

Ranabrata Mazumder

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Education :

2008 PhD, Engineering, Jadavpur University, Kolkata, India and CSIR-Central Glass and Ceramic Research Institute, Kolkata, India

PhD thesis title "Studies on Dielectric and Piezoelectric Properties of Modified PZT and Some Lead Free Oxides"

2001 Bsc(Tech) in Ceramic Engineering, College of Ceramic Technology, University of Calcutta, India

Present Position:

2007-Jun 2009 Assistant Professor in Department of Ceramic Engineering, National Institute of Technology, Rourkela, India

July 2009 -continuing-till date Associate Professor of Ceramic Engineering, National Institute of Technology, Rourkela, India

• Courses taught in National Institute of Technology :

- i) Ceramics in Electronic Applications (CR-339) (Spring semester)
- ii) Materials Thermodynamics (CR-203) (Autumn semester)
- iii) Advanced Ceramics (CR-411)(Autumn semester)
- iv) Science of Ceramic Materials (CR-230) (Spring semester)
- v) Heat Transfer and Fluid Flow (CR- 333) (Autumn semester)
- vi) Ceramics in Energy Sector (CR-662) (Spring semester)

Ongoing/Completed Research Project:

Projects implementing as Principal Investigator:

Project Title : "Fundamental and technological aspects of transition element doped (Ba,Ca)(Zr,Ti)O₃ (BCZT) based semiconducting ferroelectrics for novel photo-ferro/piezocatalytic application"

Duration : April 2022–March 2025

Sponsored by : UGC-DAE-CSR

Project Value : Rs. 12 Lakh

Project Title : " Fabrication and characterization of $\text{Li}_2\text{TiO}_3\text{-Li}_4\text{SiO}_4$ pebbles with optimized strength and porosity by novel freeze granulation technique "

Duration : April 2018–March 2022

Sponsored by : BRNS

Project Value : Rs. 39 Lakh

Project Title : Development of Li-Ceramics pebbles for Test Blanket Module

Duration : Jun 2009–August 2012

Sponsored by : Board of Research on Fusion Science and Technology (BRFST)

Project Value : Rs. 72 Lakh

Project Title: Studies on Dielectric and Piezoelectric Properties of Sonochemically Synthesized Multiferroic material

Duration : Jun 2008–May 2011

Sponsored by : National Institute of Technology, Rourkela

Project Value : Rs. 10 Lakh

Project Title : Development of Lithium Silicate Ceramic Pebbles by microwave sintering for the Test Blanket Module (TBM)

Duration : 2011-2015

Sponsored by : Board of Research on Fusion Science and Technology (BRFST)

Project Value : Rs. 52 Lakh

Projects implemented as Co-Principal Investigator:

Project Title : Fabrication of Li_4SiO_4 Pebbles with Optimized Strength and Porosity by Extrusion-spherodization Technique

Duration : August 2016- Jan 2018

Sponsored by : PFRC, BRNS

Project Value : Rs. 12 Lakh

Project Title : Sr-M hexagonal ferrite for high frequency inductor application

Duration : 2014-2017

Sponsored by : DST, SERB

Project Value : Rs. 41 Lakh

Project Title : Synthesis and characterization of lead free functional materials by microwave processing technique

Duration : 2009-2012

Sponsored by : DST-USA

Project Value : Rs. 10 Lakh

Projects implemented as Team Member:

Project Title : Development of Multilayer Piezoelectric Actuators

Duration : Jun 2001–May 2004 (In Central Glass and Ceramic Research Institute)

Sponsored by : NPSM
Project Value : Rs. 43 Lakh

Project Title : Networked programme on Nanostructured inorganic materials for electronic and magnetic applications

Duration : 2002–2007 (In Central Glass and Ceramic Research Institute)

Sponsored by : Part of Network Project of Council of Scientific & Industrial Research (CSIR)

Thesis Supervised/ Under progress:

B.Tech. 28 completed, 4 in progress,

M.Tech. 14 completed, 2 in progress

M.Tech(R) 4 completed

PhD 4 completed, 4 in progress

Mentored one student under Institute Summer Intern Scholarship (Ms. Archana Behera from NIT, Raipur, India) during May-July.2010.

