



**Dr. S. KARUPPUCHAMY**

**Professor and Head**

### Contact

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### Academic Qualifications

Degree	Institution	Year	Branch	Class
D.Sc.	Periyar University, India	2020	Chemistry	<b>Highly Commended</b>
Ph.D.	Gifu University, Gifu, Japan	2002	Materials Engineering	<b>Highly Commended</b>
M.Sc.	Madurai Kamaraj University, India	1996	Chemistry	<b>First Class</b>
B.Sc.	Madurai Kamaraj University, India	1994	Chemistry	<b>First Class</b>

## Teaching and Research Experiences: 25 Years

<b>Position</b>	<b>Institution</b>	<b>Duration</b>
Professor and Head	Alagappa University, Karaikudi, India	<b>2016-Till date</b>
Associate Professor and Head	Alagappa University, Karaikudi, India	<b>2013-2016</b>
Associate Professor	Kongu Engineering College Erode, India	<b>2012-2013</b>
Joint Senior Researcher	Kyushu Institute of Technology Kitakyushu, <b>Japan</b> & Universiti Putra Malaysia, <b>Malaysia</b>	<b>2011-2012</b>
Scientific Advisor	TSM Co. Ltd., Gumi, <b>South Korea</b>	<b>2009-2011</b>
Senior Scientist	Yokohama Rubber Co. Ltd. Iizuka, <b>Japan</b>	<b>2006-2009</b>
Research Associate	Asahi Kasei Corporation, Fuji, <b>Japan</b>	<b>2002-2004</b>
Monbukagakusho Research Fellow	Gifu University, Gifu, <b>Japan</b>	<b>1998-2002</b>

## PDF/ Visiting Professor

<b>Position</b>	<b>Institution</b>	<b>Duration</b>
Post Doctoral Researcher	Henkel Kindai Lab, Kinki University, Iizuka, Japan	2004-2006
Visiting Professor	Kyushu Institute of Technology, Kitakyushu Japan	(1998-2012), (2015), (2016) (2018) & (2019)
Visiting Professor	SPD Laboratory, Inc. Japan	(1998-2012), (2015), (2016) (2018) & (2019)
Visiting Professor	Pusan National University, South Korea	(2008), (2009), (2010), (2011)

Visiting Professor	Henkel Corporation Germany	(2006), (2017)
Visiting Professor	The Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland	(2017)
Visiting Professor	Uppsala University, Sweden	(2017)
Visiting Professor	KTH Royal Institute of Technology, Sweden	(2017)
Visiting Professor	Mahidol University, Thailand	(2012), (2015), (2016), (2018) (2019)
Visiting Professor	National University of Singapore, Singapore	(2001), (2005) (2009)
Visiting Professor	University of Hawaii, USA	(1999)
Visiting Professor	Universiti Teknologi Mara, Malaysia	(2000), (2001), (2002), (2005), (2011-2012), (2015) & (2016)
Visiting Professor	Universiti Putra Malaysia, Malaysia	(2000), (2001), (2002), (2005), (2011-2012), (2015) & (2016)

### Academic and Additional Responsibilities

S.No	Position	University Bodies	Period	
			From	To
1.	Member – Vice Chancellor Officiating Committee	Alagappa University	2021	2022
2.	Member of Syndicate	Alagappa University	2020	2023
3.	Member – Finance Committee	Alagappa University	2022	2023
4.	Chairperson – School of Chemical Sciences	Alagappa University	2023	Till date
5.	Head – Department of Energy Science	Alagappa University	2013	Till date
6.	Senate Member	Alagappa University	2013	Till date
7.	Member–Internal Quality Assurance Cell (IQAC)	Alagappa University	2022	2023

