

Profile - Dr. M. Ashok



Name : **Dr. M. ASHOK**
Designation : Professor
Department : Physics
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EDUCATION

- Ph.D. in Physics, Anna University, Chennai, Tamil Nadu, India (2003).
- M.Sc. in Physics, Madras University, Chennai, India (1998).
- B. Sc. in Physics, Manonmaniam Sundaranar University, Tirunelveli, India (1996).

EXPERIENCE

- Head of the Department, Department of Physics, National Institute of Technology, Tiruchirappalli (20th Jan. 2020 – till date)
- Professor, National Institute of Technology, Tiruchirappalli (30th Sep. 2019 – till date)
- Associate Professor, National Institute of Technology, Tiruchirappalli (6th Nov. 2011 – 29th Sep. 2019).
- Assistant Professor (Direct Recruitment), National Institute of Technology, Tiruchirappalli (6th Nov. 2008 – 5th Nov. 2011).
- Lecturer (6th pay Assistant Professor), National Institute of Technology, Tiruchirappalli (27th April 2006 – 5th Nov. 2008).
- Postdoctoral Researcher, Ewha Womens University, Korea (Nov. 2005 - March 2006).

- Brain Korea 21 Postdoctoral Researcher, Seoul National University, Korea (Nov. 2003 - October 2005).
- Project Assistant, Crystal Growth Centre, Anna University, Chennai (29.09.1998 – 31.03.2003).

AREA OF INTERESTS

- Biomaterials
- Photocatalysis Water filtration
- Anti-foulants
- Supercapacitor
- Non-enzymatic sensors
- Solar Cells

HONOURS

- **Brain Korea 21 Postdoctoral Researcher**, Seoul National University, Korea.
- **Editorial Board Member** of International Journal of Nanomaterials and Technology, Serials Publications.
- **Editorial Board Member** of Indian Journal of Research Foundation, <http://indianjournal.net>
- **Manging Guest Editor**, Materials Today Proceedings, Elsevier (**2021-2022**)
International Conference on Novel Engineering Materials for Biomedical, Energy, Environment, Sensing, And Other Applications, Volume 58, Part 3, Pages 789-986 (**2022**)
- **Guest Editor**, Material Letters: X, Elsevier (**2021**)
- **Review Editor in Nanotechnology**, Frontiers in Energy Research

BOOKS EDITED

- Natural/Inorganic Fillers Reinforced Kevlar Fabric Based Polymer Composites, Edited by Mohit Hemanth Kumar, Nivedha B., M. Ashok, Nova Science Publishers, Inc., New York, Series: Polymer Science and Technology, Publication Date: June 2022
BISAC: REF020000; SCI097000. DOI: <https://doi.org/10.52305/WNPG1551>
ISBN: 978-1-68507-864-5

RESEARCH GUIDANCE

No. of Ph.D. thesis guided	:	4
No. of M.S guided	:	2
No. of PG Dissertations guided	:	28

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/ Co-Supervisor)	Year of Award
P. Michael Sahaya Lucy Shanthi	Synthesis and Characterization of Mesoporous Nano Hydroxyapatite for bone specific drug and other bio application	Supervisor	2013
Pradeep Reddy Vanga	Multiferroic and Photocatalytic properties of pure and modified BiFeO ₃ synthesized by various methods	Supervisor	2016
K. Vijaya Sankar (Roll No: 413912001)	Preparation and study of PbBi ₂ Nb ₂ O ₉ based visible light active photocatalysts for organic pollutant dye degradation	Supervisor	2021 (Viva: 12.02.2021)
M. Helen Selvi (Roll.No: 413913051)	Photocatalytic and anti-microbial activities of Bi ₂ WO ₆ nano-plate structure synthesized by hydrothermal method	Supervisor	2021 (Viva: 15-04-2021)

MAJOR R & D PROJECTS

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Nano-Porous Hydroxyapatite Nano-composite for Tissue Engineering Applications	DST	2006	2010	Completed
"Surface Modification of Biodegradable Magnesium Alloys by Plasma Electrolytic Processing for Orthopaedic Implant Applications" (as Co- Investigator) (Dr.N. Ramesh Babu, MME, NITT is the PI)	DST	2012	2015	Completed

“Development of High Surface Area, Microporous Plasma Electrolytic Oxide Layers on Commercially Pure Titanium as Promising Systems for Photocatalytic Applications” (as Co- Investigator) (<i>Dr.N. Ramesh Babu, MME, NITT is the PI</i>)	DST-SERB EMR/2016/003259	2017	2020	Completed
“Development of nanostructures Titanium implants with bioactive and antibacterial composite coatings for dental and maxillofacial applications” (as Co-Investigator)	DST-SERB	2019	2021	Completed

PATENTS

S. No.	Invention	Name of Inventors	Year	Status (Filed / Published / Granted)
1.	Biogenic eco-friendly pickling solution for mild steel	1)Muthukumar Krishnan 2)Harinee Subramanian 3)Arthur James Rathinam 4) Ashok Mahalingam 5)Vignesh Sivanandham 6)Santhosh Gokul Murugaiah 7)Henciya Santhaseelan 8)Palanichamy Seeni 9)Subramanian Gopalan 10)Rajkuberan Chandrasekaran 11)Mathimani Thangavel	2021	Patent Number :391300 Patent Application No. 202141026551 dated June 15, 2021 The Patent Office Journal No. 27/2021 Dated 02/07/2021
2.	Design And Development of Kevlar Fabric Based Epoxy Composites Reinforced with Hybrid Metal Oxide Fillers and Saw Dust For Battery Structure Application	1) Ms. Nivedha B 2) Dr. H. Mohit 3) Dr. M. Ashok	2021	Application Number: 202141028336 Publication Number: 28/2021 Publication Date: 09/07/2021 Application Filing Date: 24/06/2021

PROFESSIONAL RESPONSIBILITIES

- Staff Advisor, Photography Club, National Institute of Technology, Tiruchirappalli.
- Staff Advisor, Festember 2008 (Marketing, Publicity), National Institute of Technology, Tiruchirappalli.
- Warden for Garnet Hostel, National Institute of Technology, Tiruchirappalli.

- Executive Member, Annual Sports day, National Institute of Technology, Tiruchirappalli.
- Committee member in digital classroom, National Institute of Technology, Tiruchirappalli.
- DAC member, Department of Physics, National Institute of Technology, Tiruchirappalli.
- Member- Institute Vigilance Committee, National Institute of Technology, Tiruchirappalli.
- B.Tech Ist year Physics coordinator, National Institute of Technology, Tiruchirappalli.

PUBLICATIONS

- | | |
|---|-----|
| ▪ Total Publication in peer reviewed international journals | 93+ |
| ▪ Invited Talks | 20+ |
| ▪ Total no. of conference organized | 16+ |
| ▪ Total no. of conference attended | 15+ |
| ▪ Publication in international Proceedings | 64+ |

INVITED TALKS

- “Synthesis and Characterization of Advanced Functional Material”, 26th – 28th March 2007, Workshop on synthesis and Characterization of Advanced Functional Materials, ICGAR, Kalpakkam.
- “Synthesis and Characterization of Nano Crystalline Hydroxyapatite Spheroids Using Anionic Template for Bio Applications”, 6th – 9th, November 2011, BioCeramics -23rd Symposium and annual meeting of International society for ceramic in Medicine (ISMC), Turkey.
- “Structural, Thermal and Magnetic Analysis of Co₂FeO₄ Spinel Oxide Synthesized by Co-Precipitation Process”, 18th - 20th December 2012, 4th International conference on Solid State Science and Technology, Malaysia.
- “The Effects of Mode of Addition and Agitation on The Morphology of Nano HAp”, 18th - 20th December 2012, 4th International conference on Solid State Science and Technology, Malaysia.
- “Nano- BioMaterial”, 4th July 2013, AICTE sponsored FDP program on Recent Development in Nano- Material and Nano Technology, Muthayammal Engineering College, Rasipuram, Tamil Nadu, India.