Research Interest :

Nanomaterial synthesis and characterization, Lead free piezoelectric/ferroelectric bulk ceramic and multilayer devices, Ferroelectric Materials for Photovoltaic and photocatalytic application, Magnetolectric composite, Multiferroic materials, Giant dielectric material, Li-based ceramics for TBM application.

Membership of Professional Bodies

- (a) Member of IEEE, USA (Membership no.90547720)
- (b) Ultrasonics, Ferroelectrics, and Frequency Control (UFFC) Society
- (c) Life member of The Indian Ceramic Society (Membership no.EL493)
- (d) Life member of Materials Research Society, India (Membership no.LMB1058)
- (e) Life member of Indian Science Congress Association (Membership no.L17703)
- (f) Member of The American Ceramic Society (ACerS), (Membership no.1145697)

Honours & Awards:

- i) Got **R.L. Thakur Memorial Award (Young Scientist) of Indian Ceramic Society for the year 2011**
- ii) Got Second best poster award in XIII National Seminar on Ferroelectrics and Dielectrics
- iii) Got CSIR JRF (GATE) and SRF Fellowship to continue PhD program (2002-2007)

Peer-Review Activities:

Article reviewing for:

Materials Science & Engineering B
Journal of American Ceramic Society
Journal of Materials Science:Materials in Electronics
Bulletin of Materials Science
Indian Journal of Physics
Journal of Applied Physics
Ceramics International
Transaction of Indian Ceramic Society
Advanced Powder Technology
Fusion Engineering Design
Journal of Nuclear Materials
Journal of Alloys and Compounds
Materials Research Bulletin
Journal of Materials Cycles and Waste Management
RSC Advances
Energy and Fuels

Student Welfare Activity:

Dr. Mazumder has become Vice President of Games and Sports Society of Student Activity Centre (SAC) of NIT, Rourkela for consecutive three year. He conducted many student events in the institute like Annual athletics meet, Inter hall sports tournament and Inter NIT Sports Meet. In Inter NIT Sports Meet more than three hundred student from different NIT participated.

Organized Conferences/ Workshop

1. As a Convener Organized BRFST Topical Meeting Series, “Workshop on Development of Lithium based Ceramics for Tritium Breeding (LCTB-2011)”, 10-11th June’2011, NIT Rourkela
2. Indo-US Workshop on Functional Materials Processing & Characterizations (3rd– 6th January, 2012)

Publications:

International Journals with Science Citation Index (SCI)

1. S. Abhinay and R. Mazumder “A Novel $0.9\text{KNbO}_3-0.1\text{BaNi}_{0.5}\text{Nb}_{0.5}\text{O}_3(\text{KBNNNO})\text{:Ag}_2\text{O/Bi}_2\text{O}_3$ heterojunction photocatalyst: Synthesis,

characterization and excellent photocatalytic performance” **J.Mat.Sci.: Mat. Electronics** **32**, 17061–17077 (2021)

