Brief CV of Dr. R. RAMESH BABU

Professor (Academic Level – 14)

Head, Department of Physics

Additional Responsibilities :

Head (i/c), Department of Nonlinear Dynamics
Bharathidasan University

CRYSTAL GROWTH AND THIN FILM LABORATORY
DEPARTMENT OF PHYSICS,
BHARATHIDASAN UNIVERSITY,
TIRUCHIRAPPALLI-24, TAMIL NADU.
rampap2k@yahoo.co.in, rameshbabu.r@bdu.ac.in
Off:+91-0431-2407057 -442 (intercom)

Google Scholar id : **YflJdjoAAAAJ (as on 03rd Oct. 2025)** : Citations : **5379** h-*index* : **43 ;** *i*10–index **- 116**
Scopus id : 57130630800 ((as on 03rd Oct. 2025) : Citations : 4458 h-*index* : **38 ; ORCID ID : 0000-0003-3007-8047**

Ph.D. (Physics)	**ANNA UNIVERSITY, CHENNAI (Crystal Growth)**

Awards/Fellowships received

- **Prof. P. Ramasamy National Award for Crystal Growth for the Year 2023** by the Indian Association for Crystal Growth on 29.08.2024.
- **Certificate of Appreciation** presented by Bharathidasan University, Trichy, for High H-index in Web of Science and Scopus during Teacher's Day Celebration – 2022.
- **Tamil Nadu Young Scientist Award – 2018,** Govt. of Tamil Nadu- Science City, Chennai
- **Fellow, Academy of Sciences, Chennai (2018)**
- **Postdoctoral Fellowship (Oct. 2010-Sep.2011),** Aichi Institute of Technology, Japan.
- **Young Scientist Fellowship (2008-2011)**, DST FAST Track, Government of India.
- **Tamil Nadu Young Scientist Fellowship Award (2008-2009)**
- **CSIR – Senior Research Fellow (SRF)**, Government of India.

Field of Expertise

- VDGF/Bridgman Methods (Organic/Inorganic Crystal growth) for NLO and Scinllators Applications
- Czochralski Method (Inorganic single crystals)/Low-Temperature Solution Growth for NLO Applications
- Thin film deposition – Transparent Conducting Oxides for Optoelectronics and Sensor Applications
- Perovskites thin films and microcrystals for solar cells and X-ray sensing

Completed Research Projects

Funding Agency	Amount Received	Tenure
UGC	Rs. 10.68 Lakhs (PI)	2008-2011
CSIR	Rs. 11.00 Lakhs (PI)	2008-2011
DST FAST TRACK	Rs .17.80 Lakhs (PI)	2009-2012
DST	Rs. 19.43 Lakhs (Co-PI)	2009-2012
DST Special	Rs. 29.40 Lakhs (PI)	2010-2015
SERB	Rs. 41.56 Lakhs (PI)	2013-2017
MHRD-RUSA (RUSA 1.0)	Rs. 150* Lakhs (*One of the PIs)	2017-2019
SERB	Rs. 35 Lakhs (PI)	2020-2024

Ongoing Research Projects

MHRD-RUSA (RUSA 2.0)	Rs.~16 Lakhs (PI)	2021-2025
UGC-DAE-CSR	Rs. 7.29 Lakhs (PI) (1st, 2nd and 3rd year grant released)	2022-2026
CMRG-GoTN	Rs. 31.97 Lakhs (PI)	2025-2028

Developed Research facilities

- Low-Temperature Solution Growth & Unidirectional Solution growth setups
- Vertical Dynamic Gradient Freeze unit/Bridgman setups (Organic Crystal growth)
- Czochralski unit (Inorganic single crystals)
- Top-seeded solution growth setup (High-temperature solution growth)
- Spray pyrolysis setup & Spin coating unit/Organic molecular evaporation unit

Characterization facilities	Hall measurement setup/Dielectric setup

Guidance
*Co-guidance -4

PhD			M.Phil. Project		M.Sc. Project		PDF	
Awarded	Thesis submitted	Pursuing	Completed	Pursuing	Completed	Pursuing	Completed	Pursuing
15*	0	3	12	0	71	9	1	0