- “Nano-Material”, 14th March 2014, National conference on Recent Trends and application in mathematics and Physics.
- “Application of Nanomaterials”, 22nd August 2014, at Biomedical Engineering, PSG College of Technology on Advances in Molecular Diagnostics and Therapeutics.
- “Classification of Biomaterials and its applications”, 22nd December 2014, FDTP on Engineering Physics II (PH6251), University College of Engineering Tindivanam.
- “Nano-Biomaterials and its applications”, 12th Feb. 2015, FDTP Refresher course on Current Trends in Physics (CTP-2015) at School of Physics, Madurai Kamaraj University, Madurai.
- “Emulsification and removal of Excess penetrant”, 7th April 2015, ISNT, Trichy Level II certificate Course for POST GRADUATE DIPLOMA COURSE (WRI& PSG CT).
- “Nano-Biomaterials and its applications”, 16th July 2015, Department of Physics, Periyar University, Salem.
- “Ion Beam Analysis”, 29th July 2015, Advanced Research in Materials for Engineering and Technological Applications (ARMETA-2015), Anna University, Tiruchirappalli.
- “Ultrasonic Testing”, 9th Oct. 2015, M. Kumarasamy College of Engineering, Karur.
- “Effect of Complexing Agent on the Formation of BiFeO₃ and Its Photocatalytic Properties”, 27th June 2016, International Conference on Material Engineering and Smart Materials (ICMESM 2016), Singapore.
- “Nano-Structured materials”, 1st March 2017, Department of Chemistry, University college of engineering, Villupuram.
- “Introduction non-destructive testing”, 6th March 2017, Department of Physics, Alagappa University, Karaikudi.
- “Why we need Nano-Structured materials”, 14th July 2017, Department of Physics, Central University of Tamil Nadu.
- “Exploring nanostructured materials for energy and environmental remediation”, 28-29 February 2020, UGC Sponsored Two Day National Seminar on Emerging trends in Physics (NSETP-2020), Sadakathullah Appa College, Palayamkottai, Tirunelveli
- ‘Materials for Energy and Environmental Science’, National Conference on Materials for Energy and Environment (MEE-22), AMET Deemed to be University, Chennai (28th Jan. 2022).
- Workshop on ‘Nanomaterials for emerging applications’ (NMEA-2022) organized by National Institute of Technology, Tiruchirappalli on 25 and 26 February 2022.

PUBLICATIONS

Refereed Research Journals

1. Subramanian, Harinee; Krishnan, Muthukumar; James, Rathinam Arthur, M Arulmozhi, Dahms, Hans-Uwe, Mahalingam, Ashok; Bio-approach ZnO/Ag nano-flowers: enhanced photocatalytic and photoexcited anti-microbial activities towards pathogenic bacteria, **Materials Today Sustainability**, 18, 100133, **2022**, Elsevier.
2. Wiston, Biny R; Prabhakaran, Praveena; Ashok, M; Bimetallic NiFe hydroxide coated onto commercial graphite foil as efficient supercapacitor electrode, **Journal of Energy Storage**, 50, 104226, **2022**, Elsevier.
3. Bismibanu, A; Vanga, Pradeep Reddy; Alagar, M; Selvalakshmi, Thangaraj; Banu, IB; Ashok, M; Impact of (Pr, Dy) Co-doping at Bi Site on Optical and Multiferroic Properties of BiFeO₃ Ceramics Prepared by Sonochemical Method, **Semiconductors**, 55, 914–921, **2022**, Pleiades Publishing.
4. Subramanian, Harinee; Krishnan, Muthukumar; Mahalingam, Ashok; Photocatalytic dye degradation and photoexcited anti-microbial activities of green zinc oxide nanoparticles synthesized via Sargassum muticum extracts, **RSC Advances**, 12, 2, 985-997, **2022**, Royal Society of Chemistry.
5. Bismibanu, A; Alagar, M; Banu, IB; Vanga, Pradeep Reddy; Selvalakshmi, Thangaraj; Ashok, M; Structural, Microstructural, Magnetic, Ferroelectric, and Energy Bandgap Analysis of Heavily-Doped Pr at Bi Site of BiFeO₃, **Brazilian Journal of Physics**, 52, 1, 01-Aug, **2022**, Springer US.
6. Kolanthai, Elayaraja; Joshy, MI Ahymah; Arul, K Thanigai; Manojkumar, P; Rameshbabu, N; Ashok, M; Sivakumar, GR; Asokan, K; Kalkura, S Narayana; Effect of swift heavy silicon ion irradiation on TiO₂ thin film prepared by micro arc oxidized technique, **Materials Today; Proceedings**, **2022**, Elsevier.
7. Maricar, S Mohamed Manjoor Shaib; Sastikumar, D; Vanga, P Reddy; Ashok, M; BiFeO₃ clad modified fiber optic gas sensor for room temperature applications, **Materials Today; Proceedings**, 39, 245-249, **2021**, Elsevier.
8. Srinivasan, S Sai Guru; Govardhanan, B; Ashok, M; Kumar, MC Santhosh; Influence of deposition time on the visible-light-driven photocatalytic activity of Cu₂O thin films by reactive sputtering at room temperature, **Materials Letters**, 284, 128980, **2021**, North-Holland.
9. Maricar, S Mohamed ManjoorShaib; Sastikumar, D; Vanga, P Reddy; Ashok, M; Fiber optic gas sensor response of hydrothermally synthesized nanocrystalline bismuth tungstate to methanol, **Materials Letters**, 288, 129337, **2021**, North-Holland.
10. Gomathi, R; Ashok, M; Menaka, M; Venkatraman, B; Quantification of Wall Loss Defect in Glass Fiber Reinforced Polymer Curved Composites Using Lock-In Thermography, **Journal of Nondestructive Evaluation**, 40, 2, 01-Oct, **2021**, Springer US.

11. Dhivyaprasath, Kasinathan; Wiston, Biny R; Preetham, Manoharan; Harinee, Subramanian; Ashok, Mahalingam; Ultrasonic spray deposition of WO_3 -rGO thin-film composite for photocatalytic degradation of methylene blue, **Optik**, 244, 167593, **2021**, Urban & Fischer.
12. Wiston, Biny R; Ashok, M; Tridax procumbens flowers derived carbon as electrode material in aqueous supercapacitor, **Materials Letters**; **X**, 12, 100109, **2021**, Elsevier.
13. Sangeetha, K; Vidhya, G; Girija, EK; Ashok, M; Fabrications of magnetic responsive hydroxyapatite platform; In vitro release of chemo drug for cancer therapy, **Materials Today; Proceedings**, 26, 3579-3582, **2020**, Elsevier.
14. Selvi, Malayappan Helen; Vanga, Pradeep Reddy; Harinee, Subramanian; Ashok, Mahalingam; Synthesis of bulk g- $\text{C}_3\text{N}_4/\text{Bi}_2\text{WO}_6$ nanocomposite for effective photocatalytic reaction and for antimicrobial activity by hydrothermal method, **Research on Chemical Intermediates**, 46, 2, 1165-1181, **2020**, Springer Netherlands.
15. Sankar, K Vijaya; Ashok, M; Effect of preparation method on structural, morphological, optical properties and photocatalytic activities of visible light active semiconductor $\text{PbBi}_2\text{Nb}_2\text{O}_9$ for various organic pollutant dyes, **Materials Science in Semiconductor Processing**, 106, 104773, **2020**, Pergamon.
16. Nikhil, VP; Wiston, Biny R; Mahalingam, Ashok; Flaw detection and monitoring over corroded surface through ultrasonic C-scan imaging, **Engineering Research Express**, **2020**, IOP Publishing.
17. Sankar, K Vijaya; Ashok, M; Significantly enhanced photo catalytic activities of $\text{PbBi}_2\text{Nb}_2\text{O}_9$ (Bulk)/ TiO_2 (Nano) hetero structured composites for methylene blue dye degradation under visible light, **Materials Chemistry and Physics**, 244, 122659, **2020**, Elsevier.
18. Manojkumar, P; Lokeshkumar, E; Saikiran, A; Govardhanan, B; Ashok, M; Rameshbabu, N; Visible light photocatalytic activity of metal (Mo/V/W) doped porous TiO_2 coating fabricated on Cp-Ti by plasma electrolytic oxidation, **Journal of Alloys and Compounds**, 825, 154092, **2020**, Elsevier.
19. Mano, Ganapathy; Harinee, Subramanian; Sridhar, Sampath; Ashok, Mahalingam; Viswanathan, Alagan; Microwave assisted synthesis of ZnO - PbS heterojunction for degradation of organic pollutants under visible light, **Scientific reports**, 10, 1, Jan-14, **2020**, Nature Publishing Group.
20. Boopathy, Govardhanan; Gangasalam, Arthanareeswaran; Mahalingam, Ashok; Photocatalytic removal of organic pollutants and self-cleaning performance of PES membrane incorporated sulfonated graphene oxide/ ZnO nanocomposite, **Journal of Chemical Technology & Biotechnology**, 95, 11, 3012-3023, **2020**, John Wiley & Sons, Ltd. Chichester, UK.
21. Maricar, S Mohamed Manjoor Shaib; Sastikumar, D; Vanga, P Reddy; Ashok, M; Synthesis of MoO_3 long microsheets and fiber optic gas sensing properties, **Materials Today; Proceedings**, **2020**, Elsevier.

