Faculty Profile

Dr. A. Durairajan, M.Sc., M.Phil., Ph.D
Assistant Professor – Physics

HIGHLIGHTS:

- Number of Journal Publications: 55
- H-Index: 17
- Project Funding Received: Nil
- Patents Published: 01
- Patents Granted: 01

PROFESSIONAL LINKS:

- Scopus ID: 55638108600
- Scopus Link: https://www.scopus.com/authid/detail.uri?authorId=55638108600
- Google Scholar ID:https://scholar.google.com/citations?user=g2ql45EAAAAJ&hl=pt-PT
- Anna University Faculty ID: 310987
- AICTE Faculty ID: 1-44788443574
- Anna University Supervisor ID: Nil
- LinkedIn: https://www.linkedin.com/feed/?midToken=AQFbYMR0lL9kXQ&midSig=2jybYtZahrErE1&trk=eml-email_next_best_action_digest_01-header-0-home_glimmer_dynamic_badging_high_dpi&trkEmail=eml-email_next_best_action_digest_01-header-0-home_glimmer_dynamic_badging_high_dpi-null-1hwgel~m7kkokwk~fu-null-null&eid=1hwgel-m7kkokwk-fu&otpToken=MWIwNTFiZTMxMTI3YzljNWJlMmYwMmVlNDYxYWVlYjc4ZWM2ZDE0MTliYWM4NTZmNzZjMDA4Njk0ZjU5NWFmNWZjYmNhOWI3NTBjMWM0ZDM1ZWVlNmQ0OTEwNjlhZWQ5MmJjMGUwMTVkNjc3NjBmM2NjLDEsMQ%3D%3D

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 10 months
- Industrial Experience: Nil

INTERNATIONAL EXPOSURE:

- Portugal
- Singapore
- Czech Republic

AREA OF SPECIALIZATION:

- High Temperature Crystal Growth
- Optical Materials
- Magnetocaloric.
- Nanoparticles Synthesis for Energy Generation

Ph.Ds AWARDED WITH DETAILS:

S:No	Name of Scholar	Title of Thesis	Year of Completion	Full Time/Part Time
Nil				

Ph.Ds GUIDING:

- **Full Time Scholars: Nil**
- **Part Time Scholars : Nil**

SPONSORED RESEARCH / FUNDING APPLIED / CONSULTANCY:

- Nil

PATENTS PUBLISHED/GRANTED:

- Ramesh Kumar Gubendiran, Bharath Sabarish Villapakkam Chandra Sekaran, **Durairajan Arulmozhi**, Eskilla Venkata Ramana, Manuel Pedro Fernandes Graça, Indranil Bhaumik, GokulRaj Srinivasan, **ENHANCED PIEZOELCTRICITY AND FERROELECTRICITY IN ION IRRADIATED TRIGLYCINE SULPHATE (TGS) CRYSTALS AND METHODS THEREOF**, IPR Patent, IN 202241027136 A, 20-05-2022.
- Thangaraju Dheivasigamani, Santhana Vedi, **Durairajan Arulmozhi**, Manuel Pedro Fernandes Graça, Manuel Almeida Valente, SIZE **CONTROLLED $BiVO_4$ SPHERES WITH A SMOOTH SURFACE**, IPR Patent, PR 20221000002357, 09-06-2022.

COURSES CERTIFIED:

- Nil

ACHIEVEMENTS AND AWARDS:

- Received Prof. V. Devarajan Memorial **Gold Medal** in M.Phil Physics (2009)
- Received **CSIR-SRF Award** in April 2013

- Received **Erasmus Mundus Exchange Research Fellowship** in June 2013
- Received Best Poster at "International Seminar on Glasses and other functional Materials", Acharya Nagarjuna University, Guntur, India
- Received **CSIR- Research Associate Award (RA)** in April 2017

SPECIAL SESSIONS DELIVERED:

- Nil

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

1. João Carvalho, Erdogan L, **Durairajan A**, Venkata Ramana E, Graça MPF and Valente MA, "Magnetocaloric properties in $ErCrO_3$ nanocrystals: dimensional dependence", 26th Soft Magnetic Materials Conference (SMM26- 2023), September 04-07, Prague, Czech Republic.
2. Rosário M, **Durairajan A**, Eskilla VR and Valente MA, "Fabrication and magnetocaloric properties of $GdCrO_3$-based nanocomposites for cryogenic refrigeration", 26th Soft Magnetic Materials Conference (SMM26- 2023), September 04-07, Prague, Czech Republic.
3. João Carvalho, **Durairajan A**, Venkata Ramana E, Graça MPF and Valente MA, "Dimensional dependence of magnetocaloric properties in $ErCrO_3$ nanocrystals", 21st International conference on Advanced Nanomaterials (ANM-2023), July 24-26, University of Aveiro, Portugal.
4. **Durairajan A**, João Carvalho, Venkata Ramana E, Graça MPF and Valente MA, "Magnetic and Magnetocaloric Properties of Combustion Synthesized $PrCrO_3$", 21st International conference on Advanced Nanomaterials (ANM-2023), July 24-26, University of Aveiro, Portugal.
5. Shanmuga Sundari S, Karthik S, **Durairajan A**, Valente MA, Asokan K, Meena RC, 2022, "Impact of Li^+ ion irradiation on structural, optical, electrical and morphological properties of $BaSnO_3$ ceramics", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2022), July 05-08, University of Aveiro, Portugal.
6. Priyadharshini S, Thangaraju D, **Durairajan A**, Valente MA, 2022, "Synthesis and Characterization of pure β-$Bi_2Mo_2O_9$ and Eu-doped β-$Bi_2Mo_2O_9$ for Photocatalytic applications", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2022), July 05-08, University of Aveiro, Portugal.
7. Govarthini SS, Thangaraju D, **Durairajan A**, Graça, MPF, 2022, "Development of 2D MoS_2 nanosheets on Lotus fibres for enhanced Hydrophobicity and Antimicrobial

activity", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2022), July 05-08, University of Aveiro, Portugal.

8. Thangaraju D, **Durairajan A**, Valente MA, 2022, "High temperature wet chemical synthesis of two-dimensional chalcogenide nanosheets for photodetector applications", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2022), July 05-08, University of Aveiro, Portugal.

9. Bagavathy S, Thangaraju D, **Durairajan A**, Valente MA, 2022, "Synthesis, Characterization of Three Distinct Phases of Bismuth Molybdate for Supercapacitor Applications", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2022), July 05-08, University of Aveiro, Portugal.

10. Bharath Sabarish,VC, Ramesh Kumar, G, **Durairajan, A,** Graça, MPF, Valente, MA, and Gokulraj, S 2021, "Influence of Swift Heavy Ag^{7+} ion irradiation on room temperature ferroelectric Triglycine Sulphate single crystal", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2021), July 06-09, University of Aveiro, Portugal.

11. Anandaraj C, **Durairajan, A,** Graça MPF, Valente MA, Gokulraj S and Ramesh Kumar, G, 2021, "Effect of calcination temperature on vibrational and optical absorption properties of $BiFeO_3$ – Graphene and $BiFeO_3$ –MWCNT Nanocomposites", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2021), July 06-09, University of Aveiro, Portugal.

12. Shanmuga Sundari S, Karthika, S, **Durairajan, A,** Graça, MPF, and Valente, MA, 2021, "YAG:Ag nanophosphors – synthesis and characterization", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2021), July 06-09, University of Aveiro, Portugal.

13. Bharath Sabarish VC, Ramesh Kumar, G, **Durairajan, A,** Graça, MPF, Valente, MA, Ramana, EV and Gokulraj, S 2020, "An Investigation on 100 MeV Ni^{7+} Swift Heavy ion Irradiation effect on the Ferroelectric Triglycine Sulphate <011> Oriented Single crystal", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2020), July 07-10, University of Aveiro, Portugal.

14. Bharath Sabarish V.C, Ramesh Kumar G, Gokulraj S, **Durairajan A** 2020, "A Study on the evaluation of Non-Linear Optical Susceptibilities for Cubical Semiconducting Crystals using Semi Classical An harmonic Oscillator Model", 28^{th} National Laser Symposium (NLS-28), January 8-11, Vellore Institute of Technology (VIT), Chennai , India

15. Venkatapathy, R, Gokulraj, S, **Durairajan, A,** and Ramesh Kumar, G 2019, "Exploration on the Effects of Yttrium (Y^{3+}) Ion Doping in $BiFeO_3$ Nanoparticles onits Structural, Optical, Morphological and Multiferroic Properties" International Conference on Nanomaterials Driven Advances in Chemical and Biosensors (NanoSe 2019), November 27 – 29, Department of Bioelectronics & Biosensors, Alagappa University, Karaikudi, India

16. **Durairajan, A,** Ramana, EV, Ramesh Kumar, G, Graça, MPF and Valente, MA 2019, "Growth, structural and magnetic Properties of $NdFeO_3$ Single Crystals", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2019), July 09-12, University of Aveiro, Portugal.