Research Papers published in Peer-reviewed Journals

Total	International Journals (175) / International Proceedings (26) / Book Chapters (4)	National Journals
208	205	3

Books written

1 (பள்ளியில் படிகம் வளர்ப்போம் (in Tamil - State Language)– KRU Publications, TN (2005)**)**
Authors **: R. Ramesh Babu,** R. Gopalakrishnan & P. Ramasamy **(201 Pages)**

Paper presented in Seminar/ Conferences/ Symposium	**122**	**Invited Talk /Special Lectures Presented**	**131**

Programme Organized

Conference/Workshop		Refresher Course		Orientation Course
International – 2	National – 3	Attended - 2	Organized – 5	Attended - 1

Membership in Professional Bodies

- Life Member of the Indian Association for Crystal Growth, India & Japan Society for Applied Physics, Japan
- Indian Science and Technology Association (ISTA)

BIO-DATA

OF

Dr. R. RAMESH BABU, FASCh

Professor & Head

Department of Physics

Bharathidasan University

Tiruchirappalli – 620 024

Tamil Nadu, INDIA

Dr. R. RAMESH BABU, FASCh

Professor (Academic Level 14)

ID No. BDU1760793

Contact

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Department of Physics
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Employee Number : BDU1760793
Date of Birth : 20-04-1976
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Orcid ID : 0000-0003-3007-8047 Vidwan-ID : 81161
Google Scholar id : YflJdjoAAAAJ Scopus id : 57130630800

Academic Qualifications : M.Sc. M.Phil. Ph.D. (Physics)

Teaching Experience : 19 Years

Research Experience : 24 Years

Areas of Research

- Crystal Growth (Nonlinear Optical materials & Scintillators)
- Thin films (Solar Cells & Gas Sensors)
- Nanomaterials/microcrystals (Multiferroic/X-ray Sensing)

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	15*	03
	M.Phil.	12	-
	PDF	01	-
Project	PG	71	09

*Co-guidance-4

Publications

Total Journals Papers	International Journals (175)/ Conference Proceedings (26)/ Books Chapters (4)	National Journals	National Conferences	Others
208	205	03	-	-

***Google Scholar** id : **YflJdjoAAAAJ** (as on 03.10.2025)

h-index : **43**
i10 index : **116**
Total Citations : **5379**

Scopus id : **57130630800 :** (as on 03.10.2025)

h-index : **38**
Citations : **4458**

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	UGC (PI)	2008	2011	Unidirectional growth of pure and doped L-arginine family single crystals by Novel solution growth method and their characterization	**10.68**

2	CSIR (PI)	2008	2011	Growth, Structural, Spectral, Thermal, Mechanical and Optical studies on semi-organic L-Lysine single crystals for NLO applications	**11.00**
3	DST (Co-PI)	2009	2011	Fabrication of energy efficient hybrid organic light emitting device (OLED) on nanostructure templates for white lighting applications	**19.43**
4	DST (PI)	2009	2014	Growth of Unidirectional single crystals of 4-aminobeznzophenone by vertical dynamic gradient freeze and unidirectional solution growth techniques for nonlinear optical applications	**17.78**
5	DST (Co-PI)	2011	2015	Top seeded solution growth of $KNbO_3$ single crystals for nonlinear optical applications	**29.40**
6	SERB (PI)	2013	2017	Fabrication and performance study of spray deposited low bandgap organic polymers and fullerene blend based solar cell devices	**41.56**
7	RUSA 1.0 (R &I) PI* *One of the PIs	2017	2019	Sustainable Energy Technologies - Investigation on the advanced functional materials for the next generation solar cell applications	**150*** *One of the PIs
8	SERB-DST	2020	2023	Hole Transport Materials-Free Fully Inorganic Mixed Halide Perovskite Solar Cells Via Cost-Effective Spray Method	**35.0**

Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	RUSA 2.0 (Research)	2021	2025	Fabrication of highly efficient organic-inorganic hybrid mixed halide perovskite thin film solar cell devices by spray technique	**~16.0**
2	UGC-DAE CSR (Research)	2022	2026	Optimization and fabrication of Lead-free Stable bi-metallic based organic-inorganic halide perovskite solar cell devices	**~7.29**
3	Chief Minister Research Grant (CMRG), GoTN	2025	2028	Perovskite-based Composites for Low-Dose X-Ray Sensing Applications in the Medical Field	**31.97**

Distinctive Achievements / Awards

1. **Prof. P. Ramasamy National Award for Crystal Growth for the Year 2023** by the Indian Association for Crystal Growth on 29.08.2024.

