



**Dr. R. SUBADEVI**  
**ASSISTANT PROFESSOR**

### Contact

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**Academic Qualifications: M.Sc., M.Phil., Ph.D.**

**Teaching Experience: 10 Years**

**Research Experience: 20 Years**

### Additional Responsibilities

1. Member – Teachers' day celebration Gift and Memento committee
2. Department Doctoral Committee Member
3. Member – Board of Studies to Dept. of Physics, Alagappa University.
4. Course Advisor for PG Students
5. Faculty co-ordinator of Fine arts Club of Department of Physics.
6. Ph.D and M.Phil. scholars Selection committee member.
7. Doctoral Committee member in Anna University of Tech., Madurai.
8. Question paper setter in Bharathidasan, Madurai Kamaraj, Alagappa, Periyar, Manonmaniam Sundaranar Universities for PG programme.

9. University Representative for DDE Examinations in various centres of Alagappa University.
10. Event coordinator for ALUTES.

### Areas of Research

Solid State Ionics,  
Lithium Electrodes and Electrolytes,  
Sodium and Sulfur electrodes,  
Biodiesel.

### Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	--	4
	M.Phil.	7	4
Project	PG	17	5
	UG / Others	3	--

### Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
31	34	--	35	--

Cumulative Impact Factor (as per JCR) : 55  
h-index : 09  
i10 index : 09  
Total Citations : 597

### Funded Research Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	UGC-SAP (DRS-III)	2015	2020	Preparation of crystals, Thin films and Battery materials for devices	105

2	DST- FIST Level II	2015	2020	Growth and study of different metal oxide thin films for gas sensors and memory devices	144
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### Consultancy Projects

### As a Member

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	Universities, Colleges, Institutions	2015 (June)	2016 (May)	Consultancies on Characterization	12,99,856
2	Universities, Colleges, Institutions	2016 (June)	2017 (Dec.)	Consultancies on Characterization	7,41,660

### Distinctive Achievements / Awards

1. Obtained **Dr.Mohan's Best Teacher Award** from The Foundation of Dr.Mohan, at TamilNadu College of Education, Nainarpuram, Karaikudi on 18.8.2011.

### Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 3

1. Organized National Seminar on Emerging Trends in Advanced Materials held on November 20<sup>th</sup>, 2009 as **Co-ordinator** in the Department of Physics, Ultra College of Engineering and Technology for Women, Madurai.
2. Organized DRDO sponsored **National Seminar on Analytical Techniques in Materials Research**, (NSAT) held on 23<sup>rd</sup> February 2011 as **Co-ordinator** in the Department of Physics, Ultra College of Engineering and Technology for Women, Madurai.
3. **Organized** DRDO sponsored **National Seminar on Functional Materials** (FUNMAT-2012) as **Co-ordinator** on 17<sup>th</sup> February 2012 in the Department of Physics, Ultra College of Engineering and Technology for Women, Madurai.
4. Organized Alagappa University Celebrates Themed Nobel Excellence Talks – 2015 ACT NEXT-2015, on 18th March 2016.
5. Organized an “International Workshop on Advanced Materials -2014 (IWAM-2014)” in the School of Physics, Alagappa University, Karaikudi, India held during 20-21 March 2014.

6. Organized a National Workshop on Characterization Techniques(NWCT-2, 2013)” as a member of Organizing committee in the School of Physics, Alagappa University, Karaikudi held on 24 & 26, March 2013.

## Events Participated

### Conferences / Seminars / Workshops

1. Participated National Seminar on Green Revolution-Energy Applied Technology (GREAT'11), organized by the Department of Chemistry, Ultra College of Engineering and Technology for Women, Madurai-625 104, Tamil Nadu on March, 4, 2011.
2. Participated National Seminar on Polymers Synthesis, Characterization and Applications (POLYCAP'2011) organized by the Department of Physics, Mannar Thirumalai Naicker (MTN) College, Madurai-625 004 during 21-22, October, 2011.

### Other Training Programs

1. Participated and secured A grade in the 85th Orientation programme organized by UGC Academic Staff College of Bharathidasan University, Tiruchirappalli, Tamil Nadu, India during 05.11.2014 to 03.12.2014.

## Overseas Exposure / Visits

1. One year (2005-06) research works have been carried out in the Department of Chemical Engineering, National Taiwan University, Taipei-106, TAIWAN, ROC, under Professor Nai-Lih, Wu, Chairman, Dept. Chem.Engg., in the field of Solid state Electrolytes for Lithium batteries.

