



Dr. G. RAVI
Senior Professor of Physics
Assumed as a Vice-Chancellor
Alagappa University
Karaikudi

Contact

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HIGHLIGHTS OF ACADEMIC MILE STONES:

- Assumed charge as a **Vice- Chancellor** at Alagappa University
- Senior Scientist Award (**SSA-2022**), Chennai.
- Awarded **D.Sc.** (Doctor of Science) in Physics in 2018.
- Selected & attended for **LEAP** (Leadership for Academicians) by MHRD-2019.
- Selected for prestigious **FRSC** (Fellow Royal Society), UK in 2021.
- Selected for Fellow Academy of Sciences, Chennai (**FASCh**), in 2021.
- Awarded most prestigious **JSPS** and performed **PDF** at Japan (2002-2004).
- Published **421** research papers in highly reputed International journals.
- Average impact factor -**4.35**; Citations-**8521**; h-index-**45**; i-10 index-**217**.
- Number of Publications in 2022: **59** with average Impact factor: **6.35**
- Number of Publications in 2023: **4** with average Impact factor: **10.60**
- Number of **Patents Granted-4; Published-2; filed- 2**
- **Papers presented** in International/National Conferences-**375**.

- Number of **books** as chapters written-7
- Number of **Awards** received- 23
- **Guidance: PDF-2; PhD Guided-18, Co-Guided-8; M.Phil-50; M.Sc-63**
- Visited **22 countries** across all the **continents** for research purpose.
- **Invited lectures** delivered- 46
- **Editor** in International Journals – 2
- **Ph.D** thesis **evaluated-65**; Ph.D **viva** conducted -68
- Executed **11 projects** with the worth of **403.1 lakhs**.
- **Devices** fabricated from research and delivered to society – 5
- Number of **conferences/seminars/events conducted-33**
- **Membership** in professional bodies –10
- As Head of Physics the **h-index** of the department increased from **28 to 67**
- As Dean Industry-consultancy, **small scale industry** is established in the campus.

Academic Qualifications: Ph.D., PDF(JSPS), D.Sc., FRSC

Sl. No	Degree	University/Institution	Year of Passing	Subject	Class/ Grade Obtained
1.	D.Sc.,	Alagappa University, Karaikudi	November 2018	Physics	Highly commended
2.	Ph.D.	Anna University, Chennai	1995	Physics	Highly commended
3.	M.Phil.	Anna University, Chennai	1990	Physics	First Class
4.	M.Sc.	Bharathidasan University	1989	Physics	First Class
5.	B.Sc.	Bharathidasan University	1986	Physics	First Class
6.	PDF (JSPS)	Japan Society for Promotion of Science, Japan	Apr.2002-Mar.2004	Physics	JSPS Award
7.	Visiting Professor	Shizuoka University, Japan	Aug. – Nov. 2012	Physics	
8.	Honorable Guest Professor	Shizuoka University, Japan	April 2014 April 2016 April 2018 April 2019	Physics	

Teaching Experience: 28 Years

S.No	Institution	Position	Period	
			From	To
1	Alagappa University	Lecturer, Crystal Research Centre	Feb.1995	Nov.2004
2	Alagappa University	Reader, Dept. of Physics	Dec.2004	Nov.2007
3	Alagappa University	Associate Professor, Dept. of Physics	Dec.2007	Nov. 2010
4	Alagappa University	Professor, Dept. of Physics	Dec. 2010	May 2015
5	Alagappa University	Professor and Head, Dept. of Physics	June 2015	Aug 2022
6	Alagappa University	Senior Professor, Dept. of Physics	Mar 2023	Till date
7	Alagappa University	Vice Chancellor, Alagappa University	Aug 2022	Till date

Research Experience: 33 Years

Administrative Experience / Post(s) & Responsibilities held

1. **Head**, Department of Physics, Alagappa University, Karaikudi
2. **Dean**, Industry & Consultancy
3. **Director**, Internal Quality Assurance Cell (IQAC)
4. **Chairperson**, School of Physical Sciences
5. **Member**, Senate, Alagappa University, Karaikudi
6. **Member**, NAAC Steering Committee, Alagappa University, Karaikudi
7. **Member**, Research Advisory Committee, Alagappa University, Karaikudi
8. **Chairman**, Board of Studies, Department of Physics, Alagappa University, Karaikudi
9. **Co-ordinator**, UGC-SAP & DST-FIST **Deputy co-ordinator**, DST-PURSE
10. **Institute Co-ordinator**, MHRD-SPARC
11. **Member**; NIRF, USIC, IPR & Ranking cell

Areas of Research

1. Crystal growth of organic & inorganic materials
2. Nano materials synthesis and Thin Films preparation for supercapacitors, Photocatalytic, sensor and solar cell applications
3. Opto-electronics and E-O modulator –Devices

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	PDF	2	--
	Ph.D. Guide/Co-Guide	18/8	3/2
	M.Phil.	50	--
Project	PG	60	3
	UG / Others	-	-

Publications

Journals		Conferences		Others
International	National	International	National	Books / Chapters / Monographs / Manuals
368	53	196	179	7

h-index	:	45
i-10 index	:	217
Total Citations	:	8521

Patents list: 8

Patents : 4 (Granted)

S.No	Title	Author(s)	Application Number	Filing Date
1.	An Improved quaternary chalcogenide Cu_2NiSnS_4 material and a method of manufacture thereof	G.Ravi et al.	202041055941	23/12/2020 Published on 26/03/2022 Granted patent Number: 389221
2	A method of preparing MXene nanosheets	G.Ravi et al.	202141042819	22/09/2021 Published on 04/03/2022 Granted patent Number: 406697
3.	Hydrogen Free Method of Growing Carbon Nanorods	G.Ravi et al.	202141018296	20/04/2021
4.	A method of preparing 3D	G.Ravi et al.	202141042818	22/09/2022

