (**2009**), Dhaka, Bangladesh.
145. M. R. I. Chowdhury, **J. Podder**, S. F. U. Farhad and D. K. Saha, "Structural and optical characterization of MnS thin film deposited by spray pyrolysis technique for optoelectronic applications", **Proc. of the 3rd International Conference on Structure, Processing and Properties of Materials, SPPM 2010**, 24-26 February **2010**, Dhaka, Bangladesh, SPPM2010 F16.
146. S. S. Siddique, S.M.M.A. Mamun, **J. Podder** and Kh. H. Bhuiyan, "Effect of CNT doping on electrical conductivity in bituminous coal", **Proc. of the Silver Jubilee Conference on Communication Technologies & VLSI Design (COMMV'09)**, VIT University, Vellore, India, October 8-10, **2009**, p-445-446.
147. **J. Podder** and Hossain T., "Study of graphite and diamond like carbon from coal and carbonaceous materials by X-ray and other associated techniques and their relevance to industrial applications", **Proc. of the ICXRI-2008** (Int.conf. on X-ray and Related Techniques in Research and Industry), 2-page extended paper, June 2-6, **2008**, University Malaysia Sabah, Shah Alam, Malaysia.

148. **J. Podder** and Hossain T., "An investigation of graphite like carbon in Bangladesh coal by XRD and associated Raman Spectroscopic technique", **Proc. of the ICXRI-2006** (Int.conf. on X-ray and Related Techniques in Research and Industry), 2-page extended paper, November 29-30, **2006**, Putrajaya, Malaysia.
149. **J. Podder**, Rusop M., Rakesh Afre, Soga T., and Jimbo T., "Boron doped amorphous carbon thin films by r.f.PECVD and their microstructure by atomic force microscopy", **Proc. of the 16th International Microscopy Congress**, Vol 2. P-1366, Sapporo, Japan, Sept 3-8, **2006**.
150. **J. Podder** and Hossain T. "Polarized light sensitive tint technique-a novel method for identifying graphitic carbons" **Proc. of the 16th International Microscopy Congress**, Vol 2. P-693, Sapporo, Japan, Sept 3-8, **2006**.
151. Hossain T and **J. Podder**, "Characterization of graphitizable organic materials including coal and coal-peat by X-rays and other related techniques, **Proc. of the Int. conf. on X-rays and Related Techniques in Research and Industry (ICXRI-2004)** p 1-12, 15-16 Sept, **2004**, Penag, Malaysia.
152. **J. Podder** and Hossain T, "Barapukuria and Khalaspir coals: the state of the art and opportunities for research", **Proc. of the 12th Int Conf. on Coal Science (ICCS'2003)**, Paper No. 2D5, p 1-7 (Published by AIE), Nov 2-6 (**2003**) Cairns, Australia.
153. **J. Podder** and Hossain T., "X-ray diffraction studies and its application on the examination of defect and growth mechanism of some laser host materials, **Proc. of the ICXRI-2002**, Oct 30-31, **2002**, Kuala Lumpur, Malaysia.
154. **J. Podder**, "Studies on nucleation, metastable zone width and growth kinetics of KDP, ADP crystals in supersaturated aqueous solutions" **Proc. of the 4th International Conference on Mechanical Engineering (ICME)**, Dec 26-28 (**2001**), Dhaka, Bangladesh VII, pp141-144.
155. **J. Podder** and Hossain T., "Thermal study of mesophase-A novel method for identifying the graphitizing carbon", **Proc. of the 11th International Conference on Coal Science**, Sept 30-5th Oct' (**2001**), San Francisco, CA, ABS.082, p 1-4 Mildred B. Perry (Eds.) Published by DOE/NETL-2001/1153, USA.
156. **J. Podder** and Majumder S., "Investigation on the electrical characterization of permian gondwana coal of Northwestern Bangladesh", **Proc. of the 11th International Conference on Coal Science**, Sept 30-5th Oct' (**2001**), San Francisco, CA, ABS.083, p 1-4 Mildred B. Perry (Eds.) Published by DOE/NETL-2001/1153, USA.
157. **J. Podder**, Ramalingom S., Tarek S. A., Kalkura, S. N, and Ramasamy P., "The influence of impurities on the growth kinetics of potassium dihydrogen phosphate", **Proc. of the Int Workshop on Preparation and Characterization of Technologically Important Single Crystals**, NPL, New Delhi, India, Feb 26-28, (**2001**), p 213-217.
158. Tarek S. A., **J. Podder**, Ramalingom, S., Kalkura, S. N, and Ramasamy P., "Crystallization and characterization of Ammonium Oxalate single crystals", **Proc. of the Int . Conf. on Crystal Growth (ICCG-13)**, 30July-4 August, Doshisha University, Kyoto Japan (**2001**), 31a-K25-06, p-10.
159. Ramalingom S, **J. Podder**, and Kalkura, S. N, "The effect of impurity adsorption on the kinetics of crystallization: Orthorhombic (b) $MgSO_4 \cdot 7H_2O$ ", **Proc. of the Int. Workshop on Preparation and Characterization of Technologically Important Single Crystals**, NPL, New Delhi, India, Feb 26-28, (**2001**), pp 197-200.
160. **J. Podder**, Tarek S. A., and Hossain T., "An Investigation into the Trace Elements Distribution in Permian Gondwana Coals of Northwestern Bangladesh by PIXE Spectroscopy", **Proc. of the 10th Int. Conf. on Coal Science**, Sept 12-17, Taiyuan-China, Vol. 1, (**1999**) p 93-96.