22. Kasinathan, Dhivyaprasath; Ashok, M; Microwave assisted WO₃ hole transport material for stable perovskite solar cell, **AIP Conference Proceedings**, 2265, 1, 30648, **2020**, AIP Publishing LLC.
22. Wiston, Biny R; Ashok, M; Electrochemical performance of nickel hydroxide nanopetals for supercapacitor electrodes, **Materials Letters**, 235, 76-79, **2019**, North-Holland.
23. Wiston, Biny R; Ashok, M; Electrochemical performance of hydrothermally synthesized flower-like nickel hydroxide, **Vacuum**, 160, Dec-17, **2019**, Pergamon.
24. Sangeetha, K; Ashok, M; Girija, EK; Development of multifunctional cobalt ferrite/hydroxyapatite nanocomposites by microwave assisted wet precipitation method; a promising platform for synergistic chemo-hyperthermia therapy, **Ceramics International**, 45, 10, 12860-12869, **2019**, Elsevier.
25. Srinivasan, S Sai Guru; Govardhanan, B; Aabel, P; Ashok, M; Kumar, MC Santhosh; Effect of oxygen partial pressure on the tuning of copper oxide thin films by reactive sputtering for solar light driven photocatalysis, **Solar Energy**, 187, 368-378, **2019**, Pergamon.
26. Wiston, Biny R; Ashok, M; Microwave-assisted synthesis of cobalt-manganese oxide for supercapacitor electrodes, **Materials Science in Semiconductor Processing**, 103, 104607, **2019**, Pergamon.
27. Prabhakaran, Praveena; Ashok, M; Synthesis of carbon dots/layered double hydroxide composites for non-enzymatic electrochemical sensing of hydrogen peroxide, **AIP Conference Proceedings**, 2115, 1, 30085, **2019**, AIP Publishing LLC.
28. Wiston, Biny R; Ashok, M; Electrochemical activity of nickel-iron layered double hydroxide synthesized via different synthesis strategies, **AIP Conference Proceedings**, 2115, 1, 30556, **2019**, AIP Publishing LLC.
29. Harinee, Subramanian; Muthukumar, Krishnan; Dahms, Hans-Uwe; Koperuncholan, Marimuthu; Vignesh, Sivanandham; Banu, Rajesh J; Ashok, Mahalingam; James, Rathinam Arthur; Biocompatible nanoparticles with enhanced photocatalytic and anti-microfouling potential, **International Biodeterioration & Biodegradation**, 145, 104790, **2019**, Elsevier
30. Ashok, Mahalingam; Deepika, Shanmuga; Sowndharya, Pitchai; Muthukumar, Krishnan; Cotton candy driven chitosan and gelatin coated poly (styrene-co-acrylonitrile) microfibers for anti-microbial wound dressing applications, **Materials Research Express**, 6, 12, 125339, **2019**, IOP Publishing.
31. Prabhakaran, Praveena; Mahalingam, Ashok; Facile synthesis of hierarchical microsphere-like layered double hydroxide for non-enzymatic selective detection of dopamine, **Materials Research Express**, 6, 12, 125033, **2019**, IOP Publishing.
32. Vanga, Pradeep Reddy; Mangalaraja, RV; Ashok, M; Magnetic Properties and Photocatalytic Behavior of Co Co-doped BiFeO₃; Er, **Journal of Superconductivity and Novel Magnetism**, 31, 1, 89-97, **2018**, Springer US.
33. Lakshmi Narasimhan G, Selvan, G; Vanga, Pradeep Reddy; Ashok, M; Novel developments in dysprosium doped bismuth phosphate, **Optik-International Journal for Light and Electron Optics**, 156, , 536-541, **2018**, Urban & Fischer.

34. Senthilkumar, Subramanian; Ashok, Mahalingam; Kashinath, Lellala; Sanjeeviraja, Chinnappanadar; Rajendran, Annamalai; Phytosynthesis and characterization of TiO₂ nanoparticles using Diospyros ebenum leaf extract and their antibacterial and photocatalytic degradation of crystal violet, **Smart Science**, 6, 1, 01-Sep, **2018**, Taylor & Francis.
35. Muthukumar Krishnan, Harinee Subramanian, Hans-Uwe Dahms, Vignesh Sivanandham, Palanichamy Seeni, Subramanian Gopalan, Ashok Mahalingam, Arthur James Rathinam; Biogenic corrosion inhibitor on mild steel protection in concentrated HCl medium, **Nature Scientific Reports**, 8, 2609, **2018**, nature.com.
36. Sangeetha, K; Ashok, M; Girija, EK; Vidhya, G; Vasugi, G; Strontium and ciprofloxacin modified hydroxyapatites as functional grafts for bone prostheses, **Ceramics International**, 44, 12, 13782-13789, **2018**, Elsevier.
37. M. Ashok, Periyayya Uthirakumar, T. Balasubramanian, P. Michael SL Shanthi; Influence of Bicationic and Catanionic Surfactants Over the Morphology of Mesoporous Nanohydroxyapatite, **Journal of Nanoscience and Nanotechnology**, 18, 10, 7064-7071, **2018**, American Scientific Publishers.
38. SenthilKumar, Subramanian; Lellala, Kashinath; Ashok, Mahalingam; Priyadharsan, Arumugam; Sanjeeviraja, Chinnappanadar; Rajendran, Annamalai; Green synthesis of CeO₂-TiO₂ compound using Cleome chelidonii leaf extract for excellent photocatalytic activity, **Journal of Materials Science; Materials in Electronics**, 29, 16, 14022-14030, **2018**, Springer US.
39. Bismibanu, A; Vanga, Pradeep Reddy; Selvalakshmi, Thangaraj; Ashok, M; Alagar, M; Investigations on Structural, Optical and Multiferoic Properties of Bismuth Ferrite Nanoparticles Synthesized by Sonochemical Method, **Journal of Electronic Materials**, 47, 11, 6373-6377, **2018**, Springer US.
40. Selvi, M Helen; Vanga, Pradeep Reddy; Ashok, M; Photocatalytic application of Bi₂WO₆ nanoplates structure for effective degradation of methylene blue, **Optik**, 173, 227-234, **2018**, Urban & Fischer.
41. Hariprasad, S; Gowtham, S; Arun, S; Ashok, M; Rameshbabu, N; Fabrication of duplex coatings on biodegradable AZ31 magnesium alloy by integrating cerium conversion (CC) and plasma electrolytic oxidation (PEO) processes, **Journal of Alloys and Compounds**, 722, 698-715, **2017**, Elsevier
42. Senthilkumar, S; Kashinath, L; Ashok, M; Rajendran, A; Antibacterial properties and mechanism of gold nanoparticles obtained from Pergularia daemia leaf extract, **J Nanomed Res**, 6, 1, 146, **2017**.
43. Dhanalakshmi, Radhalayam; Muneeswaran, M; Vanga, Pradeep Reddy; Ashok, M; Giridharan, NV; Enhanced photocatalytic activity of hydrothermally grown BiFeO₃ nanostructures and role of catalyst recyclability in photocatalysis based on magnetic framework, **Applied Physics A**, 122, 1, Jan-14, **2016**, Springer Berlin Heidelberg.
44. Vanga, Pradeep Reddy; Mangalaraja, RV; Ashok, M; Effect of co-doping on the optical, magnetic and photocatalytic properties of the Gd modified BiFeO₃, **Journal of Materials Science; Materials in Electronics**, 27, 6, 5699-5706, **2016**, Springer US.