	Si@MXene/Graphene crumbled spherical nanocomposites			
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Patents : 2 (Published)

S.No	Title	Author(s)	Application Number	Filing Date
1.	An improved electrode with superior supercapacitive performances and a method of manufacture thereof	G.Ravi et al.	202141013142	30/09/2022
2.	A heterostructured (SmCoO ₃ /RGO) material and a method of manufacture thereof	G.Ravi et al.	202141008342	27/02/2021

Patents : 2 (Filed)

S.No	Title	Author(s)	Application Number	Filing Date
1.	A method of preparing 3D Bio-activated pores carbon nanosheets from tamarind fruit	G.Ravi et al.	202241008151	16/02/2022
2.	Morphological Evolution of carnation flower like Cu ₂ CoSnS ₄ battery type electrodes and preparation methods thereof	G.Ravi et al.	202241042493	25/07/2022

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1.	TNSC&ST	1997	1999	Fabrication of Electro-Optical devices using DKDP Crystals	1.97
2.	TNSC&ST	1995	1999	Water quality assessment based on crystal of trifluorides of lanthanum	3.60
3.	AICTE	1998	2001	Growth and Characterization of Organic NLO crystals for EO Modulators	10.0
4.	DST	2007	2011	A Venture for Developing Electro-Optic Modulator from DAST Single Crystals	25.0
5.	UGC	2011	2015	Preparation of ZnO nanostructure thin films by spin coating method of spintronic and optical applications	13.0
6.	DST-SERB (EMR)	2018	2021	Graphene oxide decorated metal oxide thin films on flexible substrates for high performance electrochromic and super capacitors applications	35.6
7.	MHRD-SPARC	2019	2021	2D QDs(two Dimensional QDs): Synthesis and Applications in Electroluminescent diodes, Sensors and Solar cells.	59.93
8.	MHRD-RUSA	2019	2021	Development of pure and graphene decorated metal oxides/sulphides based nanostructured materials for sustainable energy and sensor applications	5.0

Combined Department Projects: (Completed)

S. No	Agency	Period		Budget (Rs. In lakh)
		From	To	
1.	UGC-SAP (DRS I)	2004	2009	82.25
2.	UGC-SAP (DRS II)	2009	2014	70.50
3.	DST FIST (Level I)	2005	2009	35.00
4.	DST-PURSE	2011	2014	600.00

5.	UGC-SAP (DRS III) Co-ordinator	2015	2020	105
6.	DST FIST Level-II Co-ordinator	2016	2021	144
7.	DST-PURSE Deputy co-ordinator	2017	2020	700

Consultancy Projects

S. No	Agency	Period		Project Title	Amount Earned (Rs.)
		From	To		
1.	Universities, Colleges, Institutions	2007 (June)	2022 (December)	Consultancies on Characterization	~1,40,00,000

Distinctive Achievements / Awards

1. Senior Research Fellow (SRF)- CSIR, Govt. of India, 1993
2. Young Researcher Award- (IUMRS-ICA), IISc., Bangalore, India, 1998
3. Young Scientist Award- ICCG-13, Kyoto, Japan, 2001
4. Young Invited Researcher Award, Cheju, Korea (ICPOP), 2001
5. Invited Special Researcher, NIMS, Japan, Nov. 2001-March 2002
6. JSPS Award, Japan Society for Promotion of Science, Japan, April 2002-March 2004
7. Invited Special Researcher, NIMS, Japan, June-Nov. 2004.
8. Best Researcher Award, Alagappa University, 2005
9. Invited Special Researcher, NIMS, Japan, Jan.- Feb. 2006
10. Visiting Professor, Shizuoka University, Japan, Aug.-Nov. 2012
11. Honorable Guest Professor, Shizuoka University, Japan, April 2014
12. Alagappa Excellence Award for Research (2015-2016), Alagappa University, 2016
13. Honorable Guest Professor, Shizuoka University, Japan, April 2016
14. JSPS Invitation Fellowship, Japan, Nov.-Dec. 2016
15. Appreciation Award, Alagappa University, Karaikudi, Feb. 2017
16. Honorable Guest Professor, Shizuoka University, Japan, April 2018
17. Honorable Guest Professor, Shizuoka University, Japan, April 2019
18. Dr. APJ Abdul Kalam Lifetime Achievement National Award, 2021

19. FRSC Academic Award, 2021
20. Vallal Alagappan Research recognition Award, Alagappa University, Karaikudi January 2021.
21. Fellow of Academy of Sciences, March 2021
22. Honorable Guest Professor, Shizuoka University, Japan, April 2021- Mar.2023
23. Senior Scientist Award 2023.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: **33**

Events Participated (optional)

Conferences/ Seminars / Workshops: **375**

Other Training Programs: **06**

Overseas Exposure/Visits

S.No	Countries Visited	Duration of Visit	Month & Year	Purpose of Visit
1.	Bangladesh	10 days	Oct. 1999	Dhaka, Invited talk in the Int. conference
2.	Japan	14 days	Aug. 2000	Tohoku University, Sendai, Invited talk & Chair session in Int. conference (ACCG)
3.	Singapore	2 days	Sep. 2000	National University of Singapore, Lab visit
4.	Japan	7 days	July 2001	Presented papers in ICCG-13 Int. conf. at Kyoto
5.	Korea	12 days	Aug. 2001	Cheju, Invited under Young Scientist Programme
6.	Japan	5 months	Nov.2001 - Mar.2002	Invited Special Researcher, NIMS, Tsukuba
7.	Japan	2 years	Apr.2002- Mar.2004	JSPS Fellow, NIMS, Tsukuba
8.	USA	15 days	Aug. 2002	Seattle, Presented papers in Int. Conference
9.	Canada	2 days	Aug. 2002	Vancouver, Lab visit
10.	Sri Lanka	1 day	Oct. 2002	Columbu, Lab visit
11.	Germany	2 days	June 2003	Bonn Univ., Bonn, Invited lecture
12.	France	4 days	June 2003	Strasbourg, Presented papers in MRS Internatinal Conference