2. S. Abhinay and R. Mazumder “Synthesis and characterization of visible light absorbing nanosized $(1-x)\text{KNbO}_3-x(\text{BaNi}_{\frac{1}{2}}\text{Nb}_{\frac{1}{2}}\text{O}_{3-\delta})$ ($x = 0, 0.05, 0.1, 0.15$ and 0.2) by solution combustion method and its enhanced photocatalytic activity” **Bulletin of Materials Science**, **44** (2021) 145
1. S. Abhinay and Ranabrata Mazumder “Synthesis of ferroelectric $0.9\text{KNbO}_3-0.1\text{Ba}(\text{Nb}_{1/2}\text{Ni}_{1/2})\text{O}_{3-\delta}$ through one step hydrothermal reaction: Characterization and photocatalytic properties”, **Journal of Solid State Chemistry**, **289** (2020) 121362
2. S. Abhinay, Pragya Dixit, and Ranabrata Mazumder “Effect of pore former sucrose on microstructure and electrical properties of porous BZT-0.5BCT ceramics”, **Ferroelectrics**, **557** (2020), pp.18-27,
3. S. Abhinay, P. Tarai, R. Mazumder “Preparation and characterization of $(\text{Ba}_{0.85}\text{Ca}_{0.15})(\text{Zr}_{0.1}\text{Ti}_{0.9})\text{TiO}_3(\text{BCZT})/\text{Bi}_2\text{O}_3$ composites as efficient visible light responsive photocatalysts” **Journal of Materials Science** **55** (2020) 1904–1914
4. G Jaya Rao, R Mazumder, S Bhattacharyya, P Chaudhuri, “Fabrication of $\text{Li}_4\text{SiO}_4\text{-Li}_2\text{ZrO}_3$ composite pebbles using extrusion and spherodization technique with improved crush load and moisture stability” **Journal of Nuclear Materials** **514** (2019) 321-333
5. G Jaya Rao, R Mazumder, D. Dixit, C. Ghoroi, S Bhattacharyya, P Chaudhuri, “Fabrication and characterization of Li_4SiO_4 pebbles by extrusion- spherodization technique: Effects of three different binders”, **Ceramics International** **45** (2019) 4022–4034
6. G Jaya Rao, R Mazumder, S Bhattacharyya, P Chaudhuri, “Fabrication and characterization of $\text{Li}_4\text{SiO}_4\text{-Li}_2\text{TiO}_3$ composite ceramic pebbles using extrusion and spherodization technique” **J. Eur. Ceram. Soc.** **38** (2018) 5174–5183
7. G Jaya Rao, R Mazumder, S Bhattacharyya, P Chaudhuri, “Synthesis, CO_2 absorption property and densification of Li_4SiO_4 powder by glycine-nitrate solution combustion method and its comparison with solid state method” **J. Alloys and Compds.** **725**, 461-471, (2017)
8. R Vinaykumar, R Mazumder, J Bera, Characterization of $\text{SrCo}_{1.5}\text{Ti}_{1.5}\text{Fe}_9\text{O}_{19}$ hexagonal ferrite synthesized by sol-gel combustion and solid state route, **Journal of Magnetism and Magnetic Materials** **429**, 359-366, (2017)