161. **J. Podder**, and Nahar M., "Growth and characterization of single crystals of K₂CrO₄ doped KDP from aqueous solution of different pH values", **Proc. of the Int. Conference on Material Sci. & Tech.** 23-25 Oct., Dhaka, Bangladesh, (1999) pp 3-6.
162. **J. Podder**, and Akther T., "Growth of ADP, KDP and ADP-KDP mixed crystals from aqueous solution by the slow evaporation method", **Proc. of the Int. Conference on Material Sci. & Tech.** 23-25 Oct. Dhaka, Bangladesh, (1999) pp 152-155.
163. **J. Podder**, and Hossain T., "The study of the precursor states for the graphitization of Northwestern Bangladeshi coal", **Proc. of the 9th International Conference on Coal Science**, Sept 7-12 Essen, Germany, Vol. II, (1997) p 909-912.
164. **J. Podder**, Tarek S. A., and Hossain T., "Infrared (IR) Spectroscopic studies of Permian 'Gondwana' coals of Northwestern Bangladesh", **Proc. 19th Bangladesh Science Conference**, Part-2: (1996) p 197-204.
165. Mofiz U. A., and **J. Podder**, "Ultrarelativistic excitation of sonic solitons in magnetized plasma" **Proc. of the Second International Plasma Workshop on the relation between Laboratory and Space Plasmas**, Tokyo, Japan, Nov. 25 - 26 (1986) p 217-225.
166. Rahman M. A., **J. Podder**, and Karnal I., "Neutron radiography facilities in Bangladesh research reactor", **Proc. of the Third World Conference on Neutron Radiography**", Osaka, Japan, May 14-18, Fujine et al (EDT) Neutron Radiography (3) (1989) p 179-185.
167. Rahman M. A., **J. Podder** and Karnal I., "Neutron radiography facilities at the Institute of Nuclear science & Technology, **Proc. of the 2nd seminar on Nuclear Reactor**, AERE, Savar, Bangladesh, February, (1988), p 23-33.

Invited/Keynote/Plenary talk:

1. International Webinar on 'Nanostructured Metal Oxide Thin Films for Sensor Technology', Organized by the Department of Physics, **Saveetha Engineering College, Chennai, Tamil Nadu, India, 16 July 2020.**
2. A Webinar on Physics' Fundamentals of Thermodynamics and Its Application in Nature', Organized by the **Pabna University of Science and Technology (PUST), 25 June, 2020.**
3. 'Nano-Structures Metal-Oxide Thin Films for Biosensors applications', A Seminar on Advanced Functional Materials, **Begum Rokeya University, Rangpur, Bangladesh, March 12th 2020.**
4. Nano structured metal, rare earth metal oxides thin films for gas and bio sensing applications, International Conference on Physics, Bangladesh Atomic Energy Center, **Dhaka, March 5-7, 2020.**
5. 'Metal-Oxide nanostructures for sensor applications', Crystal Growth Center, Anna University, **Chennai, India, 18th February, 2020.**
6. 'Needs, Challenges and Progress of Nano-structured Metal-Oxide Thin Films for Gas and Bio Sensing Applications', International Conference on Innovations in Physical Sciences, Information Technology and Social Sciences [IC-IPIS2020], Sri Vidya Mandir College of Arts and Science, Uthangarai, **Tamil Nadu, India, February 14-15, 2020,**
7. 'Growth of Some Novel Single Crystals from Aqueous Solutions for Optoelectronic Applications: An Overview', International Workshop on Emerging Trends in Crystal Growth' (IWETCC-2020), keynote speaker, Government Arts and Science College, Krishnagiri, **Tamil Nadu, India, 17th February '2020.**
8. 'Recent Advances in Nano-Structures Metal-Oxide Thin Films for Biosensor Applications', 'International Conference on Advanced Materials for Energy and Environmental Applications,' as