17. Venkatapathy, R, Yathavan, S, **Durairajan, A,** Graça, MPF, Valente, MA, Gokulraj, S and Ramesh Kumar, G 2019, "Modifications On The Crystalline Strain And Size In The Phase Formation Of Multiferroic Bismuth Ferrite Nanoparticles", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2019), July 09-12, University of Aveiro, Portugal.

18. Bharath Sabarish,VC, **Durairajan, A,** Ramesh Kumar, G, Graça, MPF, Valente, MA, Ramana, EV and Gokulraj, S 2019, "Swift Heavy Ion Irradiation effect on Ferroelectric Triglycine Sulphate (TGS) Single Crystals", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2019), July 09-12, University of Aveiro, Portugal.

19. **Durairajan, A,** Ramana, EV, Valente, MA and M. P. F. Graça 2018, "Exploring Temperature Dependent Raman and Magnetization in $ErFeO_3$ Single Crystal", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2018), July 16-18, University of Aveiro, Portugal.

20. Bharath, VC, **Durairajan, A,** Ramana, EV, Valente, MA, I. Bidkin and Ramesh Kumar, G 2018, "Effect on Gamma Irradiation in Structural, Vibrational and Ferroelectric Properties of TGS single crystals", International Conference on Nanomaterials Science and Mechanical Engineering (ICNMSME-2018), July 16-18, University of Aveiro, Portugal.

21. **Durairajan, A,** Balaji, D, Kavi Rasu, K, Valente, MA &Moorthy Babu, S 2015, 'Sol-Gel Synthesis, Structural, Vibrational and Colour Tuning Properties of the Eu^{3+}/Tb^{3+}:$NaGd(WO_4)_2$ Phosphors', International Conference on Luminescence and its Applications (ICLA 2015), February 09-12, PES Institute of Technology, Bangalore, India.

22. **Durairajan, A,** Balaji, D, Kavi Rasu, K, Valente, MA & Moorthy Babu, S 2015, 'Structural, Photoluminescence and Magnetic Characterization on Sol-gel Derived $NaPr(WO_4)_2$ Sub-micron Powder', Twenty Fifth National Seminar On Crystal Growth And Epitaxy -(XXV-NSCGE), February 06-07, Crystal Growth Centre, Anna University, Chennai, India.

23. **Durairajan, A,** Balaji, D, Kavi Rasu, K, Valente, MA & Moorthy Babu, S 2015, 'Sol-gel Synthesis and Magnetic Studies on $NaFe(WO_4)_2$ Sub-micron Rods', International Symposium on Semiconductor Materials And Devices (ISSMD-3), February 02-05, Crystal Growth Centre, Anna University, Chennai, India.

24. **Durairajan, A,** Balaji, D, Kavi Rasu, K, Valente, MA & Moorthy Babu, S 2014, 'Sol-gel Synthesis, Structural, Vibrational and Magnetic Characterization of $NaDy(WO_4)_2$ Sub-micron Powder', International Seminar on Glasses and other Functional Materials (ISGFM), December 11-13, Acharya Nagarjuna University, Guntur, India.

25. **Durairajan, A,** Balaji, D, Kavi Rasu, K, Valente, MA, Hayakawa, Y & Moorthy Babu, S 2014, 'Sol-gel Synthesised, Structural, Morphological, Vibrational, Luminescence and Magnetic Characterization of $NaHo(WO_4)_2$ Crystalline Powder for Transparent Ceramics Application', National Laser Symposium (NLS 23), December 03-06, S. V. University, Tirupati, India.

26. **Durairajan, A,** Thangaraju, D, Balaji, D & Moorthy Babu, S 2013, 'Combustion synthesis and Characterization of Eu^{3+}:$NaGd(WO_4)_2$ Crystalline Powder for Transparent Ceramic Application', National Laser Symposium (NLS 21), February 06-10, BARC, Mumbai, India.