8.	Member – DDE - Governing Council	Alagappa University	2022	2023
9.	Member – University Sports Board	Alagappa University	2022	2023
10.	Member–Centre for Internal Quality Assurance (DDE)	Alagappa University	2021	2023
11.	Chairman - Research Advisory Committee	Alagappa University	2021	2022
12.	Chairman - Standing Committee on Academic Affairs	Alagappa University	2021	2022
13.	Convener - Admission Committee	Alagappa University	2021	2023
14.	Member - Purchase Committee	Alagappa University	2021	2023
15.	Member - Administrative Staff - Promotion Committee	Alagappa University	2021	2023
16.	Member - Innovation Institution Council	Alagappa University	2021	2022
17.	Member - Disciplinary Committee	Alagappa University	2020	2023
18.	Board of Governing Body RUSA-2.0	Alagappa University	2020	2023
19.	Project Monitoring Unit - RUSA-2.0	Alagappa University	2020	Till date
20.	Co-ordinator-RUSA 1.0 Research and Innovation	Alagappa University	2017	Till date
21.	Co-ordinator-Incubation and Tech. Transfer Centre	Alagappa University	2019	2022
22.	Member - Standing Committee on Academic Affairs	Alagappa University	2017	Till date
23.	Co-ordinator - Alternative Energy Unit	Alagappa University	2016	Till date
24.	Co-ordinator - Environmental Awareness Club	Alagappa University	2016	2019
25.	Chief Superintendent - University Examinations	Alagappa University	2015	2016
26.	Chairman - Board of Studies	Department of Energy Science, Alagappa University	2013	Till date
27.	Member - Board of Studies	Chemistry DDE, Alagappa University	2022	2023

## Areas of Research

- Nanotechnology
- Renewable Energy (Solar, Bioenergy)
- Energy Storage Materials
- Electrochemistry and Environmental Science

## Patents Filed

1. N. Okada and S. Karuppuchamy, Japanese patent, Number; 2005-353289.
2. S. Karuppuchamy and M. Kurihara, Japanese patent, Number; 2005-005561.
3. S. Karuppuchamy, N. Suzuki, S. Ito, M. Schweinsberg, F. Wiechmann and C. Schroder, European Patent (2006): EP: 1893791.
4. S. Karuppuchamy, N. Suzuki, S. Ito, M. Schweinsberg, F. Wiechmann and C. Schroder, European Patent (2006): EP: 1893791A2.
5. S. Karuppuchamy, N. Suzuki, S. Ito, M. Schweinsberg, F. Wiechmann and C. Schroder, PCT Int. Appl. (2006), WO 2006136333.
6. S. Karuppuchamy, N. Suzuki, S. Ito, and M. Schweinsberg, F. Wiechmann and C. Schroder, PCT Int. Appl. (2006), WO 2006136334.
7. S. Karuppuchamy, N. Suzuki, S. Ito, and M. Schweinsberg, F. Wiechmann and C. Schroder, PCT Int. Appl. (2006), WO 2006136335 A1.
8. S. Karuppuchamy, N. Suzuki, S. Ito, M. Schweinsberg, H. Dolhaine, F. Wiechmann and C. Schroeder, US Patent (2008): US 20080210567.
9. H. Nishida Y. Andou, Y. Shirai, S. Karuppuchamy, A. Noor Ida, A. Hidayah and M.A. Hassan, Japanese Patent Application Number, JP2011-256880.
10. H. Nishida Y. Andou, Y. Shirai, S. Karuppuchamy, A. Noor Ida, A. Hidayah and M.A. Hassan, PCT Inter. Application, WO/2013/076960.
11. H. Nishida Y. Andou, Y. Shirai, S. Karuppuchamy, A. Noor Ida, A. Hidayah and M.A. Hassan, Malaysian Patent Application No: PI2014700501.

## Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	PDF	4	-
	Ph.D	7	4

Project	PG	58	20
	UG / Others	-	-

## Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
133	157	12	44	10

**Cumulative Impact Factor (as per JCR)** : 408

**h-index** : 35

**i10 index** : 71

**Total Citations** : 3800

## Thesis Evaluation

**Thesis Evaluated** : 40

**Viva-Voce Examiner** : 30

## Funded Research Projects

S.No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	RUSA R&I	2017	2024	Sustainable Energy Technologies	150.00
2	RUSA 2.0	2019	2024	Advanced Nanomaterials for Sustainable Energy and Sensor Application	54.75
3	ICMR	2019	2022	Smart Lab on a Chip Biosensor Integrated with Protein Imprinted Polymer Electrodes for Rapid Detection of HIV Infection	27.30
4	DST	2019	2022	Molecularly Imprinted Polymer Based Biosensor for Tuberculosis Detection	17.40