## Membership in

### Professional Bodies

1. Life Member: Indian Society for Technical Education (ISTE)
2. Life Member : Indian Association of Physics Teachers (IAPT)

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

1. Member in Board of Studies – MSc Physics, Alagappa University

## Resource persons in various capacities

Number of Invited / Special Lectures delivered: 11

## Recent Publications

1. Synthesis and electrochemical performance of PEG-MnO<sub>2</sub>-sulfur composites cathode materials for Lithium-Sulfur batteries  
**G.Radhika, R.Subadevi, K.Krishnaveni, Wei-Ren Liu and M.Sivakumar**  
J.Nanoscience and Nanotechnology (Accepted) **IF: 1.3**
2. An efficacy of 'nano' in brannerite-type CoV<sub>2</sub>O<sub>6</sub> conversion electrode for lithium batteries  
**M. Sivakumar, P. Prahasini, R. Subadevi, Wei-Ren Liu and Fu-Ming Wang**  
RSC Advances 6 (2016) 112813. **IF:3.284** DOI: 10.1039/c6ra20989k
3. Facile synthesis and characterization of ZrO<sub>2</sub> nanoparticles via modified co-precipitation method  
**M. Ramachandran, R. Subadevi, Wei-Ren Liu and M. Sivakumar**  
J.Nanoscience and Nanotechnology (Accepted) **IF: 1.3**
4. Studies on the effect of carbon wrapping on Sulfur/ Poly(acrylonitrile) (PAN) composite cathode materials for Lithium Sulfur Batteries  
**K.Krishnaveni, R.Subadevi, G.Radhika, T.Premkumar, M.Raja, Wei-Ren Liu, M.Sivakumar**  
J.Nanoscience and Nanotechnology (Accepted) **IF: 1.3**
5. Sulfonium cation based ionic liquid incorporated polymer electrolyte for lithium ion battery  
**R. Muthupradeepa, M. Sivakumar, R. Subadevi and V. Suryanarayanan**  
*Polymer Bulletin* (In Press) DOI: 10.1007/s00289-016-1796-y. **IF:1.371**
6. Synthesis and electrochemical characterization of olivine type lithium iron phosphate cathode materials via different techniques  
**R.Muruganatham, R.Subadevi, M.Sivakumar**  
*Ionics* (In Press) DOI: 10.1007/s11581-016-1676-3. **IF:1.754**
7. A brannerite type cobalt vanadate conversion anode for lithium batteries  
**P. Prahasini, R. Subadevi, Fu-Ming Wang, Wei-Ren Liu, M.Sivakumar**  
*Ionics* 22(2016)347-356 (DOI: 10.1007/s11581-015-1559-z) **IF:1.754**
8. A novel attempt for employing brannerite type copper vanadate as an anode for lithium rechargeable batteries  
**P. Prahasini, R. Subadevi, Fu-Ming Wang, Wei-Ren Liu, M. Sivakumar and I.V.B. Maggay**  
*J.Mater. Sci.: Materials in Electronics* 27 (2016) 3292-3297. DOI: 10.1007/s10854-015-4157-y. **IF: 1.798**
9. Enhanced rate performance of multiwalled carbon nanotube encrusted olivine type composite cathode material using simple polyol technique  
**R.Muruganatham, R.Subadevi, M.Sivakumar**  
*J. Power Sources* 300 (2015) 496-506 (DOI: 10.1016/j.jpowsour.2015.09.103) **IF:6.333**
10. Investigations on the rate performance of LiFePO<sub>4</sub>/ CeO<sub>2</sub> composite materials via polyol technique for rechargeable lithium batteries  
**M. Sivakumar, R. Muruganatham, R. Subadevi**  
*RSC advances* 5(2015)86126-86136 (DOI: 10.1039/C5RA12418B) **IF: 3.289**
11. Synthesis of surface modified LiFePO<sub>4</sub> cathode material via polyol technique for high rate Lithium secondary battery  
**M.Sivakumar, R.Muruganatham, R.Subadevi**