9. S. Abhinay, S. Bhukania, R.Mazumder “Microstructure and Electrical Properties of Porous BZT-0.5BCT ceramics: Effect of pore formers (PVA and PVP)”, **Ferroelectrics**, 517 (1), 14-24, (2017)
10. N. Singh, R. Mazumder, P. Gupta, D. Kumar “Polymer-assisted co-precipitation route for the synthesis of Al₂O₃–13% TiO₂ nanocomposite”, **Bull. Mater. Sci.** 40, 527–535, (2017).
11. A.Sreeram, R.Mazumder, A.Seal, A.Sen “Tape Casting and Electrical Characterization of 0.5Ba(Zr_{0.2}Ti_{0.8})O₃-0.5(Ba_{0.7}Ca_{0.3})TiO₃ (BZT-0.5BCT) Piezoelectric Substrate” **J. Eur. Ceram. Soc.** 36, 3125–3137, (2016)
12. P. Adhikari, R. Mazumder, A.Sreeram “Electrical and Mechanical Properties of nano-MgO added 0.5Ba(Zr_{0.2}Ti_{0.8})O₃-0.5(Ba_{0.7}Ca_{0.3})TiO₃ (BZT-0.5BCT) Composite Ceramics” **J.Electroceramics**. 37:127–136, (2016)
13. V.Singh, G.Jayarao, R.Mazumder “Phase Evolution and Stability of Aluminum Titanate Prepared by Solid-State Route: Effect of Two Different Particle Size of Al₂O₃” **Transaction of Indian Ceramic Society**, 75, 170-174, (2016)
14. P. Adhikari, R. Mazumder, G.K. Sahoo “Electrical and Mechanical Properties of 0.5Ba(Zr_{0.2}Ti_{0.8})O₃–0.5(Ba_{0.7}Ca_{0.3})TiO₃ (BZT–BCT) Lead Free Ferroelectric Ceramics Reinforced with Nanosized Al₂O₃” **Ferroelectrics**, 490: (2016), 60–69
15. G.Sahoo, R.Mazumder, “Low temperature synthesis of Ba(Zr_{0.2}Ti_{0.8})O₃-0.5(Ba_{0.7}Ca_{0.3})TiO₃nanopowders by solution based autocombustion method” **J.Mat.Sci.: Mat. Electronics**. 25 (2014) 3515–3519
16. C. R. Gautam, A. Madheshiya, R. Mazumder “Preparation, crystallization, microstructure and dielectric properties of lead bismuth titanate borosilicate glass ceramics” **J. Advanced Ceramics** 3(3): (2014), 194–206
17. G.Sahoo, R.Mazumder “Dielectric and Piezoelectric Properties of Lead Free (1-x) [(Bi_{0.5}Na_{0.5})TiO₃]- x[Ba(Zr_{0.2}Ti_{0.8})O₃-(Ba_{0.7}Ca_{0.3})TiO₃] Ceramics” **Ferroelectrics** **458**, (2014), 13–24
18. A.Choudhary, R.Mazumder, S.Bhattacharyya, P.Chaudhuri “Synthesis and Characterization of Li₄SiO₄Ceramics from rice husk ash by solution combustion method” **Fusion Science and Technology**, **65** (2014) 273-281
19. B.S. Sahu, P.Adhikari, J.Gorinta, A.Choudhary, R.Mazumder, S.Bhattacharyya, P.Chaudhuri “Fabrication and Characterization of Li₂TiO₃ Pebbles by Extrusion and Spherodization Technique for Test Blanket Module in Fusion Reactor” **Fusion Science and Technology**, **65** (2014) 338-345

20. A.Choudhary, B.S.Sahu, R.Mazumder, S.Bhattacharyya, P.Chaudhuri “Synthesis and sintering of Li_4SiO_4 powder from rice husk ash by solution combustion method and its comparison with solid state method” **Journal of Alloys And Compounds**, **590** (2014) **440–445**
21. J.Gorinta, A. Choudhary, S. Bhattacharyya, P.Chaudhuri, R. Mazumder “Synthesis of Lithium Orthosilicate by Solution Combustion Technique and Its Microwave Sintering” **Transaction of Indian Ceramic Society**, **71**: 198-203, 2012
22. G. Sahoo, R.Mazumder “Grain size effect on the Dielectric Properties of Molten Salt Synthesized BaTiO_3 ” **Ferroelectrics** **402**:193–199, 2010
23. R.Mazumder, A.Sen “Coexistence of Strong Frequency Dispersion of Dielectric Constant and Temperature-Invariant Curie Peaks in Doped Ferroelectric Ceramics” **Japanese Journal of Applied Physics** **48** (2009) **121401**
24. R. Mazumder, A. Sen “Effect of Pb-doping on dielectric properties of BiFeO_3 ceramics”
 - a. **Journal of Alloys and Compounds** **475** (2009) **577–580**
25. R.Mazumder, D.Chakravarty, D.Bhattacharya, A.Sen “Spark Plasma Sintering of BiFeO_3 ” **Material Research Bulletin** **44**[3] **555-559** (2009)
26. R.Mazumder, A.Sen “ ‘Ultra’-Low-temperature sintering of PZT: A synergy of nano-powder synthesis and addition of a sintering aid” **Journal of European Ceramic Society** **28**[14] **2731–2737**(2008)
27. R.Mazumder, P.S.Devi, D.Bhattacharya, P.Choudhury, A.Sen and M.Raja
 - a. “Ferromagnetism in nanoscale BiFeO_3 ” **Applied Physics Letters** **91**, **062510** (2007)
28. A.Seal, S.Das, R.Mazumder and A.Sen “Low frequency dispersion in low temperature fast-fired PZT” **Journal of Physics D: Applied Physics** **40**, **7560** (2007)
29. N.Das, R. Mazumder, A. Sen and H. S. Maiti “Nanosized bismuth ferrite powder prepared through sonochemical and microemulsion techniques” **Materials Letters**, **61**[10] **2100-2104** (2007)
30. R. Mazumder, S.Ghosh, P.Mondal, D.Bhattacharyya, S.Dasgupta, N.Das, A. Sen, A.K.Tyagi, M.Sivakumar, T.Takami, and H.Ikuta. “Particle size dependence of magnetization and phase transition near T_N in multiferroic BiFeO_3 ” **Journal of Applied Physics** **100**, **033908** (2006)
31. A. Seal, R. Mazumder, A. Sen and H. S. Maiti “Fast Firing of Lead Zirconate Titanate ceramics at Low Temperature”, **Materials Chemistry and Physics** **97**[1], **14-18** (2006)