5	DBT	2018	2021	Molecularly Imprinted Polymer Sensor Arrays for Mycotoxindetection in Plants	36.45
6	DST-SERI	2018	2021	Fabrication of Low Cost Inverted Planar Perovskite Solar Cell	51.46
7	DST-PURSE	2017	2020	Fabrication of Dye Sensitized Solar Cells	7.50
8	AURF	2017	2019	Synthesis of Nanostructured Metal oxides by Biological Route for Solar Cell Applications	3.00
9	DAE-BRNS	2016	2019	Development of Low Cost Hole Transporting Materials for Highly Efficient Perovskite solar cells	32.90
10	Himadri Chemicals	2015	2016	Development of Energy Storage Materials	0.66
11	DST-SERB	2013	2016	Development of Highly Efficient dye-sensitized solar cells	17.30
12	MOHE, Malaysia	2012	2017	Recovery of crude palm oil from EFB, USB, POME and DC	180.00

## Distinctive Achievements / Awards

### Awards

1. Outstanding Researcher Award - 2022, Alagappa University, Karaikudi.
2. Award of Excellence - 2021 for rendering exemplary service in energy science research by Ministry of Agriculture and Farmers Welfare, Government of India, Karaikal, Pondicherry during Dec. 24, 2021.
3. Tamil Nadu Senior Scientist Award for Chemical Sciences-2018, Govt. of Tamil Nadu.
4. Tamil Nadu Scientist Award (TANSA-2017) for Chemical Sciences, Govt. of Tamil Nadu.
5. Scientific Advisor (Honorary Position), SPD Laboratory, Japan Apr. 2014 to Till date.
6. Elected as Fellow Academy of Sciences, Chennai, 2018.
7. Appreciation award – 2018, Alagappa University, Karaikudi.
8. Best Researcher Award - 2017, EET CRS-17.
9. Alagappa Excellence Award for Research (2016-2017), Alagappa University, Karaikudi.
10. Best paper award received at the International Conference on Functional Materials, PSN College of Engineering and Technology, Tirunelveli during Sep. 7-10, 2016.
11. Best paper award received at the National Conference on Research advances in materials science and applications (RAMSA-2016), Anna University, Tiruchirappalli during Aug. 19-20, 2016.
12. Best paper award received at the National Conference on Recent Developments in Chemistry (RDC-15), Feb. 13-14, 2015, Aruppukottai, Tamil Nadu.
13. Seven Research Papers are listed as TOP 25 Hottest articles in the Elsevier Journals.
14. Visited for collaborative work, Kinki University, Kyushu Institute of Technology and SPD Laboratory, Japan during Oct. 2015.

15. Visited for collaborative work, Universiti Technology Mara and Universiti Putra Malaysia, Malaysia during Apr. 2015.
16. Best paper award received at the National Conference on Recent Developments in Chemistry (RDC-15) held at Aruppukottai, Tamil Nadu - Feb. 13-14, 2015
17. Leading scientists of the World 2013 – International Biographical Centre, Cambridge, UK.
18. Young Scientist Award – 2013, Department of Science and Technology (DST), Government of India.
19. Asia Biomass Energy Researcher, New Energy Foundation, Government of Japan at Kyushu Institute of Tech. Japan during Sep. 2011 to Mar. 2012.
20. Scientific Adviser (Honorary Position), TSM Co. Ltd. Gumi, South Korea during Apr. 2009 to Mar. 2011.
21. Biography-2008, Marquis Who's Who in the World, USA.
22. Best paper award from the Japanese Society of Color Material, Japan during 2007.
23. Innovation award-2005 from Henkel Kindai Lab., Japan & Germany.
24. Postdoctoral Fellowship, Asahi Kasei Corporation, Japan during 2002-2004.
25. Travel Grant was awarded from Gifu University, Japan during Oct. 1999 to present a paper at the Joint Int. Electrochemical Society Meeting, Honolulu, USA.
26. Research Fellowship was awarded by Ministry of Education, Science and Culture. (MONBUSHO), Govt. of Japan, Gifu University, Japan during 1998-2002.