2. **Certificate of Appreciation** presented by Bharathidasan University, Tiruchirappalli during Teacher Day Celebration 2022 (5th Sep. 2022) for High H-index in Web of Science and Scopus

3. **Tamil Nadu Young Scientist – 2018 (Physical Sciences)** – Science City-Department of Higher Education, Govt. of Tamil Nadu.

4. **Fellow, Chennai Academy of Sciences, Chennai (FASCh)**

5. **Outstanding Paper presentation**, International Conference on Advanced Electromaterials, November 7-10, 2011, Jeju, Korea.

6. **CERTIFICATE OF APPRECIATION** presented by **ACS Publications** during December 2011 for valuable contribution and dedicated service in the peer review of manuscripts

7. **Postdoctoral Fellowship (Oct. 2010-Sep.2011),** Department of Electrical Engineering, Aichi Institute of Technology, Japan.

8. **Young Scientist Fellowship (2008-2011)**, DST FAST Track, Government of India.

9. **Tamil Nadu Young Scientist Fellowship Award (2008-2009),** Tamil Nadu State council for Science and Technology, Tamil Nadu, India.

10. **Best Paper Presentation Award- Dec. 2005,** Indian Science Congress Association, **Tenth National Seminar on Crystal Growth**, Kongu Engineering College, Erode. Tamilnadu

11. **Best Paper Published – 2005 Award,** Indian Science Congress Association, **Crystal Growth of Laser related materials,** SSN College of Engineering, Kalavakkam, Tamil Nadu. India.

12. **Senior Research Fellowship** (Dec.2003-Dec.2005), Prof. P. Ramasamy -CSIR Emeritus Scientistship Scheme" Growth and Characterization of organic Molecular crystals for Radiation Detection", **Council of Scientific and Industrial Research,** Government of India.

13. **Senior Research Fellowship** (Nov. 2002-Oct. 2003), **Defence Research Development Organization**, Government of India.

14. **Junior Research Fellowship** (Nov. 2000-Oct. 2003), **Defence Research Development Organization**, Government of India.

Events organized in leading roles

1. **Convener,** National Seminar on Recent Advances in Materials Science (RAMS-2014) organized by School of Physics, Bharathidasan University, Tiruchirappalli-620 024 during February 3-4, 2014.

2. **Coordinator** for the UGC sponsored Refresher Course in Physics conducted by UGC Academic Staff College, Bharathidasan University, Tiruchirappalli, from 17-02-2016 to 08-03-2016.

3. **Coordinator** for the UGC sponsored Refresher Course in Nanosciences (Interdisciplinary) conducted by UGC Academic Staff College, Bharathidasan University, Tiruchirappalli, from 20-12-2017 to 09-01-2018.

4. **Co-Convener,** International conference on Sustainable Energy Technologies (i-SET 2018), by School of Physics and School of Chemistry, Bharathidasan University, Tiruchirappalli-620 024 during June27-28, 2018.

5. **Coordinator** for the UGC sponsored Refresher Course in Physics conducted by UGC Academic Staff College, Bharathidasan University, Tiruchirappalli, from 23-10-2019 to 05-11-2019.

6. **Convener,** 4th International Conference on Recent Trends in Applied Science and Technology (ICRTAST-2020), Department of Physics, Bharathidasan University, Tiruchirappalli, from 26-12-2020 to 29-12-2020.

7. **Convener,** SERB-SSR sponsored "Two days workshop on Perovskite Solar Cells", organized by Department of Physics, Bharathidasan University, Tiruchirappalli-620 024 during 15-16 December 2023.

8. **Convener,** 26th National Seminar on Crystal Growth and Applications (XXVI NSCGA 2024), Organized by Department of Physics, Bharathidasan University, Tiruchirappalli-620 024 during 29-31 August 2024.