13.	Switzerland	3 days	June 2003	Zurich, Quantum Electronics Lab visit
14.	Malaysia	2 days	Oct. 2003	Kuala Lumpur, Lab visit
15.	Japan	6 months	June- Nov.2004	Invited Special Researcher, (NIMS), Tsukuba
16.	England	3 days	Aug. 2004	Oxford Univ., Lab visit (Clarendon Lab)
17.	Italy	2 days	Aug. 2004	Univ. of Rome, Lab visit
18.	France	4 days	Aug. 2004	Grenoble, Presented papers in ICCG
19.	Netherlands	2 days	Aug. 2004	Amsterdam, Lab visit
20.	Belgium	1 day	Aug. 2004	Brussels, Lab visit
21.	Germany	1 day	Aug. 2004	Aachen University, Lab visit
22.	China	15 days	Oct. 2005	Beijing, Papers Presented & Lab visit (CAS)
23.	Japan	2 months	Jan.-Feb. 2006	Invited Special Researcher (NIMS)
24.	Taiwan	3 days	Mar. 2006	Taipei, Delivered lecture (NUT)
25.	Mexico	3 days	Aug. 2010	Mexico city & Cancun, Delivered lectures
26.	Brazil	1 day	Aug. 2010	Sao Paulo, Lab visit
27.	South Africa	2 days	Aug. 2010	Johannesburg, Lab visit
28.	Japan	4 months	Aug.- Nov.2012	Visiting Professor, RIE, Shizuoka University
29.	Australia	4 days	Oct. 2012	Brisbane, Papers Presented & Lab visit, Queensland University
30.	Thailand	2 days	Nov. 2012	Bangkok, Lab visit
31.	Japan	5 days	2014 & 2015	Shizuoka University, Japan, Honorable Guest Professor
32.	Japan	2 months	Nov.-Dec. 2016	Shizuoka University, Japan, JSPS Invitation Fellow
33.	Australia	7 days	Feb- Mar. 2019	Monash University, Australia, LEAP (MHRD) Program.
34.	Spain	3 days	Sep 23-25, 2019	Invited Talk on 6 th Int.Conference on Photonics (PHRONESIS), Barcelona.

Keynote Address/Plenary Lectures: 46

S.No	Name of the Programme	Organiser of the Programme	Level: International /National	Date
1.	Improving perovskite solar cell efficiency by modified electron transport layer.	Raja doraisingam seminar on materials for energy applications	N	24-25 March 2022
2.	International Conference on Emerging Materials and its Applications (ICEMA-2022)	St. Xavier's college, Palayamkottai	I	1 st March 2022
3.	International Conference on Growth of Crystals and their Technological Applications (GCTA-2022)	SSN College, Chennai.	I	10-12 January 2022
4.	International conference on Nanomaterials	Mahatma Gandhi University, Kottayam.	I	9-11 April 2021
5.	4th International Conference on Recent Trends in Applied Science and Technology (ICRTAST-2020)	Department of Physics, Bhardhidasan University, Trichirapalli	I	26-29, Dec 2020
6.	One Week Online International Faculty Development Programme on New Directions in Applied Science and Technology	Arunai International Research Foundation In Association with Department of Mathematics, Annamalai University and Elsevier	I	1-7 July 2020
7.	Indian summer school on crystal growth (ISSCG-2020)	SSN College of Engineering, Chennai.	N	14-23 May 2020
8.	National Seminar on Advanced materials and its applications	Karpagam Academy of Higher education	N	5-6 March 2020
9.	National Conference on Recent Trends in Advanced Materials and Characterization (RTAMC-2020)	VSM Group of Institutions, Ramachandrapuram, Andhra Pradesh	N	January 29-30 2020
10.	World Congress on Lasers, optics and Photonics (6 th Conference PHRONESIS)	Phronesis Research World, Barcelona, Spain	I	23-25 September 2019

11.	23 rd National seminar on crystal growth and applications.	Bharathiar University Coimbatore	N	28- 30 January 2019
12.	National Conference on recent trends in Physics of materials -2018 (NCRTPM-2018)	Pachayappa's College, Chennai.	N	23 Feb 2018
13.	State level conference on Materials based research work in nano technology	Sri Paramakalyani College, Alwarkurichi	N	9-10 Feb 2018
14.	22 nd National seminar on crystal growth and applications(XXII NSCGA-2018)	Sacred Heart College, Tirupathur	N	29-31 Jan 2018
15.	4 th International Conference on Nanoscience and Nano technology(ICONN 2017)	SRM University, Chennai	I	9-11 August 2017
16.	Special Lecture presentation at Nagoya Institute of Technology	Nagoya, Japan	I	Dec. 2 2016
17.	The 18 th Takayanagi Kenjiro Memorial Symposium toward Advanced Imaging Science Creation	Shizuoka University, Japan	I	Nov. 15-16 2016
18.	International Symposium toward the Future of Advanced Researches in Shizuoka University, Japan	Shizuoka University, Japan	I	Jan. 27-28, 2015
19.	International intradisciplinary Conference on the Frontier of Crystallography (IICFC)	Mangalore University, India	I	Dec. 29-30 2014
20.	Industry and Consultancy Cell & Centre for University Business Collaboration	Alagappa University, Karaikudi	I	Apr. 28 2014
21.	National Conference on Advanced Materials and its Applications (NCAMA-2014)	Annamalai University, Tamilnadu	N	Apr. 4 & 5 2014
22.	International Conference on Materials and Characterization Techniques	VIT University, Vellore	I	Mar 10-12, 2014
23.	National Conference on Recent Advances in Nanomaterials for Sensor Applications (NANOSE-14)	Dept. Bioelectronics & Biosensors Alagappa University, Karaikudi	N	Mar 6-7, 2014
24.	International Workshop on Advanced Materials (IWAM-14)	Department of Physics Alagappa University, Karaikudi	I	Mar. 2014

