

Dr.R.SUBADEVI ASSISTANT PROFESSOR

Contact	
Address	: Department of Physics Alagappa University Karaikudi – 630 003 Tamil Nadu, INDIA
Employee Number Date of Birth Contact Phone (Office) Contact Phone (Mobile) Contact e-mail(s) Skype id	 : 11408 : 16-07-1973 : +91 4565 223306 : +91 9965390030 : susimsk@yahoo.co.in :

Academic Qualifications: M.A./M.Sc./M.Phil./Ph.D./Physics

M.Sc., M.Phil., Ph.D., (Physics),

Teaching Experience: <u>12</u> Years

Research Experience: <u>22</u> Years

Additional Responsibilities

- 1. Member of Board of Studies for UG programme, Department of Physics, Bharathidasan University, Tiruchirappalli.
- 2. Member, Board of Studies in the Dept. Physics, Alagappa University.
- 3. Department Library In-charge since July 2017.
- 4. Faculty co-ordinator of Cultural Club of Department of Physics.
- 5. Co-convener of Gift committee of Teacher's day celebration on 05.09.2018.
- 6. ACT NEXT 2016 Convener.

- 7. Course Advisor (PG program timetable, CIA tests schedule, project allotment, scholarships, etc.)
- 8. Doctoral Committee member in Alagappa and Anna University of Tech., Madurai
- 9. Member of Question paper setting Board in Alagappa, Periyar, Bharathidasan Universities, Gandhigram Rural Institute for PG, MPhil and PhD programmes from 2016.
- 10. University Representative for DDE Examination Centers.
- 11. Ph.D and M.Phil. scholars Selection committee member
- 12. VPP coordinator (2016) and Staff In Charge (2013) for Educational Tour to PG students.

Areas of Research

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

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	1+1(Submitted)	3+5(Coguiding)
	M.Phil.	17	1
Project	PG	28	5
	UG / Others	3	Xx

Publications

International		National		Others
Journals	Conferences Jour		Conferences	Books / Chapters / Monographs / Manuals
115	106	Xx	98	03

Cumulative Impact Factor (as per JCR)	:	180.43
h-index	:	14
i10 index	:	20
Total Citations	:	1155

Funded Research Projects

Ongoing Projects

S. No	Agency	Period			Budget
		From	То	Project Title	(Rs. In lakhs)
1	RUSA-2.0	18.09.2 018	Till date	Theme: Advanced Nano Materials for Sustainable Energy and Sensors Applications	5.0

Note: Budget must be rounded to two decimal places

Patents

1. xxx

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.
- Best Paper Award for our paper entitled "Effect of ZrO₂ filler on P(S-MMA) gel blend polymer electrolyte for Lithium polymer battery" -M.Ramachandran, R.Subadevi, M.Sivakumar Presented in the International Conference on Nanoscience and Nanotechnology for Energy Applications (EApp-2016) organized by Centre for Nanoscience and Nanotechnology and Centre of Excellence for Energy Research, Sathyabama University, Chennai-600 119. India during 27-29, June 2016.
- **3. Best Paper Presentation** for our paper entitled "Optimization of S/MnO₂ composite cathode material for lithium sulfur batteries"

G.Radhika, K.Krishnaveni, R.Subadevi, M.Sivakumar

National Conference on Nanomaterials, NCN-2017 during held at the PG & Research Department of Physics, Arignar Anna Government Arts College, Namakkal – 637 002, Tamil Nadu India during 20-21 July 2017.

4. **Best Poster Presentation** for our paper entitled "Synthesis and characterization of P2-NaxMn_{1/2}Fe_{1/2}O₂ iron and manganese based electrode material for sodium ion rehargeable batteries"

P.Arjunan, R.Subadevi, M.Sivakumar

One day International Seminar on Materials Science and Technology (ISMST-2017) organized by Department of Physics, Mother Teresa Women's University, Kodaikanal, India on 4th Aug 2017.

- 5. **Best Poster Presentation** for our paper entitled "Designing of stable layered cathode material for sodium ion batteries using post-transition metals"
 - P.Arjunan , R.Subadevi, M.Sivakumar*

Presented in the International Conference on Momentous Role of Nanomaterials in Renewable Energy Devices -2018 (IC MNRE-2018) organized by the Department of Physics, Alagappa University, Karaikudi-630 003 during 1-2, March 2018.