9. **Coordinator** for the UGC –MMTTCC sponsored Refresher Course in Materials Science conducted by UGC-MMTTCC, Bharathidasan University, Tiruchirappalli, from 10-09-2025 to 23-09-2025.

Events Participated

Conferences / Seminars / Workshops:

1. **Awareness Programme on Applications of Radioisotopes and Radiation Technology for societal development (ARRTS-2004)** held at Anna University, Chennai, during July 13-14, 2004.

2. **School on Ion Beams in Materials science,** Institute of Physics, Bhubaneswar during October 4-10, 2004.

3. **Indo-Japan Workshop on Crystal Growth and Applications of Advanced Materials for Optoelectronics,** Crystal Growth Centre, Anna University during December 7-10,2004.

4. **International workshop on Advances in Material Science and Technology ,** SSN college of Engineering, Kalavakkam – 603 110 during Jan 31, 2005.

5. **International Workshop on Nanoscience and Technology,** Organized jointly by Anna University & ICTP Italy during 13-17, Feb. 2006.

6. **UGC Refresher Course on Physical Sciences** held at UGC-Academic Staff College, Khajamalai Campus, Bharathidasan University, Tiruchirappalli - 620 024 during 1 – 21 February 2007.

7. **Workshop on homemade Physics experiments,** Inter-University Accelerator Centre, New Delhi during 29 Sep- 04 October 2008.

8. **Accelerator User Workshop** held on December 17-18, 2008, Inter-University Accelerators Centre, New Delhi.

9. **Awareness Programme on Nano Technology (APNT),** during Feb. 27-28, 2010 held at the Centre for Nanoscience and Nanotechnology, School of Physics, Bharathidasan University, Tiruchirappalli-620 024. India.

10. **International symposium on Green Energy Research** held on December 3, 2010 at Department of Electrical Engineering, Aichi Institute of Technology, Japan.

11. **UGC Orientation Program** held at UGC-Academic Staff College, Khajamalai Campus, Bharathidasan University, Tiruchirappalli - 620 024 during 1 – 28 February 2012.

12. **National Seminar on Positron Annihilation** held at Department of Nuclear Physics, University of Madras, Chennai-25 on September 3, 2013

13. **Technical seminar by m/s. Keithley & Tektronix on "from nanovolts to gigahertz**" on 05.09.2013 held at Hotel Park Plaza, Madurai

14. **Two-day Lecture workshop on Recent Advances in Materials Chemistry** held at Department of Chemistry, Bharathidasan Institute of Technology, Anna University (Trichy Campus), Tiruchirappalli-62 024 during March 7-8, 2014.

15. **UGC Refresher Course on Physical Sciences** held at UGC-Academic Staff College, Khajamalai Campus, Bharathidasan University, Tiruchirappalli - 620 024 during 06.11.2014 – 26.11.2014.

16. **International workshop on Strongly correlated Materials (IWSCM'15)** held at Centre for High Pressure Research, School of Physics, Bharathidasan University, Tiruchirappalli -620 024, India. On 20th January 2015.

17. **A Two day Awareness Workshop On Advanced Material Characterization & Synthesis Facilities** organized by UGC-DAE CSR, Kalpakkam Node in collaboration with the Department of Nuclear Physics, University of Madras during June 27-28, 2016.

18. Participated International Conference on **Recent Trends in Science and Technology** held at Anna University on 8th &9th of September 2017.

19. Participated GIAN course on **Complex Systems : Modelling and Analysis** December 11th – 15th 2018 held at the Department of Physics, Bharathidasan University, Tiruchirappalli-24.

20. Participated GIAN course on **Physics and Technology of Functional Materials** from 12th – 20th February 2018 held at the Crystal Growth Centre, Anna University, Chennai.

21. Participated UGC sponsored Two Day Workshop for **Academic Administrators on "Institutional Assessment and Accreditation** on 12th & 13th March 2018.

22. Participated Orientation **Workshop on Swayam**, Jointly Organized by Department of Library and Information Science and UGC-Human Resource Development Centre, Bharathidasan University on 03.05.2018.

23. Participated Seminar cum Workshop on "**A Primer on Intellectual Property**" held at IPR Cell, Bharathidasan University on 30.07.2018.