27. **Durairajan, A,** Thangaraju, D, Balaji, D & Moorthy Babu, S 2013, 'Tm^{3+}:$NaGd(WO_4)_2$ Blue Phosphors: Synthesis, Structural, Morphological and Luminescence Analysis', National Conference on Luminescence and its Applications (NCLA 2013), January 8-10, PES Institute of Technology, Bangalore, India.

28. **Durairajan, A,** Thangaraju, D, Balaji, D & Moorthy Babu, S 2013, 'Paramagnetic Characterization of Sol-gel Derived $NaGd(WO_4)_2$ for Magnetic Textering', 24^{th} Annual General Meeting of Materials Research Society of India (MRSI), February 11-13, IGCAR, Kalpakkam, India.

29. **Durairajan, A,** Thangaraju, D, Balaji, D & Moorthy Babu, S 2012, 'Synthesis, Structural and Luminescence Analysis of $NaGd_{1-x}Tb_x(WO_4)_2$ Solid Solution for White

LED Application', 57th DAE Solid State Physics Symposium (DAE-SSPS 2012), December 03-07, IIT Bombay, Mumbai, India.

30. **Durairajan, A,** Thangaraju, D, Balaji, D & Moorthy Babu, S 2012, 'Combustion Synthesis of Pure and Eu^{3+} Doped $NaGd(WO_4)_2$ Red Phosphor for Solid State Light Applications', XXIVth National Seminar on Crystal Growth (NSCG-2012), December 20-22, Crystal Growth Centre, Anna University, Chennai, India.

31. **Durairajan, A,** Thangaraju, D, Balaji, D & Moorthy Babu, S 2011, 'SolGel Synthesis and Characterization of Nano Crystalline $NaGd(WO_4)_2$ for Anisotropic Transparent Ceramic Laser Application', 7th Laser Ceramics Symposium: International Symposium on Transparent Ceramics for Photonic Applications, November 14-17, Nanyang Technological University, Singapore.

32. **Durairajan, A,** Thangaraju, D & Moorthy Babu, S 2011, 'Synthesis, Structural and vibrational studies on Mixed Alkali metal Gadolinium Double Tungstates $K_{1-X}Na_XGd(WO_4)_2$', 7th Laser Ceramics Symposium: International Symposium on Transparent Ceramics for Photonic Applications, November 14-17, Nanyang Technological University, Singapore

33. Balaji, D, **Durairajan, A,** Kavi Rasu, K & Moorthy Babu, S 2014, 'Synthesis and Luminescence properties of $Eu^{3+}/Dy^{3+}/Tb^{3+}$ triply doped $CsGd(WO_4)_2$ phosphors for white light emitting diodes', National Laser Symposium (NLS 23), December 03-06, S. V. University, Tirupati, India.

34. Kavi Rasu, K, **Durairajan, A,** Balaji, D & Moorthy Babu, S 2014, 'Synthesis, Structural, Vibrational and Luminescence studies on Eu^{3+}:$LiLn(WO_4)_2$ (Ln=La, Gd & Y) red phosphors', National Laser Symposium (NLS 23), December 03-06, S. V. University, Tirupati, India.

35. Kavi Rasu, K, **Durairajan, A,** Balaji, D & Moorthy Babu, S 2014, 'Synthesis and luminescence properties of Eu^{3+}:$RbGd(WO_4)_2$ red phosphors', National Conference on Materials for Modern World (NCMMW-2015), September 10-11, Department of Physics, Easweri Engineering College, Chennai, India.

36. Balaji, D, **Durairajan, A,** Kavi Rasu, K & Moorthy Babu, S 2014, 'Synthesis and characterization of sol-gel derived Tb^{3+} co-activated with Eu^{3+}:$CsGd(WO_4)_2$ phosphors for White Light Emitting Diodes', International Conference on Advanced Functional Materials (ICAFM-2014), February 19-21, CSIR-NIIST, Thiruvananthapuram, India.

37. Kavi Rasu, K, **Durairajan, A**, Balaji, D & Moorthy Babu, S 2013, 'Pechini sol-gel synthesis and vibrational characterization of $KLa(WO_4)_2$ crystalline powders', National Laser Symposium (NLS 21), February 06-10, BARC, Mumbai, India.