25.	XVIII National Seminar on Crystal Growth	SSN College of Engineering, Tamil nadu	N	Feb 24-26, 2014
26.	Improving Device Characteristics of Optical Crystals	Central University of Tamilnadu, Thiruvarur.	N	Feb 24-26, 2014
27.	National Conference on Recent Trends in Advanced Materials (NCRTAM-13)	PSG college of Technology, Coimbatore	N	Dec 16-17, 2013
28.	A special lecture on Optical Crystals	Karunya University, Coimbatore	N	Dec.17, 2013
29.	International Workshop on Crystal Growth and Characterization of Advanced Materials	Anna University, Chennai	I	18-19, Dec. 2013
30.	National conference on Crystal growth	Anna University, Chennai	N	July 24- 26, 2013
31.	National Seminar on Recent Trends in Crystal Growth & Nanomaterials (NSCGNM-2013)	PG and Research Department of Physics, National College, Trichy	N	Mar 13-15, 2013.
32.	International Conference on Recent Trends in Advanced materials (ICRAM-2012)	VIT University, Tamilnadu	I	Feb 20-22 2012
33.	Recent Trends in Functional Materials (FUNMAT-12)	Ultra College of Engineering and Technology	N	Feb 17, 2012
34.	International Conference on Advanced Materials (ICAM-2011)	PSG College of Technology, Coimbatore	I	Dec 12-16 2011
35.	International conference on advancement of Nanoscience and nanotechnology (ICOANN -2010)	Department of Nanoscience and nanotechnology, Alagappa university Karaikudi	I	Feb. 2010
36.	National conference on recent trends in advanced energy materials	Department of physics, Alagappa University, Karaikudi	N	March 2010
37.	One day conference on Nano materials	Dept. of Electrical Eng., Cinvestav, Mexico city, Mexico	I	Aug 12, 2010
38.	International Union of Materials Research Science Conference	Cancun, Mexico	I	Aug. 13-14, 2010

39.	National conference on recent trends in crystal growth, thin films and nano structured materials	Department of physics, Aditanar college of Arts and Science, Tiruchendur	N	Aug. 5–6, 2009
40.	A special lecture on Optical data storage using MnSLN	National Taiwan University, Taipei.	I	Feb 19-21 2006
41.	Asian Conference on Crystal Growth	Chinese Academy Sciences, Beijing, China	I	21.10.2005
42.	A special Invited Lecture	Bonn Univ., Bonn, Germany	I	June 2003
43.	Asian Conference on Crystal Growth and Crystal Technoogy	Tohoku University, Sendai, Japan	I	Aug 29 - Sep 1, 2000
44.	Asian Conference on Crystal Growth and Crystal Technoogy	Kyoto University, Kyoto, Japan	I	July 2001
45.	Invited under Young Scientist Programme	Cheju, South Korea	I	August 2001
46.	International Conference on Materials Science	Dhaka, Bangladesh	I	Oct 23-27 1999

Membership in

Professional Bodies

1. Life member in Indian Crystal Growth Association
2. Life member in Indian Physics Association (IPA)
3. SPIE: International Society for Optical Engg. USA
4. Life member - Indian National Science Congress
5. Life member-Materials Research Society of India (MRSI)
6. Life member-Japan Society for Promotion of Science (JSPS), Japan.
7. Life member-National Institute for Materials Science (NIMS), Japan.
8. Life member-Bose Science Society –India
9. Fellow Member – Academy of Sciences, Chennai.
10. Fellow Member – Royal Society of Chemistry, UK.

Editor in International Journals

1. Journal of Nanomaterials, Hindawi (I.F.1.5)
2. Journal of Sol-Gel Science and Technology, Springer (I.F.2.008)

Editorial Board

1. Azhagu News Letter
2. Department News Letter
3. Department Journal

Advisory Board

1. Internal Quality Assurance Cell (IQAC): Director
2. Intellectual Property and Patent Cell : Member
3. Instrumentation Centre : Member

Academic Bodies (such as Board of Studies etc.,)

1. Board of Studies-Chairman: M.Sc., Physics, Affiliated colleges, Alagappa University.
2. Board of Studies-Chairman: M.Sc., Physics (Regular & DDE), Alagappa University.
3. Board of Studies-Member: B.Sc., Physics, Affiliated colleges, Alagappa University.
4. Board of Studies –Member: M.Sc Physics-MS University, Tirunelveli.
5. Board of Studies –Member: B.Sc Physics-MS University, Tirunelveli.
6. Board of Studies –Member: M.Sc Physics-Bharathidasan University, Trichy.
7. Board of Studies –Member: M.Sc Physics-Bharathiar University, Coimbatore.
8. Board of Studies –Member: M.Sc Physics-Periyar University, Salem.
9. Board of Studies –Member: M.Sc Physics-Annamalai University, Chidambaram.
10. Board of Studies –Member: M.Sc Physics-Madurai Kamaraj University, Madurai.
11. Board of Studies –Member: M.Sc Physics-Madurai Kamaraj University, Madurai
12. Board of Studies –Member: M.Sc Physics – Avinashilingam Institute, Coimbatore.
13. Passing Board- Member: B.Sc., Thasim Beevi Collegefor Women, Kilakarai.