- special guest, Thiru Kolanjiappar Government Arts College, Bridhachalum, organized by Indian Science and Technology Association, Kolianaper, **Tamil Nadu, India, 20-21st February '2020.**
9. 'Inorganic crystals from aqueous solutions for optoelectronic applications: An overview', International workshop on crystalline materials and applications, **Anna University, Chennai, India, January 3 – 5, 2019.**
 10. 'Transparent conducting oxides thin films: An overview and opportunities in basic research', ICEMM-2019, **K.S. Rangasamy College of Arts and Science, Tiruchengode, Tamil Nadu, India, January 7-9, 2019.**
 11. 'Transparent Conducting Oxides for Photovoltaic Cells: an Overview', Workshop cum lecture series on Advances in solar energy materials and devices, **Savitribai Phule Pune University, Pune, India, February 28 – March 1, 2019.**
 12. 'Oxides thin films by spray pyrolysis method', Workshop on Semiconductor materials cum Meeting at the **Indian Institute of Technology (IIT), Bombay, India, 2nd March 2019.**
 13. 'Growth of some novel single crystals from aqueous solutions and its importance to technology', Bernal Institute, **University of Limerick, Ireland, 11th September, 2019.**
 14. Inorganic Crystals from Aqueous Solutions for Optoelectronic Applications: An Overview, Department of Physics, Mukarram Hossain Khundaker Biggan Bhaban, **University of Dhaka, Dhaka, Bangladesh, 18th December, 2018.**
 15. 'Transparent conducting oxides thin films: state of art and prospects,' ICAMSE-2018, **Academy of Maritime Education and Training (AMET), Chennai, India, March 2- 3, 2018.**
 16. The Development of Thin film Technology for Optoelectronic Application, **Satyen Bose Science Club, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, Science Lecture Series-16, 2016.**
 17. 'Metal oxides thin films via a simple chemical route for gas sensing applications', International Conference on materials processing and applications, **Vellore Institute of Technology (VIT), Vellore, India, December 14-16, 2016.**
 18. 'Role of impurities and fundamentals of crystal growth from low temperature solutions', **St. Peter's University and Indian SpectroPhysics Association, (ICRAAS), Chennai, India, February 11 – 13, 2016.**
 19. Oxide thin films for optoelectronic applications, Canada-India symposium on materials for clean energy, **University of Saskatchewan, Radisson Hotel, Saskatoon, Canada, January 22-25, 2012.**
 20. Surface, optical and electrical characterization of $Zn_{1-x}Cd_xS$ thin films prepared by spray pyrolysis (INSC-2011), Mines Wellness Hotel, Seri Kembangan, Selangor, **Malaysia, July 4 – 5 2011.**
 21. 'Single Crystal: State of the Art and Its Importance to Technology', College of Engineering, University of Saskatchewan, **Canada, 1st April, 2011.**
 22. 'Thin Films Technologies for Optoelectronic Applications', Department of Physics and Engineering, University of Saskatchewan, **Canada, 4th April, 2011.**
 23. Deposition of Nano Fiber ZnO and $Zn_{1-x}Cd_xO$ Thin Films by a Simple Spray Pyrolysis and Characterizations for Optoelectronic Applications” 10th International Conference on the Advancement of Materials and Nanotechnology, **Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia, Nov 29th -1st Dec, 2010.**