6. Best Oral Presentation for our paper entitled "*Zn substituted layered P2-type cathode material with improved cell voltage profile for sodium ion battery*"
P.Arjunan, M.Kouthaman, K.Kannan, R.Subadevi, M.Sivakumar*
Presented in the National Conference on Advanced Materials for Sustainable Energy and Sensors (NCAMSES-2019) organized by the Department of Physics, Alagappa University, Karaikudi-600 003 during 20-22, March 2019.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 16

- 1. Organized a Two day National Conference on Advanced Materials for Sustainable Energy and Sensors (NCAMSES–2019) during 20-22, March 2019 by the Department of Physics, Alagappa University, Karaikudi-630 003 **as an Organizing Member.**
- 2. Organized an **International Conference on Momentous Role of Nanomaterials in Renewable Energy Devices – 2018 (IC MNRE-2018)** during 1-2, March 2018 by the Department of Physics, Alagappa University, Karaikudi-630 003 **as Convener**.
- Organized a National Workshop on Business Oriented Analytical Research and Development 2018 (BOARD-2018) as a Convener, organized by the Department of Physics, Alagappa University, Karaikudi-630 003 during 31st Jan' to 1st Feb' 2018.
- 4. Organized a **National Theme Meet on University-Industry Interface 2017 (NTM U2I-2017)** by Industry & Consultancy Cell in association with the Department of Physics, Alagappa University, Karaikudi India in Alagappa University, Karaikudi during 20-21, September 2017 **as Member**.
- Organized Alagappa University Celebrates Themed Nobel Excellence Talks 2016 ACT NEXT-2016, as a Convener on 28th April 2017.
- 6. Organized UGC sponsored "National Conference on Futuristic Materials (NCFM-2017)" as a **Organizing Secretary** in the Department of Physics, Alagappa University, Karaikudi, India held during 27-28, March 2017.
- 7. Organized "Business Oriented Hands-on Training on Analytical Instrumentation (HI-BOAT-2017)" as a **Member** in the Department of Physics, Alagappa University, Karaikudi, India held during 2-3, March 2017.
- 8. Organized "Workshop and Activity based Yoga (WAY-2017)" as a **Member** of Centre for Yoga Education, Alagappa University, Karaikudi-630003 on 8th February 2017.

- 9. Organized "National Seminar on Advanced Materials Research NSAMR-2017" as a **Member** in the Department of Physics, Alagappa University, Karaikudi-630003, Tamil Nadu, India on 19.01.2017.
- 10. Organized a "National Seminar on "Recent Advancements in Frontier Areas of Materials Science" as a **Member** in the Department of Physics, Alagappa University, Karaikudi, India held on 23-24th March, 2016.
- 11. Organized Alagappa University Celebrates Themed Nobel Excellence Talks 2015 ACT NEXT-2015, as a Convener on 18th March 2016.
- 12. Organized an "International Workshop on Advanced Materials -2014 (IWAM-2014)" as a **Convene**r in the School of Physics, Alagappa University, Karaikudi, India held during 20-21 March 2014.
- 13. 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.
- 14. **Organized** DRDO sponsored **National Seminar on Functional Materials** (FUNMAT-2012) as **Co-ordinator** on 17th February 2012.
- 15. Organized DRDO sponsored **National Seminar on Analytical Techniques in Materials Research**, (NSAT) held on 23rd February 2011 as **Co-ordinator**.
- 16. Organized National Seminar on Emerging Trends in Advanced Materials held on November 20th, 2009 as **Co-ordinator**.

Events Participated (optional)

Conferences / Seminars / Workshops: 06

- 1. Presented in the 13th National Conference on Solid State Ionics organized by the Department of Physics, Indian Institute of Technology (IIT R), Roorkee, Uttaraghand, India, during 16-18, December 2019.
- Participated in the International Conference on Nanoscience and Nanotechnology (ICONN-2019) organized by the Department of Physics and Nanotechnology, SRM Institute of Science and Technology, Kattankulathur-603203, Tamil Nadu, India, during 28-30, January 2019.
- 3. Participated Special Lecture on NDT techniques used in Industries organized by Department of Physics and Industry and Consultancy cell, Alagappa University, Karaikudi, India on 06.03.2017.
- 4. Participated and Chaired Technical session in "Business Oriented Hands-on Training on Analytical Instrumentation (HI-BOAT-2017)" organized by the Department of Physics, Alagappa University, Karaikudi, India held during 2-3, March 2017.
- 5. 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.