38. Kavi Rasu, K, **Durairajan**, **A,** Balaji, D & Moorthy Babu, S 2013, 'Synthesis and Vibrational Characterization of $KLa(WO_4)_2$ Crystalline Powders by Modified Pechini Method', Recent Trends in Applied Physics & Material Science (RAM 2013), February 01-02, Government College of Engineering & Technology, Bikaner, India.

39. Balaji, D, Thangaraju, D, **Durairajan, A,** Kavi Rasu, K & Moorthy Babu, S 2013, 'Synthesis of Tb^{3+}:$Y_3Al_5O_{12}$ by citrate sol-gel process and its luminescent characteristics', National Laser Symposium (NLS 21), February 06-10, BARC, Mumbai, India.

40. Balaji, D, Thangaraju, D, **Durairajan, A,** Kavi Rasu, K & Moorthy Babu, S 2013, 'Sol-gel synthesis and luminescence characteristics of $CsLa_xTb_{1-x}(WO_4)_2$ powders', National Conference on Luminescence and its Applications (NCLA 2013), January 08-10, PES Institute of Technology, Bangalore, India.

41. Balaji, D, Thangaraju, D, **Durairajan, A,** Kavi Rasu, K & Moorthy Babu, S 2013, 'Preparation and Luminescent Characteristics of Pr^{3+} activated $CsGd(WO_4)_2$ Red-emitting Phosphors', 24th Annual General Meeting of Materials Research Society of India (MRSI), February 11-13, IGCAR, Kalpakkam, India.

42. Balaji, D, **Durairajan, A,** Thangaraju, D, Kavi Rasu, K &Moorthy Babu, S 2012, 'Polymeric-Complex Sol-gel Synthesis of Tb^{3+}: $CsLa(WO_4)_2$ Green Phosphor and Its Luminescence Characteristics', XXIVth National Seminar on Crystal Growth (NSCG-2012), December 20-22, Crystal Growth Centre, Anna University, Chennai, India.

43. Balaji, D, Thangaraju, D, **Durairajan**, **A** & Moorthy Babu, S 2012, 'Synthesis and Characterization of Eu^{3+}: YAG Nanopowder By Precipitation Method', 57th DAE Solid State Physics Symposium (DAE-SSPS 2012), December 03-07, IIT Bombay, Mumbai, India.

44. Balaji, D, Thangaraju, D, **Durairajan**, **A** & Moorthy Babu, S 2011, 'Concentration dependent emission analysis of $Y_{3-x}Eu_xAl_5O_{12}$ ($0 \leq x \leq 1$) Ceramics synthesized by solgel Method', 7th Laser Ceramics Symposium: International Symposium on Transparent Ceramics for Photonic Applications, November14-17, Nanyang Technological University, Singapore.

45. Balaji, D, Thangaraju, D, **Durairajan**, **A,** Samuel, P & Moorthy Babu, S 2011, 'Synthesis and Structural Characterization of Nanocrystalline $Y_3Al_5O_{12}$ (YAG) by

Citrate Sol-Gel method', Second National Conference on Multifunctional Nanomaterials and Nanocomposite (NCMNN - 2011), March 24-25, Bharathiar University, Coimbatore, India.

46. Thangaraju, D, **Durairajan, A** & Moorthy Babu, S 2011, 'Morphology investigation of sol-gel synthesized submicron Potassium gadolinium tungstate', Second National Conference on Multifunctional Nanomaterials and Nanocomposite (NCMNN - 2011), March 24-25, Bharathiar University, Coimbatore, India.

47. Thangaraju, D, **Durairajan, A,** Moorthy Babu, S & Hayakawa, Y 2011, 'Polymerized Complex Sol-Gel Synthesis, Structural and Optical Properties of Monoclinic Eu^{3+} Doped $KGd(WO_4)_2$ Crystalline Red Phosphors', Optics 11, May 23-25, National Institute of Technology Calicut, Calicut, India.

48. Thangaraju, D, **Durairajan**, **A,** Balaji, D & Moorthy Babu, S 2012, 'Bi^{3+} and Eu^{3+} co-doped tungstomolybdate $KGd_{1-(x+y)}Eu_xBi_y(W_{1-z}Mo_zO_4)_2$) novel nanocrystalline red phosphors for tricolor white LEDs', ational Laser Symposium (NLS 20), January 09-12, crystal Growth Centre, Anna University, Chennai, India.