24. Participated **Faculty Development Programme** on **Enhancing learning outcomes through effective teaching** jointly organized by the Internal quality Assurance Cell and UGC-Human Resource Development Centre, Bharathidasan University on 28.11.2018.

25. Participated in the **Indian Summer School on Crystal Growth** (ISSCG-2020) organized by SSN Research Centre, SSN Institutions, Chennai, Tamil Nadu, India during **14-23 May 2020.**

26. Participated in **the Six days International workshop on "Smart Materials Sensor and Energy Devices) SMSED -2020)"** during 25-30, May 2020 organized by the Department of Electronics & Communication Engineering, SSN College of Engineering, Kalavakkam, Chennai.

27. Participated in the webinar **on Emerging Nano-technological Advancement in Light Emitting Diodes"** on 26th May 2020, organized by the Department of Sciences, Sona College of Technology, Salem.

28. Participated in a **Virtual symposium on multifunctional Materials** organized by Department of Physics, SRM Institute of Science and Technology, Ramapuram Campus, Chennai on 17th June 2020.

29. Participated in **International Virtual Conference on "Photovoltaics and Materials Science"** organized by Centre for Crystals Growth, Vellore Institute of Technology, Vellore, held on 23th June, 2020.

30. Participated in a Webinar on **"Single Crystal Perovskites: Next Wave of Photovoltaic Technology"** on 14th June 2020 organized by Department of Physics and IQAC of Raje Ramrao Mahavidyalay, Jath-416404, Sangli, Maharastra.

31. Participated in the **American Chemical Society Science Talk (Virtual Lecture Series)** on Engineering Charge Transit in Optically sensitive Two-dimensional Materials on 3rd July 2020.

32. Participated JOVE Webinar using Jove in Classroom, conducted on 6th September 2021 in collaboration with Bharathidasan University, Trichy.

Overseas Exposure / Visits

1. Japan

Membership in

Professional Bodies

1. Life Member in Indian Association for Crystal Growth
2. Member in Japan Society of Applied Physics (2010-2011)
3. Member, Physics Forum, School of Physics, Bharathidasan University, Tiruchirappalli
4. Life Member in Indian Science and Technology Association (ISTA)

Membership in Various committees

1. Member, PG Board of Studies (Physics), Bharathiar University, Coimbatore
2. Member, (PG, M.Phil. & Ph.D.) Board of Studies (Physics), Department of Physics, Bharathidasan University, Trichirappalli-620 024.
3. Subject Expert, PG Board of Studies (Medical Physics), Department of Medical Physics, Bharathidasan University, Trichirappalli-620 024.
4. **University Representative**, Board of Studies (Physics), Kunthavai Nachiyaar Government Arts College for Women (autonomous), Thanjavur-613 007.
5. **University Representative**, Board of Studies (Physics), Government Arts College for Women (autonomous), Pudukkottai- 622 001.
6. Subject Expert, PG Board of Studies (Physics), St. Xavier's College (autonomous), Palayamkottai-627 002.
7. Subject Expert, M.Phil. Board of Studies (Physics), Sri S. Ramasamy Naidu Memorial College, Sattur, (from January 2019 to December 2021)
8. Subject Expert, PG Board of Studies (Physics), Holy Cross College, Trichy.
9. **Member,** CARE committee, Publications of Research Papers in Bharathidasan University, from 27.07.2021 – 26.07.2023.

Others

1. **Chaired a scientific session** in the 4th International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS 2013) held at Department of Physics, Bishop Moore College, Mavelikara, Kerala, India-690110 during 6-**9** August 2013.

2. **Chaired a scientific session** in the "Second International Conference on Nanostructured Materials and Nanocomposites (ICNM 2014) 19-21 December 2014 at Mahatma Gandhi University, Kottayam, Kerala, India".

3. **Chaired a scientific session** in the "2nd National conference on Nanophotonics (NCNP-2016) held at School of Physics, Bharathidasan University Tiruchirappalli during 18-19 March 2016.

4. **Chaired a scientific session** in the International Conference on Recent Trends in Science and Technology held at Anna University on 8th &9th of September 2017.