6. 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.
- 2. UGC sponsored Refresher Course in Nanosciences (Inter Disciplinary) at the UGC-Human Resource Development Centre, Bharathidasan University, Khajamalai Campus, Tiruchirappalli, during 20.12.2017 to 09.01.2018.
- 3. Faculty Development (Enrichment) Programme, 6-12, January 2017 organized by IQAC, Alagappa University, Karaikudi.
- 4. UGC sponsored Short Term Course on Research Methodology at UGC-Human Resource Development Centre, Bharathidasan University, Khajamalai Campus, Tiruchirappalli, during 29.01.2020 to 04.02.2020.

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 in Indian Society for Technical Education (ISTE).
- 2. Life member in Indian Physics Association
- 3. Life Active Member- Society for Advancement of Electrochemical Science and Technology (SAEST)
- 4. Fellow Member Bose Science Society

Editorial Board

- 1. Xxx
- 2. xxx

Advisory Board

1. Xxx

2. xxx

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

- 1. Member in Board of Studies MSc Physics, Alagappa University
- 2. xxx

Others

- 1. xxx
- 2. xxx

Resource persons in various capacities

Number of Invited / Special Lectures delivered: 11

Others

- 1. Articles published in Newspapers / Magazines : xx
- 2. Products developed : xx
- 3. No. of PhD Thesis evaluated : xx
- 4. No. of PhD Public Viva Voce Examination conducted : xx
- 5. Sequences submitted in GenBank

**Social Interests and Initiatives / Articles in News papers etc can also be included

Recent Publications

- 1. Authors, (Year), "Title of the Paper", Journal / Conference Name, Publisher, Country, Volume/ Issue, page numbers. (Impact Factor: xx).
- Titanium deputized layered O3-type NaFe9/20Cr9/20Ti1/10O2 cathode material for Sodium-ion batteries

M.Kouthaman, P.Arjunan, K.Kannan, V.Kumaran, R.Subadevi*, M.Sivakumar* *Materials Letters*, (Accepted for Publication) IF:3.204 2. Influence of nickel strike as adhesive layer on electrodeposited Zn-Co-Ni alloy and their performance in metal-finishing

Vaibhav Namdev Kalea , S. Kumaragurua , G. Saravananb , A. Syed Jalaluddeena , P. Rajkumarc , R. Subadevic , M. Sivakumarc , RM. Gnanamuthua, *

Materials Today: Proceedings (Accepted for Publication) IF: -

3. Physical and electrochemical chattels of phosphonium ionic liquid based solid and gelpolymer electrolyte for lithium secondary batteries

R.Muthupradeepa, M.Sivakumar*, R.Subadevi, V.Suryanarayanan, M.Ramachandran, P.Rajkumar, R.Yuvakkumar

J.Materials Science: Materials in Electronics (Proof read) IF:2.220 DOI: 10.1007/s10854-020-04820-7

4. Manganese and graphene oxide composite as highly effective sulfur host for enlightening electrochemical kinetics of lithium sulfur batteries

G.Radhika, P.Rajkumar, R.Subadevi, M.Sivakumar*

International Journal of Energy Research (Accepted for Publication) IF:3.741

https://doi.org/10.1002/er.6136

5. Exploration on sulfur/acid treatment of sepiolite composite positive electrode material for lithium-sulfur battery

C.Kalaiselvi, K.Krishnaveni, V.Priyanka, P.Rajkumar, R.Subadevi*, M.Sivakumar*

Ceramics International 47 (2021) 692-699. **IF: 3.830** https://doi.org/10.1016/j.ceramint.2020.08.178

6. Clout of carbon in Polyacrylonitrile/Sulfur composite cathode via solution processing technique for lithium-sulfur batteries

K.Krishnaveni, R.Subadevi, M.Sivakumar*

Journal of Porous Materials (Proof Read) IF: 2.183 DOI: 10.1007/s10934-020-00963-4

7. Effect of TiO₂/carbon black in sulfur based composite cathode for lithium sulfur batteries

G.Radhika, P.Rajkumar, R.Subadevi, M.Sivakumar*

Ionics (Accepted for Publication) IF:2.394 https://doi.org/10.1007/s11581-020-03691-6