### **Honours/Achievements**

1. National Advisory Committee Member – International Conference on Frontier Area in Chemical Technologies 2022 (FACTs 2022) held at Department of Industrial Chemistry, Alagappa University, Karaikudi during Feb. 16-18, 2023.
2. Selection Committee Member for the Assessment Committee CSIR–SRF Extension of Fellowship held at CSIR-CECRI, Karaikudi during Jan. 11, 2023.
3. Scientific Advisory Committee Member – Indo – Poland Workshop on Functional Materials for Sensor and Energy Applications (FM-SEA) held at Department of Bioelectronic and Biosensor, Alagappa University, Karaikudi during Nov. 10-11, 2022.
4. Invited Reviewer for the papers submitted to 66<sup>th</sup> DAE Solid State Physics Symposium held at Birla Institute of Technology Mesra, Ranchi during Dec. 18-22, 2022.
5. Invited Reviewer for the papers submitted to 64<sup>th</sup> DAE Solid State Physics Symposium held at IIT Jodhpur during Dec. 18-22, 2019.
6. Advisory Committee Member - 3<sup>rd</sup> International Conference on Applied Nanoscience & Nanotechnology (ICANN–2019) held at Alagappa University, Karaikudi during Mar. 18-19, 2019.
7. Chaired a Session in the 3<sup>rd</sup> International Conference on Applied Nanoscience & Nanotechnology (ICANN–2019) held at Alagappa University, Karaikudi during Mar. 18-19, 2019.
8. Advisory Committee Member – International Conference on Sustainable Energy Resources and Materials (ISERMAT-2019) during Mar. 14-15, 2019.
9. Chaired a Session in the Second International Conference - ISERMAT 2019 held at SSN College of Engineering, OMR, Kalavakkam, Chennai during Mar. 14-15, 2019.



10. Advisory Committee Member – International Conference on Sustainable Energy Technologies held at Bharathidasan University, Tiruchirappalli during Jun. 27-28, 2018.
11. Served as a Member of Assessment Committee for UGC-JRF Fellow up gradation held at CECRI, Karaikudi during Mar. 5, 2018.
12. Chaired a Session in the International Conference on Advanced Nanomaterials, Alagappa University, Karaikudi during Feb. 26-27, 2018.
13. Invited Reviewer for the papers submitted to 62<sup>nd</sup> DAE Solid State Physics Symposium sponsored by BRNS, Mumbai, Govt. of India held at Mumbai during Dec. 26-30, 2017.
14. Chaired a Session in the International Conference on Frontier Areas in Chemical Technologies (FACTS-2017) held at Karaikudi during Jul. 6-8, 2017.
15. Advisory Committee Member – International Conference on Recent Developments in Arts, Science, Agriculture and Environment held at Kualalumpur, Malaysia during May 5-8, 2017.
16. Advisory Committee Member – National Conference on Futuristic Materials (NCFM-2017) during Mar. 27-28, 2017.
17. Advisory Committee Member – Workshop on Biosensors in Agricultural, Environmental and Medical Sciences during Mar. 13-14, 2017.
18. Chaired a session at the National Seminar on Advanced Materials Research (AMR-2017) held at Alagappa University during January 19, 2017.
19. Served as one of the Judges to select Best paper presentation in the Palm Oil Milling Technology Colloquium 2016 (POMTeC'16) held at Hotel UiTM, Shah Alam, Malaysia during Mar. 30-31, 2016.
20. Chaired a session in the International Conference on Frontier Areas in Chemical Technologies (FACTS-2016) held at Karaikudi, India during Mar. 21-23, 2016.
21. Chairperson in the 1<sup>st</sup> International Conference on Energy, Environment and Engineering (ICEEE-2016) held at CIT, Coimbatore during Feb. 29-Mar. 2, 2016.
22. Served as External Examiner for M. Phil and Ph.D. candidates of CSIR-CECRI, Bharathidasan University, Kalasalingam University, Gandhigram Rural Institute, Vellore Institute of Technology, MS University, Periyar University and Bharathiar University, India.
23. Doctoral Committee member for Research scholars of Thiagarajar College of Engineering, Anna University, Chennai, India.
24. Doctoral Committee member for Research scholars of PSN College of Engineering, affiliated to Anna University, Chennai, India.
25. Chaired a Session in the International Conference on Sustainable Energy Resources and Materials (SERM-2015), Jan. 8-9, 2015.
26. International Advisory Committee Member – International Conference on Sustainable Energy Resources and Materials (SERM-2015), Jan. 8-9, 2015.
27. International Scientific Committee Member, International conference on Energy – 2015 (ICOE-2015), Colombo, Sri Lanka.
28. National Advisory Board Member – International Conference on Nanostructured Materials and Nanocomposites (ICNM -2015) Mathura, UP India.
29. Reviewer for more than 35 journals from various scientific publishers such as Elsevier, American Chemical Society, Springer, Taylor and Francis, ECS USA, Hindawi and Cambridge Journals.