45. Vanga, Pradeep Reddy; Mangalaraja, RV; Giridharan, NV; Ashok, M; Influence of divalent Ni and trivalent Cr ions on the properties of ytterbium modified bismuth ferrite, **Journal of Alloys and Compounds**, 684, 55-61, **2016**, Elsevier.
46. Vanga, Pradeep Reddy; Mangalaraja, RV; Ashok, M; Sol-gel synthesis and characterisation of (Nd, Cr) co-doped BiFeO₃ nanoparticles, **Journal of Experimental Nanoscience**, 11, 17, 1348-1359, **2016**, Taylor & Francis.
47. Dhanalakshmi, Radhalayam; Vanga, Pradeep Reddy; Ashok, M; Giridharan, NV; The effect of a 0.5 T magnetic field on the photocatalytic activity of recyclable Nd-modified BiFeO₃ magnetic catalysts, **IEEE Magnetics Letters**, 7, 01-Apr, **2016**, IEEE.
48. S. Adalarasu, Ashok Mahalingam, Saratchandran; pulse distortion in guided wave and its impact on flaw resolution, **Journal of Non Destructive Testing and Evaluation**, 14, 5, 46-54, **2016**, ISNT
49. Vanga, Pradeep Reddy; Mangalaraja, RV; Giridharan, NV; Ashok, M; PTCR behavior of BiFeO₃ synthesized by the solvothermal method, **Materials Letters**, 143, 230-232, **2015**, North-Holland.
50. Dhanalakshmi, Radhalayam; Muneeswaran, M; Vanga, Pradeep Reddy; Ashok, M; Giridharan, NV; Photocatalytic activity of BiFeO₃ nanoparticles synthesized through hydrothermal method, **AIP Conference Proceedings**, 1665, 1, 130014, **2015**, AIP Publishing LLC.
51. Vanga, Pradeep Reddy; Mangalaraja, RV; Ashok, M; Structural, magnetic and photocatalytic properties of La and alkaline co-doped BiFeO₃ nanoparticles, **Materials Science in Semiconductor Processing**, 40, 796-802, **2015**, Pergamon.
52. S. Adalarasu, M. Ashok; Assessment on mechanical working of a rolled ring using ultrasonic techniques, **Indian J. Res. Found.**, 1, 35-41, **2015**.
53. Pradeep Reddy Vanga, R.V. Mangalaraja, M. Ashok; Effect of (Nd, Ni) co-doped on the multiferroic and photocatalytic properties of BiFeO₃, **Materials Research Bulletin**, 72, 299 (305), **2015**, Elsevier.
54. Narsimhan, Lakshmi G; Vanga, Reddy Pradeep; Ashok, M; Synthesis of Hydroxyapatite over Keggin, **Research journal of biotechnology**, 10, 10, 40-41, **2015**.
55. S. Adalarasu, Dr. M. Ashok and S. Saratchandran; Contrasting features of Guided Waves and its impact on Flaw Detection, **NDE-India 2014, 2015**, ndt.net.
56. Reddy, Pradeep; Raja, Yesu; Ashok, M; Structural, Thermal and Magnetic Analysis of Co₂FeO₄ Spinel Oxide Synthesized by Co-Precipitation Process, **Advanced Materials Research**, 895, 287-290, **2014**, Trans Tech Publications Ltd.
57. Vanga, Pradeep Reddy; Leelashree, S; Ashok, Mahalingam; Effect of Cobalt Concentration on Bi_{0.95}Ba_{0.05}Fe_{1-x}Co_xO₃., **Advanced Materials Research**, 938, 85-90, **2014**, Trans Tech Publications, Switzerland.

58. Vignesh, S; Karthikeyan, B; Udayabhaskar, R; Arjunan, V; Muthukumar, K; Ashok, M; Narayana Kalkura, S; Arthur James, R; Antimicrobial activity of biological green synthesized silver nanoparticles, **Asian journal of Physics**, 23, 6, 1025-1030, **2014**.
59. Swapna, R; Ashok, M; Muralidharan, G; Kumar, MC Santhosh; Microstructural, electrical and optical properties of ZnO; Mo thin films with various thickness by spray pyrolysis, **Journal of Analytical and Applied Pyrolysis**, 102, 68-75, **2013**, Elsevier.
60. Sandhyarani, M; Rameshbabu, N; Venkateswarlu, K; Ravisankar, KV; Ashok, M; Anandan, S; Photocatalytic and antibacterial activity of titanium, fluorine and silver co-substituted hydroxyapatite, **International Journal of Modern Physics; Conference Series**, 22, 268-277, **2013**, World Scientific Publishing Company.
61. Vanga, Pradeep Reddy; Ashok, M; Magnetic and optical studies of Fe and Co co-doped ZnO, **International Conference on Advanced Nanomaterials & Emerging Engineering Technologies**, 154-156, **2013**, IEEE.
62. Prabhu, Saravanan; Saravanamoorthy, S; Ashok, M; Velmathi, Sivan; Colorimetric and fluorescent sensing of multi metal ions and anions by salicylaldehyde based receptors, **Journal of luminescence**, 132, 4, 979-986, **2012**, North-Holland.
63. Sivakumar, Manickam; Towata, Atsuya; Yasui, Kyuichi; Tuziuti, Toru; Kozuka, Teruyuki; Iida, Yasuo; Maiorov, Michail M; Blums, Elmars; Bhattacharya, Dipten; Sivakumar, Neelagesi; Ultrasonic cavitation induced water in vegetable oil emulsion droplets: A simple and easy technique to synthesize manganese zinc ferrite nanocrystals with improved magnetization, **Ultrasonics sonochemistry**, 19, 3, 652-658, **2012**, Elsevier.
64. Shanthi, P Michael SL; Ashok, M; Balasubramanian, T; Synthesis and characterization of porous nanocrystalline biphasic calcium phosphate for bio applications, **Nanobiosystems; Processing, Characterization, and Applications V**, 8464, 846411, **2012**, International Society for Optics and Photonics.
65. Ashok, M; Krishnan, Arunkumar; Choudhury, G; Kalkura, Narayana S; Jayanthi, V; Regional differences in composition of cholesterol gallstones in India, **Journal of Medical Science and Research**, 3, 1, 3, **2012**, Journal of Medical Science & Research.
66. Udhayakumari, D; Saravanamoorthy, S; Ashok, M; Velmathi, Sivan; Simple imine linked colorimetric and fluorescent receptor for sensing Zn²⁺ ions in aqueous medium based on inhibition of ESIPT mechanism, **Tetrahedron letters**, 52, 36, 4631-4635, **2011**, Pergamon.
67. Elayaraja, K; Joshy, MI Ahymah; Suganthi, RV; Kalkura, S Narayana; Palanichamy, M; Ashok, M; Sivakumar, VV; Kulriya, PK; Sulania, I; Kanjilal, D; 125 MeV Si⁹⁺ ion irradiation of calcium phosphate thin film coated by rf-magnetron sputtering technique, **Applied Surface Science**, 257, 6, 2134-2141, **2011**, North-Holland.
68. Yogamalar, N Rajeswari; Ashok, M; Bose, A Chandra; Blue emission and bandgap modification in N; ZnO nanorods, **Functional Materials Letters**, 4, 3, 271-275, **2011**, World Scientific Publishing Company.
69. SL Shanthi, P Michael; Ashok, M; Mangalaraja, RV; Balasubramanian, T; Synthesis and Characterization of Nano Crystalline Hydroxyapatite Spheroids Using Anionic Template for Bio Applications, **Key Engineering Materials**, 1463, 493, 723, **2011**.