5. **Chaired a scientific session** in the International Conference on Advanced Nanomaterials (ICAN-2018) held at Department of Nanoscience and Nanotechnology, Alagappa University, Karaikudi on **26**th &27th of February 2018.

6. **Chaired a scientific session** in the National e-conference on Advanced Research in Materials Science organized by the Department of Physics, Kamaraj College, Thoothukudi-628 003 Tamil Nadu during 22 & 23red February 2021.

7. Served as **Member of the Venue Arrangements Committee** of the XLVI Indian Social Science Congress, held from 27th to 31st January, 2023 at Bharathidasan University, Tiruchirappalli-620 024.

Additional Responsibilities

1. Coordinator – Central Workshop, Bharathidasan University (05.09.2022 – till date)

2. Head (i/c), Department of Nonlinear Dynamics, Bharathidasan University (31.08.2024 – till date)

3. Deputy Coordinator, RUSA Schemes, Bharathidasan University, Tiruchirappalli. (13.04.2022 to till date)

4. Examination in-charge – Department of Physics, Bharathidasan University (2014-till date)

5. Mentor, M.Sc. Physics (II Year) – 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021, 2021-2022, 2022-2023 and 2023-2024 Batch.

6. Director-Research, Bharthidasan University, Tiruchirappalli-620 024. (01.08.2024 – 10.09.2025)

Resource persons in various capacities

Paper Presented in National/International Seminars Symposia and Conferences	:	122
Invited/Special Lectures Presented	:	131

Others

1. No. of Ph.D. Thesis evaluated : 34

2. No. of Ph.D. Public Viva Voce Examination conducted : 26

List of Research Publications

1. V Krishnapressad, Soumya Sundar Parui, R Ramesh Babu, Unveiling the potential of spray-coated $Cs_3Bi_2I_9$ based perovskite solar cells: Numerical insights and experimental realization, Materials Science and Engineering: B, 323 (2026) 118684.

2. Soumya Sundar Parui, V Krishnapressad, Ram Kumar, Nithin Xavier, R Ramesh Babu, Vipul Kheraj, Enhancing Performance of Inorganic $CsPbBr_3$ Solar Cells with ZnO Additive via One-Step Spin Coating, IEEE 53rd Photovoltaic Specialists Conference (PVSC), pages 0400-0402, (2025) IEEE
DOI: 10.1109/PVSC59419.2025.11133379

3. I. Clitenn, C. Siva, T. Prakash, R. Ramesh Babu, Enhanced low-dose medical X-ray sensing using Cs_2ZnBr_4 perovskite microcrystals synthesized via Water-Assisted Solid-State Reaction, Materials Science in Semiconductor Processing, 200 (2025), 109903.

4. I Clitenn, B Noorul Ayin, T Prakash, R Ramesh Babu, Low-temperature synthesis of Cs_2BaBr_4 microcrystals via Water-Assisted Solid-State Reaction for low-dose X-ray sensing, Materials Science in Semiconductor Processing 194 (2025) 109528.

5. Soumya Sundar Parui, V Krishnapressad, Ram Kumar, Nithin Xavier, R Ramesh Babu, Vipul Kheraj, Towards stable and efficient CsPbBr3 solar cells: A one-step spin coating approach with ZnO additives, Materials Science in Semiconductor Processing 199 (2025) 109811.

6. V Krishnapressad, Soumya Sundar Parui, R. Ramesh Babu, Efficiency enhancement via novel lead-free inorganic $CsSnBr_3/Cs_3Bi_2I_9$ heterojunction absorber layer in perovskite solar cell, Solid State Communications 399, (2025) 115888.

7. A Subashini, R Kumaravel, Helen Stoeckli-Evans, T Sabari Girisun, Sharon Mary Tomson, Reji Philip, Aurelien Crochet, R Ramesh Babu, K Ramamurthi, Structural, Hirshfeld surface and nonlinear optical properties of 4-fluorobenzylidene-4-methoxyaniline (FBMOA) and 4-fluorobenzylidene-4-methylaniline (FBMA), Journal of Molecular Structure, 1327 (2025) 141121.