30. Served as Inspection Committee member to inspect the DDE centres of Annamalai University during Dec. 1-30, 2015.
31. International Technical Committee Member, International Conference on Nanomaterials and Nanotechnology (NANO-15) Nano-15, Dec. 7-10, 2015.
32. Served as one of the Judges for selecting best paper at the CRSI Symposium in Chemistry held at NIT Trichy, Jul. 23-25, 2015.
33. Served as one of the Judges for selecting best paper at the ISERMAT-2015 held at Chennai during Jan. 8-9, 2015.
34. Chaired a Session in the International Conference on Sustainable Energy Resources and Materials (ISERMAT-2015) held at Chennai, Tamil Nadu, Jan. 8-9, 2015.
35. International Advisory Committee Member-International Conference on Sustainable Energy Resources and Materials (ISERMAT-2015) held at Chennai, Tamil Nadu, Jan. 8-9, 2015.
36. Chaired a Session in the National Conference on Materials for Energy Storage and Conversion held at Tirunelveli, Tamil Nadu, Sep. 4-5, 2014.
37. Chaired a Session in the International Conference on Fracture 2014 held at Kottayam, India during Aug. 9 -11, 2014.
38. National Advisory Committee Member – ICNM 2014.
39. National Advisory Committee Member – International Conference on Fracture 2014.
40. Editorial Board Member - Advanced Nanoscience and Technology: An International Journal (ANTJ).
41. Chaired a session in the International Workshop on Adv. Mater. (IWAM-2014) held at Alagappa University during Mar. 20-21, 2014.
42. National Advisory Committee Member – National Conference on Recent Adv. in Nanomater. for Sensor Applications during Mar. 6-7, 2014.
43. External Expert for judging the best poster and oral presentation during National Science Day held at CSIR-CECRI, Karaikudi during Feb. 28, 2014.
44. Served as Member of squad team for April 2013 Alagappa University Examinations.
45. Served as a Member of the panel of Judges for final year students Project presentation at the Dept. of Process and Food Engineering held at Faculty of Eng. UPM, Malaysia during Jun. 26, 2012.
46. Organizing committee member of the CSIR & BRNS Sponsored Conference on Recent Applications of Nanomaterials in Chemistry and Environmental Research, Jul. 20-21, 2012, India.
47. Chaired a Session in the First International Conference on Nanostructured materials and Nanocomposites held at Kottayam, India during Apr. 6-8, 2009.

## Events Organized in Leading Roles

Number of Seminars / Conferences / Workshops / Events organized: **25**

Position	Programme	Duration	Institution
Convener	One day Special Lecture on Energy Storage Materials	28.07.2023	Alagappa University

Convener	One day Indo-Japan Seminar on Renewable Energy: Opportunities and Challenges	26.09.2022	Vidyagiri College of arts and science
Convener	One day Special Lecture: Research on Solar Technology in Japan	23.09.2022	Alagappa University
Convener	National Seminar on Renewable Energy Science and Technology (NSREST-2022)	22.03.2022	Alagappa University
Convener	National Energy Conservation Day - 2021	22.03.2022	Alagappa University
Convener	Workshop on Development of Low Cost Solar cells for Rural and Tribal Applications	15.03.2022	Alagappa University
Convener	Second International Virtual Conference on Renewable Energy and Technology (ICREST-2020)	28.09.2020 to 29.09.2020	Alagappa University
Convener	Webinar on Energy Conversion and Storage Devices	27.05.2020	Alagappa University
Convener	Webinar on New Generation Solar Cells	18.05.2020	Alagappa University
Co-Convener	National Workshop on Advanced Nanomaterials for Sustainable Energy and Sensor Applications	04.03.2020 to 06.03.2020	Alagappa University
Convener	One day Seminar on Energy Conservation	13.12.2019	Alagappa University
Convener	One day Special Lecture on Thin Film Technology and Organic Solar Cells	08.07.2019	Alagappa University
Convener	One day Special Lecture on Dye-Sensitized Solar Cells and its Future Perspectives	12.02.2019	Alagappa University
Convener	One day Special Lecture on Development of Low Cost DSSC	11.02.2019	Alagappa University
Convener	One day Seminar on Energy Conservation	13.12.2018	Alagappa University
Convener	Special Lecture on Waste to Energy	04.12.2018	Alagappa University
Convener	One day Special Lecture on Thin Film Technology in Solar Cells	06.07.2018	Alagappa University
Convener	One day Special Lecture on Development of Electrode Materials for Low Cost Solar Cells	05.07.2018	Alagappa University
Convener	One day Special Lecture on Bioenergy, Focusing on the optimization of the Biogas Process and Environmental Analysis	06.03.2018	Alagappa University
Convener	International Conference on Renewable Energy and Technology (ICREST-2017)	10.03.2017 to 11.03.2017	Alagappa University