70. Shanthi, P Michael SL; Mangalaraja, RV; Uthirakumar, AP; Velmathi, S; Balasubramanian, T; Ashok, M; Synthesis and characterization of porous shell-like nano hydroxyapatite using Cetrimide as template, **Journal of colloid and interface science**, 350, 1, 39-43, **2010**, Academic Press.
71. Shanthi, P Michael SL; Ashok, M; Balasubramanian, T; Riyasdeen, A; Akbarsha, MA; Synthesis and characterization of nano-hydroxyapatite at ambient temperature using cationic surfactant, **Materials Letters**, 63, 24-25, 2123-2125, **2009**, North-Holland.
72. Rao, T Prasada; Kumar, MC Santhosh; Angayarkanni, S Anbumozhi; Ashok, M; Effect of stress on optical band gap of ZnO thin films with substrate temperature by spray pyrolysis, **Journal of Alloys and compounds**, 485, 01-Feb, 413-417, **2009**, Elsevier.
73. Pandiyarajan, T; Karthikeyan, B; Venkatesan, P; Ashok, M; Anandan, S; Giridharan, NV; Simple synthesis and spectroscopic studies on cobalt added ZnO nanocrystals, **Spectrochimica Acta Part A; Molecular and Biomolecular Spectroscopy**, 74, 1, 84-86, **2009**, Elsevier.
74. Shanthi, P Michael SL; Ashok, M; Balasubramanian, T; Uthirakumar, AP; Synthesis and characterization of nano spherical hydroxyapatite for drug delivery and tissue engineering, **Nanobiosystems; Processing, Characterization, and Applications II**, 7403, , 74030K, **2009**, International Society for Optics and Photonics.
75. Ashok, M; Kandasamy, A; Velmathi, S; Synthesis and Characterization of Hydroxyapatite Nanorods, **International Journal of Nano Science, Nano Engineering & Nanotechnology**, 1, 01-Feb, 13-15, **2009**.
76. Ashok, M; Kalkura, S Narayana; Sundaram, N Meenakshi; Arivuoli, D; Growth and characterization of hydroxyapatite crystals by hydrothermal method, **Journal of Materials Science; Materials in Medicine**, 18, 5, 895-898, **2007**, Kluwer Academic Publishers-Plenum Publishers.
77. Chanda, SC; Manna, A; Vijayan, V; Nayak, Pranaba K; Ashok, M; Acharya, HN; PIXE & XRD analysis of nanocrystals of Fe, Ni and Fe₂O₃, **Materials letters**, 61, 28, 5059-5062, **2007**, North-Holland.
78. Sundaram, N Meenakshi; Girija, EK; Ashok, M; Anee, TK; Vani, R; Suganthi, RV; Yokogawa, Y; Kalkura, S Narayana; Crystallisation of hydroxyapatite nanocrystals under magnetic field, **Materials Letters**, 60, 6, 761-765, **2006**, North-Holland.
79. Rautray, TR; Vijayan, V; Ashok, M; Kennedy, JV; Jayanthi, V; Ibrarullah, MD; Panigrahi, S; Pixe analysis of gallstones, **International Journal of PIXE**, 15, 147-152, **2005**, World Scientific Publishing Company.
80. Ashok, M; Reddy, Nageshwar; Jayanthi, V; Kalkura, SN; Vijayan, V; Gokulakrishnan, S; Nair, KG; Regional differences in constituents of gall stones., **Tropical gastroenterology; official journal of the Digestive Diseases Foundation**, 26, 2, 73-75, **2005**.
81. Anee, TK; Palanichamy, M; Ashok, M; Sundaram, N Meenakshi; Kalkura, S Narayana; Influence of iron and temperature on the crystallization of calcium phosphates at the physiological pH, **Materials Letters**, 58, 03-Apr, 478-482, **2004**, North-Holland

82. Kalkura, S Narayana; Anee, TK; Ashok, M; Betzel, C; Investigations on the synthesis and crystallization of hydroxyapatite at low temperature, **Bio-medical materials and engineering**, 14, 4, 581-592, **2004**, IOS Press.
83. Rajesh, NP; Kannan, V; Ashok, M; Sivaji, K; Raghavan, P Santhana; Ramasamy, P; A new nonlinear optical semi-organic material; cadmium thiourea acetate, **Journal of crystal growth**, 262, 01-Apr, 561-566, **2004**, North-Holland.
84. Ashok, M; Sundaram, N Meenakshi; Kalkura, S Narayana; Crystallization of hydroxyapatite at physiological temperature, **Materials Letters**, 57, 13-14, 2066-2070, **2003**, North-Holland.
85. Anee, TK; Ashok, M; Palanichamy, M; Kalkura, S Narayana; A novel technique to synthesize hydroxyapatite at low temperature, **Materials Chemistry and Physics**, 80, 3, 725-730, **2003**, Elsevier.
86. Ashok, M; Rautray, T; Nayak, Pranaba; Vijayan, V; Jayanthi, V; Narayana Kalkura, S; Energy dispersive X-ray fluorescence analysis of gallstones, **Journal of radioanalytical and nuclear chemistry**, 257, 2, 333-335, **2003**, co-published with Springer Science+ Business Media BV.
87. Ashok, M; Investigations on the crystallisation of calcium phosphate biomaterials and the trace element analyses of the urinary stones and gallstones, **2003**, Anna University Chennai.
88. Kumar, R Ashok; Kennedy, V John; Sasikala, K; Jude, ALC; Ashok, M; Moretto, Ph; Trace element analysis of blood samples from mentally challenged children by PIXE, **Nuclear Instruments and Methods in Physics Research Section B; Beam Interactions with Materials and Atoms**, 190, 01-Apr, 449-452, **2002**, North-Holland.
89. Sandaram, Nachiappan Meenakshi; Ashok, M; Kalkura, N; Observation of cholesterol nucleation in a magnetic field, **Acta Crystallographica Section D; Biological Crystallography**, 58, 10, 1711-1714, **2002**, International Union of Crystallography.
90. Ashok, M; KALKUPA, S NARAYANA; Kennedy, VJ; Markwitz, A; Jayanthi, V; Nair, KGM; Vijayan, V; Trace element analysis of south Indian gallstones by PIXE, **International Journal of PIXE**, 12, 03n04, 137-144, **2002**, World Scientific Publishing Company.
91. Gokulakrishnan, S; Ashok, M; Jayanthi, V; Analysis of gallstone; a critical appraisal on various techniques, **Gastroenterol Today**, 3, 145-148, **2001**.
92. Ashok, M; Narayana Kalkura, S; Vijayan, V; Magudapathy, P; Nair, KGM; Investigation of the elemental concentration of kidney stones by PIXE analysis, **International Journal of PIXE**, 11, 01n02, 21-25, **2001**, World Scientific Publishing Company.
93. M. Ashok, S. Narayana Kalkura, V. Vijayan, K.G.M. Nair And P. Ramasamy; Analysis Of The Elemental Concentration In Renal Calculi, **Journal Of Medical Physics**, 25, 205-207, **2000**, Medknow Publications.

Conferences/Workshops/Symposia Proceedings

1. Decrypting the charge-storage properties of CeO₂ decorated α -nickel hydroxide in battery-type supercapacitors, International conference on technologies for Smart green connected societies, Online, Nov. 29, 30 2021.
2. Biny R. Wiston, M. Ashok, Boosting the electrochemical kinetics of nickel hydroxide using CeO₂ and their application in high efficiency supercapacitors, 6th International Conference on Nanoscience and Nanotechnology (Virtual Conference), SRM Institute of Science and Technology, Kattankulathur, February 01 – 03, 2021.
3. K. Vijaya Sankar, M. Ashok, Extended study on controlled loading of various Organic Pollutant Dyes over PbBi₂Nb₂O₉ semiconductor under visible light irradiation, International Conference on Novel engineering materials for Biomedical, Energy, Environmental Sensing, and other application (Virtual Conference), National Institute of Technology, Tiruchirappalli, pg. 32, 11-13th March 2021.
4. M. Helen Selvi, M. Ashok, Hydrothermal synthesise of Ag/Bi₂WO₆ nanoplate for photocatalytic degradation of methylene blue dye, International Conference on Novel engineering materials for Biomedical, Energy, Environmental Sensing, and other application (Virtual Conference), National Institute of Technology, Tiruchirappalli, pg. 143, 11-13th March 2021.
5. Biny R. Wiston, M. Ashok, Porous carbon synthesized from Tridax procumbens flowers and their electrochemical activity in aqueous electrolyte, International Conference on Novel engineering materials for Biomedical, Energy, Environmental Sensing, and other application (Virtual Conference), National Institute of Technology, Tiruchirappalli, pg. 75, 11-13th March 2021. (*Won the Best presentation award*).
6. Dhivyaprasath K, Ashok M, Highly Transparent Self-Cleaning Substrate for Anti-Microbial Activity Using Simple Spin Coating Method, International Conference on Novel engineering materials for Biomedical, Energy, Environmental Sensing, and other application (Virtual Conference), National Institute of Technology, Tiruchirappalli, pg. 162, 11-13th March 2021.
7. Jerlin G and Ashok M., Synthesis and Characterization of Biocompatible ZnO-Ag Nanocomposite using Seaweed Extract, International Conference on Novel engineering

materials for Biomedical, Energy, Environmental Sensing, and other application (Virtual Conference), National Institute of Technology, Tiruchirappalli, pg. 108, 11-13th March 2021.