32. R. Mazumder, A. Seal, A. Sen, H.S. Maiti “Effect of Boron Addition on the Dielectric Properties of Giant Dielectric $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ ” **Ferroelectrics, Publisher Taylor & Francis, 326, 103-108, 2005,**
33. R. Mazumder, A. Sen, H.S. Maiti “Impedance and Piezoelectric Constants of Phosphorous incorporated $\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3$ Ceramics” **Materials Letters. 58 3201-3205(2004)**
34. R. Mazumder, A. Sen, H.S. Maiti “Diffuse Phase Transition of Copper Doped Barium Titanate” **Transaction of Indian Ceramic Society, 63(3) (2004) 159-162**
35. S.Ghosh, R.Mazumder, et.al. “Microstructure of refractory castables prepared with sol-gel additives” **Ceramics International 29, 671-677(2003)**
36. S.Mukhopadhyay, S.Ghosh, M.K.Mahapatra, R.Mazumder et.al. “Easy –to-use mullite and spinel sols as bonding agents in a high-alumina based ultra low cement castable” **Ceramics International 28, 719-729 (2002)**

Patents Filed/Granted:

1. “A process for the preparation of low temperature sinterable nanosized PZT powder” by Ranabrata Mazumder, Amarnath sen (Indian Patent)
Patent filed in India, Patent No. 292979, Date of Sealing 16.02.2018.
2. “A method of manufacturing dense and warpage free lead zirconate titanate wafers” by Anshuman Seal, Nandini Das, Ranabrata Mazumder, and Amarnath Sen (Indian Patent) 672/DEL/06

Papers under review/preparation:

1. “Spark Plasma Sintering of $0.9[\text{KNbO}_3] - 0.1 [\text{BaNi}_{1/2}\text{Nb}_{1/2}\text{O}_3]$ ” D. K. Patro, R. Mazumder, S. Chakraborty, G.K. Sahoo, A.Sreeram
2. “Low temperature synthesis of BZT-BCT nanoparticle by Molten Salt Synthesis methods and its optical properties” A.Sreeram, G. Sahoo, R.Mazumder

Publication in Proceedings (National Conference)

1. Bhabani Sankar Sahu, S. Bhattacharyya, P.Chaudhuri, R.Mazumder “Thermal and Electrical Characterization of Lithium Titanate Ceramics (Tritium Breeder in Fusion Reactor) synthesized

by autocombustion technique” Proceedings of the 2nd International Conference on Advances in Nuclear Materials (ANM-2011) February 9-11, 2011

2. Bhabani Sankar Sahu, S. Bhattacharyya, P. Chaudhuri, R. Mazumder “Synthesis and sintering of nanosize Li_2TiO_3 ceramic breeder powder prepared by autocombustion technique”, Proceedings of the 20th Annual Conference of Indian Nuclear Society, January 4-6, 2010 pp 282-287

3. R. Mazumder, A. Seal, A. Sen “Low Temperature Sintering of PZT Nanoparticles using LiBiO_2 as a Sintering aid” Proceedings of National Seminar on Advances in Electroceramics, May 5-6, 2006, ARDE, Pune. Page 272-276, Allied Publisher PVT. LTD.