Resource persons in various capacities

Number of Invited / Special Lectures delivered: **46**

Others

1. Articles published in Newspapers / Magazines : 3
2. Products developed : 5
3. No. of PhD Thesis evaluated : 65
4. No. of PhD Public Viva Voce Examination conducted : 68

Conferences/ Seminars/ Workshops organized (National/International) in leading roles: 33

- World Standards day, Alagappa University on 14th October 2022.

- ACT NEXT: Noble prize in Physics 2021 at Department of Physics, Alagappa University on 17th March 2022.
- World Standards day, Alagappa University on 13th October 2021.
- ACT NEXT: Noble prize in Physics 2020 at Department of Physics, Alagappa University on 12th February 2021. (Online)
- ACT NEXT: Noble prize in Physics 2019 at Department of Physics, Alagappa University on 28th August 2020.
- Indo-UK International Virtual Conference on Advanced Nanomaterials for Energy and Environmental Applications (ICANEE-2020), 16–18, September 2020.
- International Virtual Conference on Recent Trends in Energy Material (INCRTEM-2020), Alagappa University, Karaikudi, 9-11, September, 2020.
- One Day International Webinar on Advances in Materials Science, Alagappa University, Karaikudi 10, June, 2020.
- Webinar entitled (i) Ideas and Implementation for Innovation and Incubation and (ii) Sun Our Nearest Star" organised by the Department of Physics, Alagappa University, Karaikudi on 13.05.2020.
- International Conference on Advanced Materials for Sustainable Energy and Sensors (INCAMSES-2019), Alagappa University, Karaikudi 16-17 September, 2019
- ACT NEXT :Noble prize in Physics 2018 at Department of Physics, Alagappa University on 5th April 2019
- National conference on Advanced materials for sustainable Energy and sensors (NCAMSES – 2019), Alagappa University, Karaikudi 20-22 March 2019.
- ACT NEXT: Noble prize in Physics 2017 at Department of Physics, Alagappa University on 28th March 2018.
- International Conference on momentous role of nanomaterials in renewable energy devices (IC MNRE 2018), Alagappa University, Karaikudi 1-2 March 2018
- Business Oriented Analytical Research and Development (BOARD-2018) at Department of Physics, Alagappa University during 31st January – 1st February 2018.
- National Conference on Futuristic Materials (NCFM-2017) at Department of Physics, Alagappa University during 27 & 28th March 2017.
- National Theme Meet on University- Industry Interface 2017 (NTM U21-2017) Alagappa University during 20th September 2017.
- ACT NEXT: Noble prize in Physics 2016 at Department of Physics, Alagappa University on 28th April 2017.
- Business Oriented Hands-on Training on Analytical Instrumentation (HI-BOAT-2017) at Department of Physics, Alagappa University during 2nd& 3rd March 2017.
- National Seminar on Synthesis, Characterization and Applications of Advanced Materials (AMR-2017) at Department of Physics, Alagappa University during 19 January 2017.
- Organized a National Seminar on “Recent Advancements in Frontier Areas of Materials Science” at Department of Physics, Alagappa University, Karaikudi, during 23-24th March, 2016.

- Alagappa University Celebrates Themed Nobel Excellence Talks – 2015 ACT NEXT-2015, at Department of Physics, Alagappa University on 18th March 2016.
- International Workshop on Advanced Materials -2014 (IWAM2014) at Department of Physics, Alagappa University during 20-21 March 2015.
- National Workshop on Characterization Techniques (NWCT-2, 2013) at Department of Physics, Alagappa University during 24 & 26, March 2013.
- National Workshop on Characterization Techniques (NWCT-1, 2012) at Department of Physics, Alagappa University during 24 & 26, March 2012.
- International Workshop on Advanced Energy Materials (IWAEM-2012) at Department of Physics, Alagappa University during 9-10, February 2012.
- State Level Workshop on Structure solving by Powder X-ray diffraction (SLWSSP-XRD 2011) at Department of Physics, Alagappa University during 26-27, July 2011.
- National Conference on Recent Trends in Advanced Energy Materials at Department of Physics, Alagappa University during 10th& 11th March, 2010.
- Organized a National Workshop on “Theory and Practice of XRD Techniques” as a member of organizing committee in the School of Physics, Alagappa University during July13-17,2009.
- National Workshop on “Crystal Growth and Characterization” at Department of Physics, Alagappa University on March 16, 2009.
- National Workshop on “Recent Advances in Materials Science” at Department of Physics, Alagappa University on March 07, 2008
- XXX Indian social Science Congress, at Department of Physics, Alagappa University during 27- 31 December 2006
- National Seminar on Recent trends in Materials Science, at Department of Physics, Alagappa University on 3rd May, 1999.

Contribution to the society

- ❖ Advanced Research training is being given for socially and economically deprived students from downtrodden villages of Sivaganga, Pudukottai and Ramanathapuram Districts.
- ❖ Motivating the poor students to pursue advanced research after M.Sc. program. Organizing Mass Awareness Programmes (ACT Next) every year.
- ❖ Hands on Training is being given for first graduated students to handle the sophisticated instruments like XRD, Raman, VSM, AFM, SEM, PL, FTIR, etc. Several hands-on-training programmes on the fabrication of energy conversion and storage devices such as Solar cells and Supercapacitors and demonstration of crystal growth experiments were conducted.