- Appl. Surf. Sci.* 337 (2015) 234-240 (DOI: 10.1016/j.apsusc.2015.02.100) **IF:3.150**
12. Studies on graphene enfolded Olivine composite electrode material via Polyol technique for high rate performance in Lithium ion batteries  
**R.Muruganatham, M.Sivakumar, R.Subadevi, S.Ramaprabhu, N-L.Wu**  
*Electronic Materials Letters*. (Accepted) (doi:10.1007/s13391-015-5061-6) **IF: 2.057**
  13. Comparative studies on biodiesel from rubber seed oil using homogeneous and heterogeneous catalysts  
**R.Meenadevi, R.Subadevi, Samuel Paul Raj, M.Sivakumar**  
*International J. Green Energy* 12 (2015) 1215-1221  
(DOI:10.1080/15435075.2014.893879), **IF:1.601**
  14. A facile synthesis and characterization of LiFePO<sub>4</sub>/C using simple binary reactants with oxalic acid by polyol technique and other high temperature  
**R.Muruganatham, M.Sivakumar, R.Subadevi, N-L.Wu**  
*J.Mater. Sci.: Materials in Electronics* 26 (2015) 2095-2106. DOI 10.1007/s10854-014-2653-0 **IF: 1.798**
  15. Structural, morphology and ionic conductivity studies on composite PS-MMA -ZrO<sub>2</sub> polymer electrolyte for lithium polymer battery  
**M.Ramachandran, R.Subadevi, Fu-Ming Wang, Wei-Ren Liu, M.Sivakumar**  
*International J. ChemTech Research* 6 (2014) 1687-1689.
  16. Studies On The Effect Of Dispersoid(ZrO<sub>2</sub>) In PVdF-co-HFP Based Gel Polymer Electrolytes  
**M.Sivakumar, R.Subadevi and R.Muthupradeepa**  
*AIP Conf. Proc.* 1536, 857-858 (2013); doi: 10.1063/1.4810498
  17. Structural and magnetic properties of LiFePO<sub>4</sub> cathode materials prepared by polyol technique  
**R.Muruganatham, R.Subadevi, M.Sivakumar**  
*Elixir Magnetic Materials* 50 (2012) 10609-10612
  18. A Polyol Route LiFePO<sub>4</sub> Cathode Material For Li-Batteries  
**R.Muruganatham, R.Subadevi, M.Sivakumar**  
*Advanced Materials Research* 584 (2012) 341-344.
  19. Synthesis and characterization of Cu Doped LiCoO<sub>2</sub> Cathode material for Lithium Batteries using Microwave assisted Sol-gel synthesis  
**P.Prahasini, R.Subadevi, M.Sivakumar and Fu-Ming,Wang**  
*Advanced Materials Research* 584 (2012) 345-349.
  20. Development and characterizations of PVdF-PEMA gel polymer electrolytes  
**R.Subadevi, M.Sivakumar, S.Rajendran, H.-C.Wu, N.-L.Wu**  
*Ionics* 8 (2012) 283-289. **IF:1.754**
  21. Studies on the Effect of Anions of various Lithium salts in PEMA Gel Polymer Electrolytes  
**R.Subadevi, M.Sivakumar, S.Rajendran, H.-C.Wu, N.-L.Wu**  
*J.Appl. Polym.Sci.* 119 (2011)1-6. **IF:1.67**
  22. Compositional effect of PVdF-PEMA blend gel polymer electrolytes for Lithium Polymer Batteries  
**M.Sivakumar, R.Subadevi, S.Rajendran, H.-C.Wu, N.-L.Wu**  
*Euro.Polym.J.* 43 (2007) 4466-4473. **IF:3.485.**
  23. Electrochemical Investigations on the effect of Dispersoid in PVA based solid polymer electrolytes  
**S.Rajendran, M.Sivakumar, R.Subadevi, N.-L.Wu, J.-Y.Lee**  
*J.Appl.Polym.Sci.* 103 (2007) 3950-3956. **IF:1.64**

24. Electrochemical studies on [(1-x)PVA-xPMMA] solid polymer blend electrolytes complexed with LiBF<sub>4</sub>  
**M.Sivakumar, R.Subadevi, S.Rajendran, N.-L.Wu, J.-Y.Lee**  
*Materials Chemistry and Physics* 97 (2006) 330-336. **IF:2.101**
25. Li-ion conduction of plasticized PVA solid polymer electrolytes complexed with various lithium salts  
**S.Rajendran, M.Sivakumar, R.Subadevi**  
*Solid State Ionics* 167 (2004) 335-339. **IF:2.38.**
26. Characterization of PVA-PVdF based Solid Polymer Blend Electrolytes  
**S.Rajendran, M.Sivakumar, R.Subadevi, M.Nirmala**  
*Physica B:* 348 (2004) 73-78. **IF:1.319**
27. Investigations on the effect of various plasticizers in PVA-PMMA solid polymer blend electrolytes  
**S.Rajendran, M.Sivakumar, R.Subadevi**  
*Materials Letters* 58 (2004) 641-649. **IF:2.437**
28. XRD, FTIR, Impedance and Thermal Studies of PVA-PMMA solid polymer blend electrolyte  
**S.Rajendran, M.Sivakumar, R.Subadevi, J.Merciline Leonora**  
*Bull.Electrochem.* 20 (2004) 87-92. **IF:0.25.**
29. Studies on the effect of salt concentration in PVA based solid polymer electrolytes  
**S.Rajendran, M.Sivakumar, R.Subadevi**  
*J.Power Sources* 124 (2003) 225-230. **IF:6.217.**
30. Studies on the effect of plasticizers in Poly(vinyl alcohol) based hybrid solid polymer electrolytes  
**S.Rajendran, M.Sivakumar, R.Subadevi**  
*J.Applied Polym.Sci.* 90 (2003) 2794-2800. **IF:1.64**
31. Bio-Diesel from palm oil: The clean and green fuel for diesel  
**R.Meenadevi, Samuel Paul Raj, R.Subadevi, M.Sivakumar**  
*Pro.8<sup>th</sup> Asian Academic Network for Environmental Safety and Waste Management (AANESWM)*, December 10-13, 2006, Anna University, Chennai, India, pp.439-444.