49. Thangaraju, D, **Durairajan**, **A,** Balaji, D & Moorthy Babu, S 2011, 'Magnetic field orientation of nano scaled monoclinic $KGd(WO_4)_2$ particles for noncubic transparent ceramics', 7^{th} Laser Ceramics Symposium: International Symposium on Transparent Ceramics for Photonic Applications, November14-17, Nanyang Technological University, Singapore.

50. Thangaraju, D, **Durairajan, A,** Samuel, P & Moorthy Babu, S 2011, 'Growth, Vibrational and Luminescence Analysis of Monoclinic $KGd_{(1-x)}Pr_x(WO_4)_2$ (x=0.005, 0.02, 0.05 %) Single Crystals', International Conference on Materials for Advanced Technology 2011 (ICMAT 11); Symposium EE: CGCT-5-Fuctional Materials Crystallization, Characterization and Devices, June 26 –July 1, National University of Singapore.

51. Thangaraju, D, Samuel, P, **Durairajan, A** & Moorthy Babu, S 2010, 'Pechini polymeric complex sol-gel method assisted synthesis of Dy^{3+} doped $KGd(WO_4)_2$ nanocrystalline sticks for ceramic laser applications', National Laser Symposium (NLS 19), December 01-04, RRCAT, Indore, India.

PROFESSIONAL MEMBERSHIPS:

- Nil

OTHER DETAILS (If any):

X **In peer-reviewed International Journals**

1. S. Vidhya, Yathavan Subramanian, J. Gajendiran, S. Gokul Raj, Bharath Sabarish V.C, **A. Durairajan**, Minh Thang Le, Ukashat Mamudu, G. Ramesh Kumar,*, J. Kishor Kumar, "Methylene blue dye degradation characteristics of BiFeO3-graphene-LiNbO3 ternary nanocomposites", Sustainable Materials and Technologies 44, e01331 **(2025)**

2. S Vidhya, Yathavan Subramanian, K Durgadevi, VC Bharath Sabarish, **A Durairajan**, MPF Graça, J Gajendiran, Abul K Azad, S Gokul Raj, G Ramesh Kumar, J Kishor Kumar, "Synthesis and characterization of a heterogeneous ternary nanocomposite photocatalyst $BiFeO_3$-Graphene-$NaNbO_3$ for the degradation of MB dye disrupting pulmonary organs", Optics & Laser Technology 181, 111798 **(2025)**

3. S Vidhya, Subramanian Yathavan, K Durgadevi, VC Bharath Sabarish**, A Durairajan**, MPF Graça, J Gajendiran, Abul Kalam Azad, S Gokul Raj, G Ramesh Kumar, S Kumaresan, J Kishor Kumar, "Influence of graphitic phase on the structural, optical, electrical and photocatalytic properties of $BiFeO_3$/$KNbO_3$ based binary nanocomposites", Ceramics International 50(17), 29097-29107 **(2024)**

4. João Carvalho, **A Durairajan**, E Venkata Ramana, Suchandra Goswami, AACS Lourenço, MPF Graça, MA Valente, "Influence of synthesis protocol on structure, magnetic and magnetocaloric properties of $ErCrO_3$", Inorganic Chemistry Communications 170, 113367 **(2024)**

5. Venkata Ramana E, **Durairajan A**, Kavitha D,Tobaldi DM, Janez Zavaˇsnik, Bdikin I, Valente MA, "Enhanced magnetoelectric and energy storage performance of strain-modified PVDF-$Ba_{0.7}Ca_{0.3}TiO_3$-$Co_{0.6}Zn_{0.4}Fe_2O_4$ nanocomposites", Journal of Energy Storage 87, 111454 **(2024)**

6. Thangaraju Dheivasigamani, Komaravolu Amassai, Priyadarshini Shanmugam, Govarthini Seerangan Selvam and **Durairajan Arulmozhi**, " Size and surface-engineered $BiVO_4$ catalytic smooth spheres for efficient electrochemical détection of bifenox herbicide", New Journal of Chemistry 47, 15609 **(2023)**