Convener	One day Seminar on Energy Conservation	10.12.2016	Alagappa University
Convener	One day Seminar on Energy Conservation	14.12.2015	Alagappa University

## Events Participated

**Number of Conferences / Seminars / Workshops: 201**

## Overseas Exposure / Visits

1. Kyushu Institute of Technology, Kitakyushu, Japan
2. SPD Laboratory, Inc.
3. Pusan National University, South korea
4. Henkel Corporation, Germany
5. The Ecole polytechnique federale de Lausanne (EPFL), Switzerland
6. Uppsala University, Sweden
7. KTH Royal Institute of Technology, Sweden
8. Mahidol University, Thailand
9. National University of Singapore, Singapore
10. University of Hawaii, USA
11. Universiti Teknologi Mara, Malaysia
12. Universiti Putra Malaysia, Malaysia

## Membership

### Professional Bodies

1. Life Member- Chemical Research Society of India (CRSI)
2. Life Active Member-Society for Advancement of Electrochemical Science and Technology
3. Member- International Society of Electrochemistry (ISE)
4. Member- Asian Federation of Biotechnology (AFOB)
5. Member-American Nano Society, USA

### Collaborations

1. Kyushu Institute of Technology, Japan
2. Kinki University, Japan
3. Toyota Technological Institute, Japan
4. Polytechnic University of Aguascalientes, Mexico

5. Universiti Putra Malaysia, Malaysia
6. Universiti Teknologi Mara, Malaysia
7. EPFL, Lausanne, Switzerland
8. Mahidol University, Thailand

#### MoU

1. Polytechnic University of Aguascalientes, Mexico
2. Kinki University, Japan
3. SPD Laboratory Kinki University, Japan
4. Himadri Chemicals, Kolkata
5. Kyushu Institute of Technology, Japan

#### Academic Bodies in Other Institutes/ Universities

Year / Period	Name of the BoS / Administrative Committee / Academic Committee	Role
2023	Board of Studies, M.S. University.	External Expert
2022	Faculty Promotion Scrutiny and Selection Committee, Periyar University.	Member
2020	Board of Studies, Periyar University, Salem.	External Expert
2020	Question Paper Setting Board	Chairman

#### Ph.D. Thesis Guided

1. No. of PhD Thesis evaluated : 7
2. No. of PhD Public Viva Voce Examination conducted : 7

S. No	Name of the Scholar	Title of the Thesis	Year of Completion
1.	R. Dhilip kumar	Eco Friendly Synthesis of Nanostructured Materials for Energy Applications	2017
2.	M. Thamima	Investigations of Optical, Structural and Photocatalytic Properties of Nanostructured Oxide Semiconductors	2018
3.	J. Maragatha	Development of Photocatalytic Nanomaterials for Environmental applications	2018
4.	C. Brundha	Studies on the Preparation of Core Shell Structured Nano materials for Highly Efficient Dye Sensitized	2018

		Solar cells	
5.	K. Ramachandran	Preparation of Inorganic Hole Transporting Materials for Highly Efficient Perovskite Solar cells	2021
6.	M. Selvamurugan	Novel Synthetic Routes to Oxide Nanomaterials for Energy Storage Applications	2021
7.	M. Nagalakshmi	Synthesis of Titanium Dioxide Nanomaterials for Photocatalytic and Antibacterial Applications	2021