4. A. Sen, A. Seal, N. Das, R. Mazumder and H. S. Maiti, “Technological Challenges of Making PZT Based Piezoelectric Wafers”, Proceedings of ISSS 2005 International Conference on Smart Materials Structures and Systems, July 28 – 30, 2005, Bangalore, India.

5. R. Mazumder, A. Seal, A. Sen and H. S. Maiti “A mixture of $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ and B_2O_3 as a sintering aid for low temperature densification of PZT” Proceedings of XIII National Seminar on Ferroelectrics and Dielectrics, November 23- 25, 2004, Delhi University, Delhi. Page 19-22, Allied Publisher PVT. LTD.

Papers presented in conferences/Workshop:

Leadfree Ferroelectrics for Multifunctional Application Conventional application to catalysis

International Conference/ Workshop :

1. Monika Singh, S. Abhinay, P. S. Mondal, P. Saha, R. Mazumder, “Ferroelectric ($\text{Ba}_{0.85}\text{Ca}_{0.15}\text{Zr}_{0.1}\text{Ti}_{0.9}$) O_3 (BCZT)- Ag_2O nanofiber composite prepared by electrospinning technique for novel visible-light-driven photocatalysis” International Conference on Global Trends in Traditional to Space Ceramics (GT-TSC’22) and 86th Annual Session of InCerS, IIT BHU, December 8-9, 2022
2. R. Mazumder, “Leadfree ferroelectrics for multifunctional applications” International Symposium on Advances in Piezoelectrics (ISAP-2022), C-MET Thrissur, July 14-15, 2022 (**Invited Lecture**)
3. S. Abhinay, R. Mazumder, “A Novel visible light driven photocatalyst 0.9KNbO_3 - $0.1\text{BaNiNbO}_3/\text{Ag}_2\text{O}$ nanocomposites with enhanced photocatalytic performance” IEEE International Symposium on Applications of Ferroelectrics (ISAF), $f^2c\pi^2$, EPFL Lausanne, Switzerland July 14 - 19, 2019
4. S. Abhinay, P. Tarai, R. Mazumder “Preparation of BZT-BCT/ Bi_2O_3 nanocomposites as efficient visible light responsive photocatalysts” 2019 ISAF-ICE-EMF-IWPM-PFM Joint Conference - $f^2c\pi^2$, EPFL Lausanne, Switzerland July 14 - 19, 2019