8. Nivedha B, Ashok Mahalingam, Mohith Hemanth Kumar, Natural and Synthetic filler reinforced Kevlar Epoxy Composite for High Strength and Flame Retardance Application, International Conference on Novel engineering materials for Biomedical, Energy, Environmental Sensing, and other application (Virtual Conference), National Institute of Technology, Tiruchirappalli, pg. 138, 11-13th March 2021.

9. Elayaraja Kolanthai, M. I. Ahymah Joshy, K. Thanigaiarul, K. Venkateswarlu, N. Rameshbabu, M. Ashok, G.R. Sivakumar, K. Asokan, S. Narayana Kalkura, Effect of swift heavy silicon ion irradiation on TiO₂ thin film prepared by micro-arc oxidized technique, International Conference on Novel engineering materials for Biomedical, Energy, Environmental Sensing, and other application (Virtual Conference), National Institute of Technology, Tiruchirappalli, pg. 104, 11-13th March 2021.

10. Praveena Prabhakaran, Biny R. Wiston, Nivedha Balasubramanian, M. Ashok, *Organic-Inorganic hybrid material based on carbon dots/LDH for electrochemical detection of bioanalytes*, International Conference on Recent Advances in Materials Science, Central University of Tamilnadu, Thiruvarur, 25th February 2020.

11. Biny R. Wiston, K. Dhivyaprasath, Shivangi Tewatia, K. Sarina and M. Ashok, *Facile fabrication of transition-metal oxide and its improved electrochemical properties for high-performance supercapacitors*, International Conference on Recent Advances in Materials Science, Central University of Tamilnadu, Thiruvarur, 25th February 2020 (***Won the Best Poster presentation award***).

12. Dhivyaprasath Kasinathan, Biny R. Wiston, Ashok Mahalingam, *Waste batteries derived Graphene oxide and its application as supercapacitor electrodes*, International Conference on Recent Advances in Materials Science, Central University of Tamilnadu, Thiruvarur, 25th February 2020.

13. Nivedha Balasubramanian, Dhivyaprasath Kasinathan, Ashok Mahaligam, *WO₃ thin film for photocatalytic degradation of industrial dyes*, International Conference on Recent Advances in Materials Science, Central University of Tamilnadu, Thiruvarur, 25th February 2020.

14. Dhivyaprasath Kasinathan and M. Ashok, *Microwave assisted WO₃ hole transport material for stable perovskite solar cell*, 64th DAE Solid State Physics Symposium, Indian Institute of Technology Jodhpur, Rajasthan, India, 18-22 December 2019.
15. B. Govardhanan, G. Arthanareeswaran, M. Ashok, *Photocatalytic removal of Phenol-Red and Pharmaceutical pollutants using by PES UF membrane incorporated Graphene oxide/g-C₃N₄ composite*, International Conference on Multifunctional and Hybrid Composite Materials for Energy, Environment and Medical applications (ICMHCEE 2019), National Institute of Technology, Tiruchirappalli, 9-11 September 2019 (**Won the Best Oral presentation award**).
16. Biny R. Wiston and Ashok Mahalingam, *Biowaste derived activated carbon prepared in minutes and its application as supercapacitor electrodes*, International Conference on Recent Advances in Materials Science (ICRAMS-2019), National College, Tiruchirappalli, India, 4-6 February 2019.
17. Praveena Prabhakaran, Ashok Mahalingam, *Non-enzymatic sensing performance of layered double hydroxide: controlled synthesis and its morphology-dependent electrochemical activity*, International Conference on Recent Advances in Materials Science (ICRAMS-2019), National College, Tiruchirappalli, India, 4-6 February 2019.
18. Biny R. Wiston, Ashok Mahalingam, *Microwave-assisted synthesis of cobalt-manganese oxide for supercapacitor electrodes*, 5th International Conference on Nanoscience and Nanotechnology, Department of Physics and Nanotechnology, SRM Institute of Science and Technology, Kattankulathur, India, 28 – 30 January 2019.
19. Praveena Prabhakaran, Ashok Mahalingam, *Facile synthesis of porous layered double hydroxide hierarchical microspheres for non-enzymatic selective detection of dopamine*, 5th International Conference on Nanoscience and Nanotechnology, Department of Physics and Nanotechnology, SRM Institute of Science and Technology, Kattankulathur, India, 28 – 30 January 2019.
20. Dhivyaprasath Kasinathan, Govardhanan Boopathy, Ashok Mahalingam, *Ultrasonic spray deposition of WO₃/RGO composite thin film for photocatalyst degradation of industrial dyes*, 5th International Conference on Nanoscience and Nanotechnology, Department of Physics and Nanotechnology, SRM Institute of Science and Technology, Kattankulathur, India, 28 – 30 January 2019.

21. Helen Selvi Malayappan, M. Ashok, *Synthesis and characterization of ZnO/Bi₂WO₆ nanoplate for effective photocatalytic reaction and antimicrobial activity*, 5th International Conference on Nanoscience and Nanotechnology, Department of Physics and Nanotechnology, SRM Institute of Science and Technology, Kattankulathur, India, 28 – 30 January 2019.
22. Sai Guru Srinivasan, Govardhanan B., Ashok M., Santhosh Kumar M. C, *Photocatalytic activity of reactively sputtered nanostructured Cu₂O thin films deposited at room temperature*, 5th International Conference on Nanoscience and Nanotechnology, Department of Physics and Nanotechnology, SRM Institute of Science and Technology, Kattankulathur, India, 28 – 30 January 2019.
23. Biny R. Wiston and M. Ashok, *Electrochemical activity of nickel-iron layered double hydroxide synthesized via different synthesis strategies*, 63rd DAE Solid State Physics Symposium, 18th – 22nd December, Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India, 18-22 December 2018.
24. Praveena Prabhakaran and M. Ashok, *Synthesis of carbon dots/layered double hydroxide composites for non-enzymatic electrochemical sensing of hydrogen peroxide*, 63rd DAE Solid State Physics Symposium, 18th – 22nd December, Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India, 18-22 December 2018.
25. M. Ashok, S. Shanmuga Deepika, P. Sowndharya, Muthukumar Krishnan, *Cotton Candy Driven Chitosan and Gelatin Coated Poly(Styrene-Co-Acrylonitrile) Microfibres for Wound Dressing*, National Workshop on Advanced materials and Applications (NWAMA-2018), Siksha ‘O’ Anusandhan (Deemed to be University), Bhubaneswar, 1-2 December, 2018.
26. Praveena Prabhakaran, M. Ashok, *Synthesis and characterization of carbon dot/layered double hydroxide hybrid structure for visible light degradation of organic water pollutants*, National Workshop on Advanced materials and Applications (NWAMA-2018), Siksha ‘O’ Anusandhan (Deemed to be University), Bhubaneswar, 1-2 December, 2018.
27. V. P. Nikhil, Biny R. Wiston, Ashok Mahalingam, *Flaw detection and monitoring over corroded surface through ultrasonic-scan imaging*, National Workshop on Advanced materials and Applications (NWAMA-2018), Siksha ‘O’ Anusandhan (Deemed to be University), Bhubaneswar, 1-2 December, 2018.