### List of Research Articles / Recent Publications

S. No	Authors/Title of the paper/Journal	Impact Factor
1.	A vacuum pressure sensor based on graphene/ZnO nanorod Schottky junction Sakthivel, P., K. Ramachandran, M. Malarvizhi, <b>S. Karuppuchamy</b> , and P. Manivel, <i>Carbon Letters</i> (2023): 1-11.	4.5
2.	Fabrication of Planar Perovskite Solar Cells Using Ternary Metal Oxide Nanocomposite as Hole-Transporting Material, KP Muthukumar, V Arjun, A Nithya, Sadhasivam Thangarasu, Tae Hwan Oh, <b>S Karuppuchamy</b> , <i>Energies</i> 2023, 16(9), 3696.	3.2
3.	Investigation on the effect of neodymium ion doping in TiO <sub>2</sub> on the photovoltaic performance of dye-sensitized solar cells, G. Anantharaj, J. Anandha Raj, <b>S. Karuppuchamy</b> , S. Vijayaraghavan, <i>Materials chemistry and physics</i> , 2022, 292 126785.	4.7
4.	Fabrication of Efficient and Stable Planar Perovskite Solar Cell using Copper Oxide as Hole Transport Material, V Arjun, K.P Muthukumar, K Ramachandran, A Nithya and <b>S. Karuppuchamy</b> , <i>Journal of Alloys and Compounds</i> , 2022, 923 (25) 166285.	6.2
5.	H <sub>2</sub> O <sub>2</sub> Assisted Hydrothermal and Microwave Synthesis of CuO–NiO Hybrid MWCNT Composite Electrode Materials for Supercapacitor Applications, Sannasi Veeman and <b>S. Karuppuchamy</b> , <i>Ceramics International</i> , 2022, 48 (18), 26806-26817.	5.2
6.	Biosynthesized TiO <sub>2</sub> nanoparticles an efficient biogenic material for photocatalytic and antibacterial applications, M. Nagalakshmi, C. Jeganathan, J. Anandharaj, A. Nithya M. JothiBasu and <b>S. Karuppuchamy</b> , <i>Energy &amp; Environment</i> , 33 (2), 377-398, 2021.	4.2
7.	Microwave Synthesis of Sn-doped NiO/CNT Composites: The Effect of Sn Incorporation on Their Electrochemical Properties, Sannasi Veeman, M. Maheswari, K. Ramachandran and <b>S. Karuppuchamy</b> , <i>Journal of Electronic Materials</i> , 50 (2021) 6102-6113.	2.04
8.	High performing Zn-embedded Ni <sub>9</sub> S <sub>8</sub> nanosphere electrodes for Pseudo-supercapacitors, R. Dhilipkumar, C. Jeganathan, K. L. Vincent Joseph, C. Karthikeyan and <b>S. Karuppuchamy</b> , <i>Journal of Materials Science: Materials in Electronics</i> (2021).	2.8
9.	Nanostructured bilayer CuSCN@ CuI thin films as efficient inorganic hole transport material for inverted perovskite solar cells, K. Ramachandran, C. Jeganathan and <b>S. Karuppuchamy</b> , <i>Ceramics International</i> , 2021, 47(13),	5.2

	17883-17894.	
10.	Electrodeposition of Nanostructured Bilayer CuI@ CuSCN as Hole Transport Material for Highly Efficient Inverted Perovskite Solar Cells, K. Ramachandran, C. Jeganathan and <b>S. Karuppuchamy</b> , <i>Journal of Alloys and Compounds</i> , 2021, 881, 160530.	6.2
11.	Surfactant assisted electrochemical growth of ultra-thin CuSCN nanowires for inverted perovskite solar cell applications, K. Ramachandran, C. Jeganathan and <b>S. Karuppuchamy</b> , <i>Organic Electronics</i> , 2021, 95, 106214.	3.8
12.	One-step electrodeposition of CuSCN/CuI nanocomposite and its hole transportability in inverted planar perovskite solar cells, K. Ramachandran, C. Jeganathan and <b>S. Karuppuchamy</b> , <i>Nanotechnology</i> , 2021, 32, 325402.	3.5
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