5. S.Abhinay, P.Dixit, R. Mazumder “Microstructure and Electrical Properties of Porous BZT-0.5BCT ceramics: Effect of pore formers (PVA and Sucrose)” 2019 ISAF-ICE-EMF-IWPM-PFM Joint Conference - $f^2c\pi^2$, EPFL Lausanne, Switzerland July 14 - 19, 2019
6. Subhra Sourav Jana, Sumit Kumar Choudhary, S.Abhinay, R. Mazumder “Effect of Calcination and Sintering Temperature on Dielectric Properties of Giant Dielectric $Ti_{0.9}(Al_{0.5}Nb_{0.5})_{0.1}O_2$ Ceramics” MS&T18 – October 14-18, 2018 – Columbus, Ohio, USA
7. Pragma Dixit, R. Mazumder “Fabrication and characterization of PVDF/ $Ba_{0.85}Ca_{0.15}Zr_{0.1}Ti_{0.9}O_3$ (BCZT) composite film: Effect of two different method prepared BCZT powder” MS&T18 – October 14-18, 2018 – Columbus, Ohio, USA
8. S.Abhinay, R. Mazumder “Solution combustion synthesis of nanosized ferroelectric $(1-x)KNbO_3-x(BaNb_{1/2}Ni_{1/2}O_{3-\delta})$: characterization, mechanism and photocatalytic properties” MS&T18 – October 14-18, 2018 – Columbus, Ohio, USA
9. Sumit Kumar Choudhary, S.Abhinay, R. Mazumder, “Effect of calcination and sintering temperature on dielectric properties of giant dielectric $Ti_{0.9}(In_{0.5}Nb_{0.5})_{0.1}O_2$ ceramics”, International Conference On Expanding Horizons of Technological Applications Of Ceramics And Glasses (EH-TACAG 17) and Annual Session of Indian Ceramic Society, Dec 14-16, 2017 at College of Engineering Pune, Pune.
10. Pragma Dixit, Swetapadma Mahapatra, R. Mazumder, “Fabrication and Characterization of PVDF-PZT (Navy type-VI) composite”, International Conference On Expanding Horizons Of Technological Applications of Ceramics And Glasses (EH-TACAG 17) and Annual Session of Indian Ceramic Society, Dec 14-16, 2017 at College of Engineering Pune, Pune.
11. P. Adhikari, R.Mazumder, S. Abhinay “Electrical and Mechanical Properties of $0.5Ba(Zr_{0.2}Ti_{0.8})O_3-0.5(Ba_{0.7}Ca_{0.3})TiO_3$ (BZT–0.5BCT) composite Ceramics Reinforced by Small Amount of Nano-oxides”, International Conference on Technologically Advanced Materials (ICTAM) and Asian Meeting on Ferroelectricity (AMF10)" November 7-11, 2016 at University of Delhi, New Delhi.
12. S. Abhinay, R. Mazumder, “Phase Evolution, Densification and Electrical Properties of $0.9[KNbO_3]-0.1[BaNi_{1/2}Nb_{1/2}O_{3-\delta}]$ Semiconducting Ferroelectric Ceramics Prepared By Conventional Sintering and Microwave Sintering”, International Conference on Technologically Advanced Materials (ICTAM) and Asian Meeting on Ferroelectricity (AMF10)" November 7-11, 2016 at University of Delhi, New Delhi.
13. S. Abhinay, S. Bhukania, R.Mazumder, “Microstructure and Electrical Properties of Porous BZT-0.5BCT ceramics: Effect of pore formers (PVA and PVP)”, International Conference on Technologically Advanced Materials (ICTAM) and Asian Meeting on Ferroelectricity (AMF10)" November 7-11, 2016 at University of Delhi, New Delhi.
14. G.Jayarao, R.Mazumder, P.Chaudhuri, “Phase Evolution, Densification and Strength of $Li_4SiO_4 - Li_2TiO_3$ Composite Ceramic Prepared by Solid-State Synthesis Method”,

International Conference on Ceramic & Advanced Materials for Energy and Environment (CAMEE-2015) and 79th Annual Session of Indian Ceramic Society, December 14-17, 2015, Bengaluru, India