28. Dhivyaprasath Kasinathan, Ashok Mahalingam, *Pre-synthesized WO₃ as hole transport material for inverted structure perovskitesolar cell*, National Workshop on Advanced materials and Applications (NWAMA-2018), Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, 1-2 December, 2018 (***Won the Best Poster award***).
29. Biny R. Wiston, Ashok Mahalingam, *Supercapacitive performance of hydrothermally prepared cobalt hydroxide*, National Workshop on Advanced materials and Applications (NWAMA-2018), Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, 1-2 December, 2018.
30. K. Vijaya Sankar, Ashok Mahalingam, *Comparative study of Photocatalytic performances of a stable visible light active PbBi₂Nb₂O₉ for various organic pollutants*, National Workshop on Advanced materials and Applications (NWAMA-2018), Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, 1-2 December 2018.
31. Praveena Prabhakaran, Biny R. Wiston, M. Ashok, *Synthesis, Characterization and Electrochemical Capacitance Performance of 2D- Ni/Al Layered Double Hydroxide*, International Conference on Recent Trends in Materials Science and Technologies (ICMST-2018), Indian Institute of Space Science and Technology, Thiruvananthapuram, India, 10-13 October 2018.
32. Biny R. Wiston, Ashok Mahalingam, *Electrochemical performance of hydrothermally synthesized flower-like α -nickel hydroxide*, National Conference on Energy Materials-2018 (NCEM2018), Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, 28 & 29 June 2018.
33. Helen Selvi M, Ashok M, *Synthesis of bulk g-C₃N₄/Bi₂WO₆ nanoplate for photocatalytic reaction and for antimicrobial activity by hydrothermal method*, National Conference on Energy Materials-2018 (NCEM2018), Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, 28 & 29 June 2018.
34. Praveena Prabhakaran, M. Ashok, *Carbon dot decorated layered double hydroxides as photocatalyst for solar light degradation of methylene blue*, National Conference on Energy Materials-2018 (NCEM2018), Department of Physics, Manonmaniam Sundaranar University, Tirunelveli, 28 & 29 June 2018.

35. Biny R. Wiston, Ashok Mahalingam, *Hydrothermally synthesized 2D layered cobalt hydroxide as supercapacitor electrodes*, International Conference on Sustainable Energy Technologies (i-SET-2018), School of Physics and School of Chemistry, Bharathidasan University, Tiruchirappalli, 27 & 28 June 2018 (***Won the Best Poster award***).
36. Mano. G, Harinee. S, Balaharish. V, Ashok. M and A. Viswanathan, *Preparation of visible response ZnO photocatalyst for the application of photocatalytic activity*, International Conference on Sustainable Energy Technologies (i-SET-2018), School of Physics and School of Chemistry, Bharathidasan University, Tiruchirappalli, 27 & 28 June, 2018.
37. Shanthi, P.M.S.L., M. Ashok, *A simple low temperature treatment to grow nano to micro spherical Hap particles using CTAB*, International conference on frontiers in engineering, applied sciences and technology (FEAST'18), National Institute of Technology Tiruchirappalli, 27-28 April 2018.
38. Praveena Prabhakaran, M. Ashok, *Layered double hydroxides as photocatalyst for visible light degradation of methylene blue*, International Conference on Desalination (InDA-2018), Department of Chemical Engineering, National Institute of Technology Tiruchirappalli, 20-21 April 2018.
39. B. Govardhanan, M. Ashok, G. Arthanareeswaran, *Sulfonated graphene/Zinc oxide nano composites with pes polymeric membrane for degradation and separation of dyes and pharmaceutical waste water*, International Conference on Desalination (InDA-2018), Department of Chemical Engineering, National Institute of Technology Tiruchirappalli, 20-21 April 2018.
40. Muthukumar Krishnan, Harinee Subramaniam, Ashok Mahalingam, Arthur James Rathinam, *Eco-friendly pyto-synthesis of silver nanoparticles and its antibacterial and larvicidal activity*, National Conference on Advanced Materials: Processing and Characterization, National Institute of Technology, Tiruchirappalli (NITT), 27 & 28, February 2017.
41. Shanthi, P.M.S.L., M. Ashok and T. Balasubramaniam, *Influence of cationic surfactants over the morphology of nanohydroxyapatite*, National Conference on Advanced Materials: Processing and Characterization, National Institute of Technology, Tiruchirappalli (NITT), 27 & 28, February 2017.

42. G. Raju, Ashok M., *The phased array advantage of ultrasonic scanning of Rocket motor cases of Indian satellite launch vehicles*, NDE Conference & Exhibition of the Indian Society for NDT (ISNT), Chennai, 14-16 December 2017.
43. Angad Acharya, Dr. M. Ashok, Dr. N. Gopalakrishnan, *Study of Defects in Friction Stir Welded Dissimilar Aluminum Sample by Using Ultrasonic C Scan*, National conference on non-destructive evaluation, Hyderabad, December 2015.
44. Aniket Kumar Tiwary, M. Ashok, N. Gopalakrishnan, *Defect Detection and Quantification with Advanced Ultrasonic*, National conference on non-destructive evaluation, Hyderabad, December 2015.
45. Pradeep Vanga Reddy, M. Ashok, Magnetic and optical studies of Fe and Co co-doped ZnO, *International Conference on Advanced Nanomaterials and Emerging Engineering Technologies (ICANMEET)*, Sathyabama University, Chennai, India 24-26 July 2013.
46. Shanthi, P.M.S.L., M. Ashok, T. Balasubramanian, *Synthesis and characterization of porous nanocrystalline biphasic calcium phosphate for bio applications*, 846411-846411-7, NanoScience + Engineering, SPIE, San Diego, California, United States 12-15 2012.
47. M. Sandhyarani, N. Rameshbabu, K. Venkateswarlu, K. V. Ravisankar, M. Ashok, S. Anandan, *Photocatalytic and Antibacterial Activity of Titanium, Fluorine and Silver Co-Substituted Hydroxyapatite*, 268-277, International Conference on Ceramics, Bikaner, India (2012).
48. Shanthi, P.M.S.L., RV Mangalaraja, T. Balasubramaniam, M. Ashok, *The effects of mode of addition and agitation on the morphology of nano Hap*, International Conference of Solid State Science and Technology (ICSSST 2012), Malaysia, 18 –20 December 2012.
49. Pradeep Reddy, Yesu Raja, M.Ashok, *Structural, Thermal, Magnetic and UV-Vis Analysis of Co₂FeO₄ Spinel Oxide Synthesized by Co-Precipitation Process*, 4th International Conference of Solid State Science and Technology (ICSSST2012), Malaysia, 18– 20 December 2012.

50. Shanthi, P.M.S.L., M. Ashok, R.V. Mangalaraja and T. Balasubramanian, Conference on Bioceramics-23, 23rd symposium and Annual Meeting of International Society for Ceramics in Medicine (ISCM), Istanbul-Turkey, 06-09 November 2011.

51. Shanthi, P.M.S.L., R.V. Mangalaraja, T. Balasubramanian and M. Ashok, *Tailoring the morphology of Nano Hydroxyapatite through Co-precipitation method by using mixture surfactants as template. Biomaterials and Implants: Prospects and Possibilities in the New Millennium*, BIO 2011, organized by Bioceramics and coating division, Central Glass and Ceramic Research Institute, Kolkata, 21-23 July 2011.

52. Shanthi, P.M.S.L., M. Ashok, R.V. Mangalaraja, A. Riyasdeen, M.A. Akbarsha and T. Balasubramanian *Synthesis and Characterization of Mesoporous nNano Hydroxyapatite by Surfactant Template Method*, International Conference on Recent Trends in Materials Science and Technology (ICMST-2010), Indian Institute of Space Science and Technology, Thiruvananthapuram, Kerala, 29-31 October 2010.

53. P. Michael S. L. Shanthi, M. Ashok, T. Balasubramanian, A. P. Uthirakumar, *Synthesis and characterization of nano spherical hydroxyapatite for drug delivery and tissue engineering*, 74030K-74030K-8, NanoScience+ Engineering SPIE, San Diego, California, United States, 2-6 August 2009.

54. Shanthi, P.M.S.L., M. Ashok, T. Balasubramanian and A.P. Uthirakumar, *Synthesis and characterization of nano hydroxyapatite using cationic surfactant as template*, Nanobiosystems: Processing, Characterization, and Applications II (Optics+Photonics -2009), Society of Photo-Optical Instrumentation Engineers, San Diego, California, United States, 2-6 August 2009.

55. Shanthi, P.M.S.L., M. Ashok and R.V. Mangalaraja, *Synthesis and characterization of nano Spherical hydroxyapatite for Osseous Tissue Engineering*, International Conference on Tissue Engineering & Stem Cell Research Using Nanomaterials (NANOBIO-2009), Organized by Amrita Centre for Nano Sciences & Amrita Institute of Medical Sciences, Kochi, Kerala, 17-19 February 2009.

56. Shanthi, P.M.S.L., M. Ashok, *Synthesis and characterization of Porous Hydroxyapatite*, International Workshop on Porous Ceramics (POROCER- 2008) organized by Indian Ceramic Society, Bangalore, 8-11 January 2008 (**Won the Best Student Poster award**).