8. Soumya Sundar Parui, Krishnapressad Vijayan, Nithin Xavier, R Ramesh Babu, Vipul Kheraj, Numerical and Experimental Validation of $CsPbBr_3$ Perovskite Solar Cells: Insights on a One-Step Deposition Technique, The Journal of Physical Chemistry C 2025, 129, (2025) 16, 7625–7639.

9. Soumya Sundar Parui, Akshay Jariwala, V Krishnapressad, R Ramesh Babu, Vipul Kheraj, Soumya Sundar Parui, Akshay Jariwala, V Krishnapressad, R Ramesh Babu,

Vipul Kheraj, Journal of Optics https://doi.org/10.1007/s12596-024-02374-z. (2025) pages 1-14

10. Senthilkumar, P., Raja, S., Ramesh Babu, R., M Sriramkumar, Jothivenkatachalam, K., Vasuki, G.Enhanced optoelectronic and catalytic properties of Sm doped SnO_2 thin films, *Physica B: Condensed Matter*, 690, (2024) 416208.

11. K Arjunan, R. Ramesh Babu, Visible light photocatalysis application of $(1-x)(SnO_2) - (x)(Pr_2O_3)$ composite thin films by laboratory spray pyrolysis method, Applied Physics A, 130 (6) (2024) 378.

12. K. Arjunan, R. Ramesh Babu, Chemical spray deposited SnO_2:MoO_3 composite thin films for visible light photocatalytic dye degradation application, Ionics 30 (2024) 4227-4244.

13. K. Arjunan, R. Ramesh Babu, Fabrication of samarium doped SnO_2 thin films using facile spray pyrolysis technique for photocatalysis application, *Ionics,* 30 (1) (2024) 491-507.

14. K. Arjunan and R. Ramesh Babu, Facile Homemade Spray Pyrolyzed $(SnO_2)_{1-x}(CeO_2)_x$ Composite Thin Films for Visible Light Photocatalysis Application, Ionics 29(11), (2023) 4797–4816.

15. Sripan Chinnaiyah, Ramakanta Naik, R Ramesh Babu, Improvement of photovoltaic performance on inverted chalcostibite $CuSbS_2$ solar cells using Sr-doped TiO_2 window layers, Journal of Materials Science: Materials in Electronics, 35 (15) (2024) 1015.

16. P Senthilkumar, S Raja, R Ramesh Babu, G Vasuki, Influence of Ru doping on the structural, morphological, optical, electrical and optoelectronic properties of SnO_2 thin films, Journal of Physics and Chemistry of Solids 174, (2023) 111177.

17. P Senthilkumar, S Raja, **R Ramesh Babu**, V Kavinkumar, K Jothivenkatachalam, G Vasuki Optoelectronic, photocurrent sensitivity and photocatalytic dye degradation behaviour of spray deposited Cr doped SnO_2 thin films, Materials Chemistry and Physics, 305 (2023) 127988. (IF - 4.778)

18. A. Subashini, K. Ramamurthi, **R Ramesh Babu**, R. Philip and H. Stoeckli-Evans, Synthesis, crystal structure and Hirshfeld surface analysis of the orthorhombic polymorph of 4-bromo-*N*-(4-bromobenzylidene)aniline, *Acta Cryst.* E79, (2023). 146-150, https://doi.org/10.1107/S2056989023001111

19. Subashini Ashokkumar, Reji Philip, **R Ramesh Babu Ramraj**, Ramamurthi Kandasamy, Two photon absorption properties of CBHB and DEABHB single

crystals for optical limiting applications, Journal of Fluorescence 33, pages1077–1087 (2023). (IF – 2.525)

20. Velusamy P, Xinghui Liu, **R. Ramesh Babu**, M. Sathiya, Norah Salem Alsaiari, Fatimah Mohammed Alzahra, M. Tariq Nazir, Elangovan Elamurugu, Fuchun Zhang Chemically sprayed CdO: Cr thin films for formaldehyde gas detection and optoelectronic applications, Chemosphere, 329 (2023), 138535. (IF – 8.943)

21. Sripan Chinnaiyah, Devarajan Alagarasan, Rajamanickam Ganesan, **R Ramesh Babu,** Cu-poor chalcostibite $CuSbS_2$ thin films for inverted photovoltaic applications, Applied Physics A, (2023) 129:238 (IF – 2.983)

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