15. P. Adhikari, A.Sreeram, R.Mazumder “Dielectric and Mechanical Properties of nano-MgO added $0.5\text{Ba}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_3-0.5(\text{Ba}_{0.7}\text{Ca}_{0.3})\text{TiO}_3$ (BZT–BCT) composite Ceramics” International Conference on Ceramic & Advanced Materials for Energy and Environment (CAMEE-2015) and 79th Annual Session of Indian Ceramic Society, December 14-17, 2015, Bengaluru, India
16. V.Singh, G.Jayarao, R.Mazumder “Phase Evolution and Stability of Aluminum Titanate Prepared by Solid-State Route and Solution Combustion Route” International Conference on Ceramic & Advanced Materials for Energy and Environment (CAMEE-2015) and 79th Annual Session of Indian Ceramic Society, December 14-17, 2015, Bengaluru, India
17. D. K. Patro, R. Mazumder, S. Chakraborty, A.Sreeram, “Phase Evolution, Densification and Dielectric Properties of $0.9[\text{KNbO}_3] -0.1 [\text{BaNi}_{1/2}\text{Nb}_{1/2}\text{O}_3-\delta]$ Semiconducting Ferroelectric Ceramics Prepared By Conventional Sintering and Spark Plasma Sintering” 18th International Workshop on Physics of Semiconductor Devices (IWPSD), December 7-10, 2015, IISc Bangalore
18. A.Sreeram, A.Seal, A.Sen, R. Mazumder “Effect of Two Different Dispersants on Fabrication of BZT-BCT Piezoelectric Wafers by Tape Casting Technique” 1st International Conference on “Alumina and other Functional Ceramics (AOFC-2015)” 11-13 March, 2015, Central Glass and Ceramic Research Institute, Kolkata
19. N. Singh, R. Mazumder, P. Gupta and D. Kumar “Effect of Processing Parameters on the Morphology of $\text{Al}_2\text{O}_3\text{-TiO}_2$ Nanocomposites for High Temperature Applications” 2nd Edition Nanotech Dubai 2015 International Conference, 16-18 Mar 2015 | Dubai - United Arab Emirates
20. P. Adhikari, R. Mazumder, G.K. Sahoo “Electrical and Mechanical Properties of $0.5\text{Ba}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_3-0.5(\text{Ba}_{0.7}\text{Ca}_{0.3})\text{TiO}_3$ (BZT–BCT) Lead Free Ferroelectric Ceramics Reinforced with Nanosized Al_2O_3 ” AMF-AMEC-2014 The Joint Conference of 9th Asian Meeting on Ferroelectrics & 9th Asian Meeting on Electroceramics, Oct. 26-30, 2014, Shanghai, China
21. A.Sreeram, A. Seal, R. Mazumder, A.Sen “Fabrication of BZT-BCT Piezoelectric Wafers by Tape Casting Technique and Their Characterization” AMF-AMEC-2014 The Joint Conference of 9th Asian Meeting on Ferroelectrics & 9th Asian Meeting on Electroceramics, Oct. 26-30, 2014, Shanghai, China
22. G.Sahoo, R.Mazumder, D.Chakraborty “Preparation of dense nanostructured ceramics by spark plasma sintering from molten salt synthesized BaTiO_3 nanoparticle and its dielectric properties” IUMRS-ICA, December 16-20’2013, IISc, Bangalore

23. U. K. Chanda, G. K. Sahoo, R. Mazumder “Effect of Sm doping on dielectric and magnetic properties of microwave sintered BiFeO₃ ceramic” IUMRS-ICA, December 16-20’2013, IISc, Bangalore
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2. Abinash Kumar, Sanjog Kumar Patra, A. Srivastava, P. Chaudhuri, R. Mazumder, "Effect of Different Additives on Fabrication of Li₂TiO₃ Pebbles Formed by Novel Freeze Granulation Technique for Test Blanket Module (TBM)" Third Indian Materials Conclave and 32nd Annual General Meeting of MRSI, December 20-23, 2021 IIT, Madras, (Virtual Mode)
3. Monika Singh, Rituraj Singh, S. Abhinay, R. Mazumder, "Synthesis and Characterization of Ferroelectric (Ba_{0.85}Ca_{0.15}Zr_{0.1}Ti_{0.9})O₃ (BCZT)- Ag₂O Heterojunction Photocatalyst for Excellent Photocatalytic Activity" Third Indian Materials Conclave and 32nd Annual General Meeting of MRSI, December 20-23, 2021 IIT, Madras
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5. P.Lavya, H.Saini, R. Mazumder, A.Srivastava, P.Chaudhuri, "Effect of Dispersant, Binder and Solid Content on Fabrication of Li_2TiO_3 Pebbles by Aqueous Freeze Granulation Technique", National Conference on "Innovations and Technologies for Ceramics (InTeC-2019), 83rd Annual Session of the Indian Ceramic Society, 11-12 December'2019, CSIR-NIIST, Thiruvananthapuram, Kerala
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8. S. Abhinay, R. Mazumder "Structural, electrical and optical properties of Ba, Ni modified KNbO_3 semiconducting ferroelectric ceramics", 29th annual general meeting of materials research society of India (MRSI) and national symposium on "Advances in Functional and Exotic Materials" Feb 14-16, 2018 at SRM hotel, Tiruchirappalli.
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