- ❖ The knowledge on developing devices like Electro-optic modulators using DKDP, DAST crystals, Optical holographic memories using Lithium Niobate (SLN), Lithium Tantalate (SLT) crystals is imparted to socially backward students.
- ❖ The development of long-term sustainable energy economy is one of the most important technological problems facing mankind. Hydrogen is one of the future energy carriers and it is still demand to produce clean hydrogen at low cost with low over potential. We have synthesized some of the novel materials for electrochemical hydrogen evolution reaction, which exhibited low overpotential in comparison to the recent literatures. Few of the works are listed below,

(a) Compared to different molar ratios of SrMoO₄ materials, 1:5 M ratios of SrMoO₄ nanostructures showed outstanding catalytic action toward OER performance with 187 mV at 10 mA/cm² and a small 20.5 mV/dec Tafel slope. In addition, this electrode showed better durability in 16 h chronoamperometry test (99%) without any decay. Therefore, optimizing the proper molar ratio of SrMoO₄ material is one of the important parameters to obtain a good candidate for electrochemical water-splitting applications.

(b) Electrochemical HER performance revealed that low concentration of citric acid assisted SrV₂O₆ nanostructure exhibited 78 mV low over potential to achieve 10 mA/cm² current density. It displays better catalytic performance with low 83.3 mV/dec Tafel slope and cyclic stability of 66% @16 h.

‘Hydrogen is the fuel for the future’ the word pay attention in every corner of the world. With this moto, we are looking forward to produce efficient hydrogen fuel in the laboratory level and utilize the small-scale practical application purpose and try to pattern and extent our knowledge with the collaboration of industries.

- ❖ The knowledge analyzed on important solar related parameters like Sun flares, black spots developed on the surface of the Sun, the degree of UV radiation from the Sun, Troposphere changes etc using the fabricated Electro-optic modulators are disseminated to M.Sc. and Ph.D. students.
- ❖ The physical phenomena of how Audio and Video modulation are being done with the Electro-optic modulator is taught to the students.
- ❖ Experience as a team leader both in academic as well as administrative responsibilities.
- ❖ Association with various institutions across the country through research collaboration and as member of various committees.
- ❖ The research activities of Department of Physics are being taught to village people through Village Placement Programme in every year.
- ❖ The lab facilities are opened to school students and affiliated college students on Science day celebrated on 28th February in every year.

- ❖ Guest Lectures were delivered at several institutions during the inauguration of Science clubs, Science Associations, Awareness Programmes, etc.,
- ❖ Popular Articles Published for the applications of Nanoscience and Technology in Energy, Environment, Healthcare, Society and Technology.
- ❖ The outcome of the above research work was resulted for the publication of **421 research papers** in highly reputed international/national **journals** and the results were presented in **375 International and National conferences**.
- ❖ **4 patents** were granted, **2 patents** were published and **2 patents** were filed respectively.
- ❖ The number of **citations & h index are 8521 and 45** respectively.
- ❖ Funding to the tune of **Rs.1.48 crores** was received from various funding agencies such as UGC, DST, AICTE, MHRD-SPARC and TNSCST to execute the above-mentioned works. As a capacity of coordinator UGC-SAP, DST-FIST, and DST-PURSE an amount of **Rs.949 lakhs** have been received for the development of Dept. of Physics.
- ❖ Hence, the nominee's contribution in the field of Material science and Crystal growth is substantial and the contribution is significant in the context of basic and applied research.

Publications in International Journals (2022 & 2023)

S.No.	Title of the article	Author (s)	Name of the Journal Vol. No. & Page	International / National	Impact factor
1.	Mesoporous oxygen vacancy 3D-rhombohedral Ov-Mn ₂ O ₃ mixed with rGO@ CNTs as cathode material for self-charging pouch-type hybrid supercapacitor applications	G.Ravi et al.	Materials Today Chemistry, 26 (2022) 101017.	I	8.301
2.	Simulation and analysis of lead-free perovskite solar cells incorporating cerium oxide as electron transporting layer	G.Ravi et al.	RSC Advances, 12 (2022) 32365-32373.	I	4.036
3.	Samarium doped barium molybdate nano structured candidate for supercapacitors	G.Ravi et al.	Journal of Energy Storage, 56 (2022) 105945.	I	8.907

4.	Heterostructured O _v -Mn ₂ O ₃ @Cu ₂ SnS ₃ @SnS Composite as Battery-Type Cathode Material for Extrinsic Self-Charging Hybrid Supercapacitors	G.Ravi et al.	Advanced Materials Interfaces, (2022) 2200104.	I	6.389
5.	Improving the potential of ethyl acetate green anti solvent to fabricate efficient and stable perovskite solar cells.	G.Ravi et al.	RSC Advances, 12 (2022) 32611-32618	I	4.036
6.	Rare Earth-Doped MoS ₂ for Super capacitor Application	G.Ravi et al.	Energy & Fuels, 36 (2022) 6476-6482.	I	4.654
7.	Hydrothermal Synthesis of Flower Like MnSe ₂ @MoSe ₂ Electrode for Supercapacitor Applications	G.Ravi et al.	Topics in Catalysis, 65 (2022) 615-622.	I	2.781
8.	Facile preparation and characterization of MXene@Platinum nanocomposite for energy conversion applications	G.Ravi et al.	Fuel, 317 (2022) 123493.	I	8.035
9.	Preparation and characterization of antimony nanoparticles for hydrogen evolution activities	G.Ravi et al.	Fuel, 325 (2022) 124908.	I	8.035
10.	Rare earth metal (Sm)-doped NiMnO ₃ nanostructures for highly competent alkaline oxygen evolution reaction	G.Ravi et al.	Nanoscale Advances, 4 (2022) 2501-2508.	I	5.598
11.	One-step fabrication of copper sulfide catalysts for HER in natural seawater and their bifunctional properties in freshwater splitting	G.Ravi et al.	Fuel, 322 (2022) 124073.	I	8.035
12.	Carbonization and optimization of biomass waste for HER application	G.Ravi et al.	Fuel, 324 (2022)124466.	I	8.035