24. Study of co-doped bimetallic impurities on the growth kinetics of some NLO crystals from aqueous solutions, 13th National seminar on crystal growth, NSCG-13, **SSN college of Engineering**, Tamil Nadu, **India**, January 27-29, **2009**.
25. The influence of co-doped bimetallic impurities on the growth and nucleation kinetics of KAP and KDP single crystals for non-linear applications, International Conference on Frontiers of Physics (ICFP-2009), **Tribhuvan University, Nepal**, **June 2-5, 2009**.
26. Investigations on the structural and optical properties of ZnO nano fiber thin films deposited by spray pyrolysis method, International Conference on Frontier of Physics (ICFP 2009), Nepal Physical Society, **Tribhuvan University, Kathmandu, Nepal**, June 2-5, **2009**.
27. Single Crystal: State of the Art & Technological Importance, **Satyen Bose Science Club**, Bangladesh University of Engineering and Technology, Dhaka, **Bangladesh**, 21st August, **2008**.
28. Crystal Growth: Present state of art and scope of research in Bangladesh, Department of Physics, **University of Dhaka**, Dhaka, **Bangladesh**, April 05, **2006**.
29. Deposition of Some Transparent Conducting Oxide Thin Films by a Simple Spray Pyrolysis Technique and Their Characterizations for Optoelectronic Applications, ICXRI-2008, Universiti Malaysia Sabah (UMS) Kota Kinabalu, Sabah, **Malaysia**, **2-6 June 2008**.
30. An Investigation of Graphite like Carbon in Bangladeshi Coal by XRD and associated Raman Spectroscopic Techniques ICXRI-2006, Putrajaya, **Malaysia**, **29-30 Nov, 2006**.
31. Fundamental of crystal growth from aqueous solutions, 11th National seminar on crystal growth, NSCG-11, **SSN college of Engineering**, Tamil Nadu, **India**, December 7-9, **2006**.
32. 'Crystal Growth research activities in Bangladesh', The 12th International Summer School of Crystal Growth (ISSCG12), Berlin, **Germany**, **August 1 to 7, 2004**.
33. Bangladeshi Coal: State of the art and energy source for industrial applications, Institute of Advanced Materials Study, Kyushu University, **Japan**, 12th March, **2004**.
34. Synthesis and characterization of CuInS₂ thin films by two step photochemical deposition technique, Department of Electrical and Computer Engineering, **Nagoya Institute of Technology**, Nagoya, **Japan**, 5th April, **2004**.
35. Carbon and Carbonaceous materials: state of the art and outlook for research, Department of Electrical and Computer Engineering, **Nagoya Institute of Technology**, Nagoya, **Japan**, 17th September, **2003**.
36. The study of impurities effect on the growth and nucleation kinetics of potassium dihydrogen phosphate, **Doshisha University**, Kyoto, **Japan**, July 30 – August 4, **2001**.
37. Potassium antimony tartrate doped KDP-A new NLO semi organic crystal, 31st National seminar on crystallography, Bhabha Atomic Research Center, **Mumbai, India**, **June 19-22, 2001**.
38. Thermal study of mesophase of carbonaceous material-A novel method for identifying the graphitizing carbon, International Conference on Inorganic Materials for the new Millennium, Materials Science Research Center, **IIT-Madras, India**, **January 18-19, 2001**.
39. The influence of impurities on the growth kinetics of potassium dihydrogen phosphate, International workshop on preparation and characterization of technologically important single crystals, National Physical Laboratory (NPL), **New Delhi, India**, **February 26-28, 2001**.
40. Studies on the growth of urea doped KDP crystals and their characterization, National seminar on current trends in Material Science, M. G. University, **Kerala, India**, **March 23-24, 2001**.