57. Shanthi, P.M.S.L., M. Ashok, T. Balasubramanian, *Synthesis and characterization of Nano spherical Hydroxyapatite by co-precipitation method for Drug delivery*, 53rd DAE Solid State Physics Symposium-2008, BARC, Trombay, India, 16–20 December 2008 (***Won the Best Student Poster award***).
58. Shanthi, P.M.S.L., N. Kavitha, M. Ashok, *Synthesis and Characterization of NanoHydroxyapatite*, International Conference On Materials Science Research And nanotechnology (ICMSRN – 2008), Mother Teresa Women’s University, Kodaikanal, India, 27– 29 February 2008.
59. K. Shamsiya Banu, Shanthi, P.M.S.L., M.Ashok, *Synthesis and Characterization of Zn–Al Layered Double Hydroxide Nanohybrid*, International Conference On Materials Science Research And Nanotechnology (ICMSRN – 2008), Mother Teresa Women’s University, Kodaikanal, India, 27– 29 February 2008.
60. M. Ashok, V.Vijayan, S. N. Kalkura, D.Arivuoli, G.Choudhary and V. Jayanthi, *PIXE analysis and elemental comparison of gallstones in India*, Seminar on Applications of Radioisotopes and Radiation Technology, Institute of Physics, Bhubaneswar, India, 21-22 November 2002.
61. M. Ashok, G. Gokulakrishnan, S. Mathew and V. Jayanthi, *Role of IRS and PIXE in Determining the composition of Gallstone*, 57th APICON Joint Annual Conference, Chennai, 13-17 January 2002.
62. V. Kannan, N.P. Rajesh, M. Ashok, V. Vijayan, P. Santhana Raghavan, P. Ramaswamy, *Elemental analysis on KDP crystals grown from pure and EDTA added solution by using EDXRF*, Proceedings on Applications of radioisotopes and radiation technology (2002).
63. M. Ashok, N. M. Sundram, S. Narayana Kalkura, R. Kesavamoorthy and K.G.M. Nair, *Crystallisation of Hydroxyapatite: An Inorganic bone material at physiological temperature*, Inorganic Materials for new millennium, IIT Chennai, India, 18-19 January 2001.
64. M. Ashok, N. M. Sundram, S. Narayana Kalkura, R. Kesavamoorthy and K.G.M. Nair, *Crystallization of Hydroxyapatite at physiological temperature*, Tissue replacement materials and devices and biodegradable polymers and composites for the millennium ahead, IIT Kharagpur, India, 6-8 December 2000.

Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized

- Demonstration on “Physics Experiments for School Students” (under TEQIP), 19th August 2006, NIT, Tiruchirappalli.
- Demonstration on “Physics Experiments for School Teachers” (under TEQIP), 17th December 2006, NIT, Tiruchirappalli.
- “Gateway to GATE 2008- Workshop for Aspirants” (under TEQIP), 10th March 2007, NIT, Tiruchirappalli.
- “Career Building Skill Workshop wards of staff and faculty of our institute”, 29th & 30th May 2009, NIT, Tiruchirappalli.
- “National Symposium on Applied Physics 2009”, 26th March 2009, NITT.
- “Motivational Programme for Success” for the Residential Student Councilors 21th November, 2009, NIT, Tiruchirappalli.
- National Seminar on “Non-destructive Evaluation” (organized by ISNT, Trichy), 10th -12th, December 2009, NIT, Tiruchirappalli.
- “Motivational Programme for Success”, 17th April 2010, NIT, Tiruchirappalli.
- “Quality” - National Symposium on NDT 2011, March 2011, NIT, Tiruchirappalli.
- “Industrial Workshop on Advance in Non-destructive Evaluation” (Organized under TEQIP), 3rd - 4th October 2013, NIT, Tiruchirappalli.
- “Optical and ultrasonic methods in NDE” (Organized under TEQIP), 16th -20th October 2013, NIT, Tiruchirappalli.
- “Elemental, Compound and Phase Analysis by powder X-ray Diffraction”, 19th -20th Sept. 2014, NIT, Tiruchirappalli.
- “Waves and Oscillation in Science & Technology”, 7th & 8th October 2014, NIT, Tiruchirappalli.
- “Certificate course on NDE Techniques”, 1st -5th June 2015, NIT, Tiruchirappalli.
- “Future Non-Destructive Technological methods”, 15th & 16th Sept. 2016, NIT, Tiruchirappalli.
- International Conference on Novel engineering materials for Biomedical, Energy, Environmental Sensing, and other application (ICON-BEES 2021), March 11 to 13, 2021

Participation in Workshops/ Conferences/ Seminars/ Schools etc.

- National Seminar on Non-destructive Evaluation, 7-9, December 2006, ISNT, Hyderabad.
- Workshop on MEMS and Smart Structures, ISSS, 11-16 December 2006, IISc, Bangalore.
- 5th International Conference on Trends in Industrial Measurements and Automation (TIMA), 4-6, January 2007, NIT, Tiruchirappalli.
- Laser Materials Processing, 9-10, January 2007, NIT, Tiruchirappalli
- International Conference on Nanomaterials and its application, 4-6, February 2007, NIT, Tiruchirappalli.
- International Conference on Materials Science Research And Nanotechnology (ICMSRN), 27– 29 February 2008, Mother Teresa University, Kodaikanal.
- Empower Yourself, Break thru, 3-5 November 2007, Chennai.
- Induction Program on Instructional Design and Delivery, 7-12 July 2008, NITTR, Chennai.
- Ultrasonic Testing, ASNT Level 2, 27 Jan - 5 Feb 2009, MSME, Chennai
- Workshop on LabVIEW Hands on Training, 15 - 19 June 2009, Sri Ramakrishna Engineering College, Coimbatore.
- Science Academics Lecture Workshop on Spectroscopy, 3-4 Dec. 2010, NIT, Tiruchirappalli.
- National Seminar on Non-destructive Evaluation, 7-10 Dec. 2011, Chennai Trade Center, Chennai.
- Short term course on Engineering Materials and Manufacturing Method, 25-30 June 2012, NIT, Tiruchirappalli.
- Workshop on super conductive materials and their fabrication, 17 March 2014, NIT, Tiruchirappalli.
- National Seminar on Non-destructive Evaluation, 4-6 Dec. 2014, ISNT, Pune.
- Conclave on Academic Reforms, 28-29 April 2015, NIT, Tiruchirappalli.

OTHER CONTRIBUTIONS

- ASNT Level II in Ultrasonic Testing
- Added many experimental setup for M. Tech. (NDT) and B. Tech. (Immersion C-Scan, Phased Array Ultrasonic System, Eddy Current System and B. Tech. Optical Fibre based experiments)
- Founder of New Generation Materials Lab and Advanced NDE Lab

- Guided French student under ISAE, ENSMA, under Research Laboratory Internship in 10-06-2013 to 06-09-2013
- Guided French student under ISAE, ENSMA, under Research Laboratory Internship in 1-06-2016 to 20-08-2016
- Life Member, Indian Society for Non-Destructive Testing, LM8441, 2009
- Mentor, two National Post-Doctoral Fellows (N-PDF), SERB, India
 - Dr. K. Sangeetha (2017-19)
 - Dr. K. Muthukumar (2017-19)
- Mentor, DST-INSPIRE Fellow (Biny R. Wiston, IF170069, SRF), ‘Design and development of transition metal hydroxides for energy storage application’ (2017-2022)
- Mentor for SERB-TARE fellow (Dr. Sivakamavalli Jeyachandran), ‘Development of Quorum Sensing Inhibitors and Biocompatible Nanomaterials from Marine Microorganisms’ (2022-)

ACADEMIC FOREIGN VISITS

- **South Korea**, 26th Nov. 2007 - 25th Dec. 2007, Semiconductor Material Science and its Related Process, Research Center for Advance Materials development, Chonbuk National University, with Prof. Cheul Ro Lee, under TEQIP faculty training programme.
- **Turkey**, 6th – 9th Nov., 2011, BIOCERAMICS 23, Symposium in Istanbul, Turkey, under PDA.
- **Malaysia**, 17th – 21th Dec., 2012, 4th International Conference of Solid State Science and Technology, ICSSST2012 at Holiday Inn Malacca, Malaysia, under PDA.
- **Singapore**, June 26th - July 1st, 2016, International Conference on Material Engineering and Smart Materials, under PDA.