13.	Nitrogen and nitrogen-sulfur doped graphene nanosheets for efficient hydrogen productions for HER studies	G.Ravi et al.	International Journal of Hydrogen Energy, (2022).	I	7.139
14.	Investigation of optimum Mn dopant level on TiO ₂ for dye degradation	G.Ravi et al.	Chemosphere, (2022) 135574.	I	8.943
15.	Effect of grinding time on bismuth oxyhalides optical and morphological properties influence on photo catalytic removal of organic dye	G.Ravi et al.	Chemosphere, (2022) 135272.	I	8.943
16.	ZnCo ₂ O ₄ / CNT composite for efficient supercapacitor electrodes	G.Ravi et al.	Ceramics International, (2022).	I	5.532
17.	Morphological evolution of carnation flower like Cu ₂ CoSnS ₄ battery type electrodes	G.Ravi et al.	Materials Advances, (2022).	I	3.18
18.	Computational studies and experimental fabrication of DSSC device assembly on 2D-layered TiO ₂ and MoS ₂ @TiO ₂ nanomaterials	G.Ravi et al.	Physica B: Condensed Matter,633 (2022) 413770.	I	2.988
19.	PEG mediated tetragonal calcium molybdate nanostructures for electrochemical energy conversion applications	G.Ravi et al.	International Journal of Hydrogen Energy, (2022).	I	7.139
20.	Surfactant induced copper vanadate (β -Cu ₂ V ₂ O ₇ , Cu ₃ V ₂ O ₈) for different textile dyes degradation	G.Ravi et al.	Environmental Research, 211 (2022) 112964.	I	8.431
21.	Electrochemical energy storage applications of carbon nanotube supported heterogeneous metal sulfide electrodes	G.Ravi et al.	Ceramics International,48 (2022) 6157-6165.	I	5.532
22.	Mapping and Scientometric Measures on Research Publications	G.Ravi et al.	Topics in Catalysis (2022)	I	2.781

	of Energy Storage and Conversion		1-12.		
23.	Construction of bimetallic ZnSe-CoSe ₂ flower as a finely tuned electrode for enhancing supercapacitor performance	G.Ravi et al.	International Journal of Energy Research (2022).	I	4.672
24.	Facile hydrothermal synthesis of MXene@antimony nanoneedle composites for toxic pollutants removal	G.Ravi et al.	Environmental Research, 210 (2022) 112904.	I	8.431
25.	Flower like strontium molybdate for efficient energy conversion applications	G.Ravi et al.	Fuel, 308 (2022) 122051.	I	8.035
26.	Scheelite-type Fe substituted SrWO ₄ for hydrogen evolution reaction under alkaline conditions	G.Ravi et al.	Fuel, 316 (2022) 123309.	I	8.035
27.	Characterization of activated biomass carbon from tea leaf for supercapacitor applications	G.Ravi et al.	Chemosphere, 291 (2022) 132931.	I	8.943
28.	Morphology investigation on direct growth ultra-long CNTs by chemical vapour deposition method for high performance HER applications	G.Ravi et al.	Fuel, 330 (2022) 125532.	I	8.035
29.	Conversion and reducing agent effect on zero valent iron into Fe ₃ O ₄ for photocatalytic degradation under UV light irradiation	G.Ravi et al.	Environmental Research, 214 (2022) 113959.	I	8.431
30.	Nd doped ZrO ₂ photocatalyst for organic pollutants degradation in wastewater	G.Ravi et al.	Environmental Technology & Innovation, 28 (2022) 102851.	I	7.758

31.	Investigation of g-C ₃ N ₄ ratio on CaFe ₂ O ₄ to remove toxic pollutants from wastewater	G.Ravi et al.	Journal of Hazardous Materials Advances 7 (2022) 100143.	I	14.224
32.	Investigation of pure and g-C ₃ N ₄ loaded CdWO ₄ photocatalytic activity on reducing toxic pollutants	G.Ravi et al.	Chemosphere, 291 (2022) 133090.	I	8.943
33.	Exploration of a Bimetallic NiSe ₂ @CoSe ₂ Nano sphere as a Proficient Electrode for Electrochemical Activity	G.Ravi et al.	Energy & Fuels, 36 (2022) 1726-1734.	I	4.654
34.	Electrochemical Enhancement of Binary CuSe ₂ @ MoSe ₂ Composite Nanorods for Supercapacitor Application	G.Ravi et al.	Topics in Catalysis, (2022) 1-9.	I	2.781
35.	Crystal growth and characterization of 2-amino-6-methylpyridinium p-chlorobenzoate dihydrate single crystal: a novel third-order nonlinear optical material for optoelectronic application	G.Ravi et al.	Journal of Materials Science: Materials in Electronics, (2022) 4598-4616.	I	2.779
36.	Investigation of PEG directed Sb ₂ WO ₆ for dyes removal from wastewater	G.Ravi et al.	Chemosphere, 291 (2022) 132677.	I	8.943
37.	The electrochemical energy storage and photocatalytic performances analysis of rare earth metal (Tb and Y) doped SnO ₂ @ CuS composites	G.Ravi et al.	Advanced Powder Technology, 33 (2022) 103442.	I	4.969