7. Bharath Sabarish VC, **Durairajan A**, Graça MPF, Valente MA, Gajendiran J, Rajasekhar BN, Asim Kumar Das, Rajeev Bhatt, Indranil Bhaumik, Soharab M, Gokul Raj S and Ramesh Kumar G, "Effect of titanium swift heavy ion irradiation on

ferroelectric triglycine sulphate (TGS) <011> oriented single crystals", Journal of Materials Science: Materials in Electronics 34, 1566 **(2023)**

8. Anandaraj C, Gajendiran J, Bharath Sabarish VC, **Durairajan A**, Graca MPF, Valente MA, Gokul Raj S, Shamima Hussaing, Mandeep Jangrag, Monisha S, Ramesh Kumar G, " Exploration of synergic effect assessment on the electrochemical behaviour of graphene and multiwall carbon nanotube (MWCNT) modified $BiFeO_3$-MoS_2 heterogeneous composites ", Diamond & Related Materials 139, 110390 **(2023)**

9. Karthika S, Asokan K Marimuthu K, Evangelin Teresa P, Ramcharan Meena, **Durairajan A**, Valente MA, Meena P and Shanmuga Sundari Sankaran, "Structural and optical properties of lithium borate glasses under extreme conditions of ion irradiation", Physica Scripta 98, 085907 **(2023)**

10. Ramasamy Venkatapathy, Ramana Ramya J, Bharath Sabarish VC, Gajendiran J, **Durairajan A**, Graça MPF, Valente MA, Gokul Raj S and Ramesh Kumar G, "A Comparative Analysis on the Crystalline Behavior, Topographical, Photoluminescence, and Leakage Current Characteristics of $BiFeO_3$Nanopowders and Thin Films", Crystal Research Technology 58, 2200143 **(2023)**

11. Gajendiran J, Gnanam S, Ramachandran K, Bharath Sabarish VC, **Durairajan A,** Graça MPF, Valente MA, Gokul Raj S, Ramesh Kumar G, "Study of the structural, magnetic and dielectric properties of $GdMnO_3$-$GdMn_2O_5$ nanocomposites via sol-gel route", Materials Letters 330, 133311 **(2023)**

12. Anandaraj C, Bharath Sabarish VC, **Durairajan A**, Graça MPF, Valente MA, Gajendiran J, Gokul Raj J, Ramesh Kumar G, "Influence of tungsten trioxide (WO3) on the topographical, structural, optical absorption and electrochemical characteristics of BFO-MWCNT and BFO-Graphene nanocomposite ceramics", Chemical Physics 563, 111699 **(2022)**

13. Bharath Sabarish VC, **Durairajan A,** Graça MPF, Valente MA, Gajendiran J Rajasekhar BN, Das AS, Rajeev Bhatt, Indranil Bhaumik, Soharab Mohammad, Anil Kumar Sinha, Manvendra Narayan Singh, Gokulraj S and Ramesh Kumar G, " Enhanced ferroelectric and piezoelectricity in 100 MeV Ag^{7+} ion-irradiated <011>-oriented TGS single crystals", Applied Physics A 28,567 **(2022)**

14. Shanmuga Sundari , Dhanasekaran R, Binay Kumar, **Durairajan A,** Valente MA, Devaraj Stephen L, "Study on growth, optical and dielectric properties of 'Nd' DOPED

NBT-BT ($0.94(Na_{0.5}Bi_{0.5}Tio_3)$-$0.06BaTio_3$) relaxor ferroelectric single crystals", Journal of Electroceramics 48, 143–156 **(2022)**

15. Bharath Sabarish VC, **Durairajan A,** Graça MPF, Valente MA, Gajendiran J Rajasekhar BN, Rajeev Bhatt, Indranil Bhaumik, Karnal AK, Anil Kumar Sinha, Manvendra Narayan Singh, Gokulraj S, Ramesh Kumar G, "Exploration of Gamma irradiation effects on the Structural, Spectral Characteristics, Thermomechanical behaviour and Optical constants in <011> Oriented Glycine-Di-Glycinium Sulphate (TGS) Single Crystals", Journal of Molecular Structure 1248, 131450 **(2022)**

16. Shanmuga Sundari S, Karthika S, **Durairajan A**, Graça MPF, Valente MA, " YAG: Ag nano phosphors–synthesis and characterization ", Nanomaterials Science & Engineering 3(2), 35-42 **(2021)**

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