41. Crystallization and characterization of potassium sulphate from low temperature solutions, Symposium on fundamentals of crystal growth, Crystal Growth Center, **Anna University, Chennai, India, November 6-7, 2000.**
42. Crystallization and characterization of $MgSO_4 \cdot 7H_2O$ from low temperature aqueous solutions, XXX National seminar on Crystallography, Sri Venkateswara University, **Tirupati, India, June 28-30, 2000.**
43. An investigation of the electrical properties of Barapukuria coal of Northwestern Bangladesh, National seminar on Physico-Chemical studies of solids including Minerals and Coal, Indian School of Mines, **Dhanbad, India, December 21- 22, 2000.**
44. Growth and characterization of KDP-ADP mixed crystals and their applications in the electronic devices, Symposium on crystal growth of laser related materials, Crystal Growth Center, **Anna University, Chennai, India, August 7-9, 2000.**
45. An investigation into the trace elements distribution in Permian Gondwana coals of northwestern Bangladesh by proton induced X-ray emission spectroscopy, 10th International conference on coal science, **Taiyuan, China, September 12-17, 1999.**
46. The study of the precursor states for the graphitization of Northwestern Bangladeshi coal, 9th International conference on coal science, Essen, **Germany, September 7-12, 1997.**
47. A study of the trace element analysis of Barapukura coal by PIXE measurement, International symposium on recent advances in Physics, **Dhaka, Bangladesh, March 21-23, 1997.**
48. Petrographic studies of Permian Gondwana Coals from the boreholes of Barapukuria and Khalaspir of Northwestern Bangladesh, 19th Bangladesh Science Conference, **Jahangirnagar University, Savar, Dhaka, October 29-31, 1996.**
49. An investigation into the thermal behavior of Bangladeshi coal, 18th Bangladesh Science Conference, **Bangladesh Agricultural University, Mymensingh, Bangladesh, June 22- 24, 1994.**
50. Optically anisotropic crystalline growth developed in Barapukuria coal found in Bangladesh, Institute of Post Graduate Studies in Agriculture (IPSA), Salna, Gazipur, Dhaka, 17th Bangladesh Science Conference, **May 6-9, 1992.**
51. Neutron radiography at the Institute of Science and Technology, **International Bose Symposium, Dhaka, University of Dhaka, Dhaka, Bangladesh, January 15 – 19, 1989.**
52. Thermal properties of carbonizing and graphitizing materials, 11th Bangladesh Science Conference, **Rajshahi University, Rajshahi, Bangladesh March 3-6, 1986.**

❖ **Research Collaborations:**

- **Dr. Suresh Sagadevan**
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Contributed Research Presentation at various National/International Conferences:
(Published in the Abstract Book): About **100** contributed research papers.

Country Visited for Scientific Presentations: India, Nepal, China, Japan, Korea, Singapore, Malaysia, Germany, France, Moscow, Canada, Ireland, Belfast, England, etc.

Supervision of Post Graduate (M.Phil) and Doctoral Research (Ph.D)

Degree Awarded

➤ Ph.D. : **05**, M.Phil.: **28**, M.Sc.: **16**

In Progress

➤ Ph.D.: **03** , M.Phil.: **02** ,M.Sc.: **05**

Appointment of an External Examiner for Ph.D. Thesis Evaluation

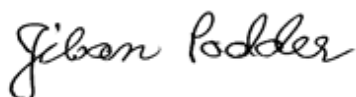
- Over 160 Ph.D theses have been evaluated from different Universities around the world.

Contribution of our family during the Liberation Period:

During the liberation period from April'1971 to December'1971 our whole family along with my parents were moved to Tripura (Agartala) as refugees after the loss of our grandfather named **Gobinda Chandra Podder** who was killed on **28th March** midnight at his working place in Nitaiganj, **Narayanganj** by Pakistani Army [Ref: Muktiyuddha Narayanganj by Rita Bhowmick). Since my father **Akhil Chandra Podder** was serving Government job (Audit General Office, Dhaka) then he was appointed as an Assistant supervisor at a Muktiyudha Transit Camp named "Ichamoti Brijna" in Agartala under the **Provisional Government of the People's Republic of Bangladesh** until 18th December'1971. After the victory of our independent country we returned back to Narayanganj at the end of December'1971. At that time I was a student of class-7 and the entire period we stayed in the Noyabadi refugee camp nearby Ichamoti Brijna camp and interact with the young freedom fighters. In addition to the loss of our grandfather we lost also my eldest brother's father-in-law and mother-in-law "**Kalachand Roy**", Professor of Carmichael College and "**Munjusree Roy**" by Pakistani Army on May 30, 1971 in the Carmichael College campus, Rangpur. I feel proud to be a witness of our liberation and to recollect the memories of those days how struggled we did to get free of our beloved motherland from the Pakistani Army. After the independence I was also very fortunate to see our father of the Nation **Bangabandhu Sheikh Mujibur Rahman** three times very closely.

➤ **Summary**

Publications in Referred Journals	137
International Conf. Proceedings (full paper)	30
Published Abstracts	100
Invited Presentations	52
Patent: U. S Provisional Patent Apl. No. 61/932662 'Methods and Apparatus for Crystallization of Salts', 2015	1
Technical Reports	5
Text Book: 'Applied Engineering Physics:-Electricity and Magnetism'	1
Text Book: 'Advanced Engineering Physics: Heat and Thermodynamics'(in Press)	1
A Text of Materials Characterization Techniques by J. Podder & S. Sagadevan (in press)	1



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