38.	Polyvinylpyrrolidone-assisted novel copper antimony sulfide nanorods for highly efficient hydrogen evolution reaction	G.Ravi et al.	Fuel, 314 (2022) 123096.	I	8.035
39.	Novel strontium vanadate nanostructures for hydrogen evolution reaction activity	G.Ravi et al.	Materials Letters, 309 (2022) 131426.	I	3.574
40.	Fabrication of Ce doped TiO ₂ for efficient organic pollutants removal from wastewater	G.Ravi et al.	Chemosphere, (2022) 133540.	I	8.943
41.	Recent Progression of Flower Like ZnSe@MoSe ₂ Designed as an Electrocatalyst for Enhanced Supercapacitor Performance	G.Ravi et al.	Topics in Catalysis, (2022) 1-9.	I	2.781
42.	Synthesis of pure and lanthanum-doped barium ferrite nanoparticles for efficient removal of toxic pollutants	G.Ravi et al.	Journal of Hazardous Materials, 424 (2022) 127604.	I	14.224
43.	Experimental and theoretical approach of novel third-order nonlinear optical single crystal: benzamide 5-chloro-2-hydroxybenzoic acid	G.Ravi et al.	Journal of Materials Science: Materials in Electronics (2022) 1-9.	I	2.779
44.	In-situ deposition of amorphous Tungsten (VI) oxide thin-film for solid-state symmetric supercapacitor	G.Ravi et al.	Ceramics International, 48 (2022) 2510-2521.	I	5.532
45.	Enhanced visible light-driven photocatalytic performance of CdSe nanorods	G.Ravi et al.	Environmental Research, 203 (2022) 111855.	I	8.431

46.	Facile single-step synthesis of MXene@CNTs hybrid nanocomposite by CVD method to remove hazardous pollutants	G.Ravi et al.	Chemosphere, 286 (2022) 131733.	I	8.943
47.	Gadolinium doped CeO ₂ for efficient oxygen and hydrogen evolution reaction	G.Ravi et al.	Fuel, 310 (2022) 122319.	I	8.035
48.	Effect of sodium dodecyl sulfate surfactant concentrations on the novel strontium copper oxide nanostructures for enriching hydrogen evolution reaction electrochemical activity in alkaline solution	G.Ravi et al.	Journal of Alloys and Compounds, 928 (2022) 167001.	I	6.371
49.	Nickel and cobalt co-doped MnCO ₃ nanostructures for water oxidation reaction	G.Ravi et al.	International Journal of Hydrogen Energy, 47, 72 (2022) 30810-30818.	I	7.139
50.	Cost effective and facile low temperature hydrothermal fabrication of Cu ₂ S thin films for hydrogen evolution reaction in seawater splitting	G.Ravi et al.	International Journal of Hydrogen Energy, 47,72 (2022) 30819-30829.	I	7.139
51.	Hydrothermal construction of flower-like CuS microspheres electrocatalysts for hydrogen evolution reactions in alkaline fresh water, alkaline seawater, and seawater	G.Ravi et al.	International Journal of Energy Research, (2022).	I	4.672

52.	Green synthesis of ZnO nanoparticles using Abutilon Indicum and Tectona Grandis leaf extracts for evaluation of anti-diabetic, anti-inflammatory and in-vitro cytotoxicity activities	G.Ravi et al.	Ceramics International, 48, 22 (2022) 33624-33634.	I	5.532
53.	Fabrication of heterostructure NiO/ZnO thin film for pseudocapacitor application	G.Ravi et al.	Journal of Sol-Gel Science and Technology, 104, 1 (2022) 198-210.	I	2.606
54.	Ag doped ZnSnO ₃ nanocubes: Promotion on the charge storage mechanism for supercapacitors	G.Ravi et al.	Journal of Physics and Chemistry of Solids, 169 (2022) 110894.	I	4.383
55.	Echinochloa frumentacea grains extract mediated synthesis and characterization of iron oxide nanoparticles: A greener nano drug for potential biomedical applications	G.Ravi et al.	Journal of Drug Delivery Science and Technology, 76 (2022) 103799.	I	5.602
56.	Ionic Liquid Passivator for Mesoporous Titanium Dioxide Electron Transport Layer to Enhance the Efficiency and Stability of Hole Conductor-Free Perovskite Solar Cells	G.Ravi et al.	Energy & Fuels, (2022).	I	4.654
57.	Effect of Neodymium substitution on the structural, morphological and optical properties of yttrium oxide nanocrystals	G.Ravi et al.	Materials Research Innovations, (2022) 1-10.	I	2.12

58.	Pre-eminent design and performance of hybrid diatomic sulphide materials for supercapacitor applications	G.Ravi et al.	Interational Journal Of Energy Research, (2022).	I	4.672
59.	PVP-assisted grass-like NiSe@ZnSe composite for environmental energy applications	G.Ravi et al.	Journal of Materials Science: Materials in Electronics, 33, 11 (2022) 8409-8416.	I	2.779
60.	Probing the energy conversion and storage process in two dimensional layered bismuthene-hexagonal boron nitride nanocomposite electrode and PVA-KOHBaTiO ₃ piezo electrolyte nano generators	G.Ravi et al.	Nanoenergy, 106 (2023) 108060	I	19.069
61.	A Comprehensive review on novel quaternary metal oxide and sulphide electrode materials for supercapacitors	G.Ravi et al.	Renewable and Sustainable energy reviews (2023)	I	16.799
62.	Copper doped zinc sulfide nanostructure for alternative energy production	G.Ravi et al.	Materials Letters (2023)	I	3.57
63.	Synthesis and procedure antibacterial activity of Ca doped Zn ₂ SnO ₄ nanoparticles by microwave assisted method	G.Ravi et al.	Applied Physics A, 129 (2023) 154	I	2.98