8. An Emerging Electrochemically Active Maricite NaMnPO₄ as Cathode Material at Elevated Temperature for Sodium-Ion Batteries

V.Priyanka, G.Savithiri, R.Subadevi*, M.Sivakumar*

Applied Nanoscience, (Accepted). IF:2.88 https://doi.org/10.1007/s13204-020-01506-8

9. Graphene Sheets Encased Silica/Sulfur Composite Cathode for Improved Cyclability of Lithium-Sulfur Batteries

P.Rajkumar, K.Diwakar, R.Subadevi*, RM.Gnanamuthu, Fu-Ming Wang, Wei-Ren Liu, M.Sivakumar*

Journal of Solid State Electrochemistry, (Accepted). IF:2.646

 Tweaking the Electrochemical Activity of Maricite NaMnPO₄ in Sodium Batteries using Different Manganese Precursors via Polyol Method

V.Priyanka, G.Savithiri, P.Rajkumar, T.Meenatchi, R.Subadevi*, M.Sivakumar* Journal of Solid State Chemistry, 290 (2020) 121551-57 (Proof read). IF:2.726 https://doi.org/10.1016/j.jssc.2020.121551

11. Novel Layered O3-NaFe_{0.45}Co_{0.45}Ti_{0.1}O₂ cathode material for Sodium Batteries

M.Kouthaman, K.Kannan, P.Arjunan, T.Meenatchi, R.Subadevi*, M.Sivakumar* Materials Letters, 276 (2020) 128181. IF:3.204

DOI: 10.1016/j.matlet.2020.128181

 An Imprint of Sulfur/SiO₂ in N-doped Graphene as Positive Electrode for Lithium-Sulfur Rechargeable Batteries

P.Rajkumar, K.Diwakar, K.Krishnaveni, G.Radhika, R.Subadevi*, RM.Gnanamuthu, Fu-Ming Wang, M.Sivakumar*

Applied Physics A, 126 (2020) 516, IF:1.81 DOI:10.1007/s00339-020-03617-z

 Titanium based Layered O3-NaTi_{7/10}Ni_{3/20}Mg_{3/20}O₂ anode material for Sodium ion batteries

K.Kannan, M.Kouthaman, P.Arjunan, R.Subadevi*, M.Sivakumar*

Materials Letters, 273 (2020) 127950. IF:3.204 DOI:10.1016/j.matlet.2020.127950

14. Nitrogen doped Graphene Sheets Encapsulated Sulfur Binary Composite as Cathode for Lithium-Sulfur Battery Applications

P.Rajkumar, K.Diwakar, K.Krishnaveni, G.Radhika, R.Subadevi*, RM.Gnanamuthu, Fu-Ming Wang, M.Sivakumar*

Journal of Materials Engineering and Performance, 29 (2020) 2865–2870. IF: 1.652 DOI:10.1007/s11665-020-04825-7

15. Stable Prismatic Layer Structured Cathode Material via Cation Mixing for Sodium Ion Battery

P.Arjunan, M.Kouthaman, K.Kannan, K.Diwakar, R.Subadevi*, S. Raghu, M.Sivakumar*

Ionics (2020). IF:2.394 DOI:10.1007/s11581-020-03592-8

16. Cobalt doped layered Lithium nickel oxide as a 3 in 1 electrode for Lithium-ion, Sodiumion and supercapacitor applications

K.Diwakar, P.Rajkumar, P.Arjunan, R.Subadevi*, M.Sivakumar* International Journal of Energy Research, 44 (2020) 7591-7602. IF:3.741 DOI:10.1002/er.5492

- 17. Sepiolite Enfolded Sulfur/ ZnO Binary Composite Cathode Material for Li-S Battery
 C.Kalaiselvi, R.Subadevi*, Fu-Ming Wang, M.Sivakumar*
 Frontiers in Materials, 7 (2020) 109. IF: 2.705 DOI:10.3389/fmats.2020.00109
- 18. Enhanced Electrochemical Performance of MWCNT-intercalated Silica/Sulfur Composite Cathode for Rechargeable Lithium-Sulfur Batteries

P Rajkumar, K Diwakar, R Subadevi^{*}, R Gnanamuthu, Mozaffar Abdollahifar, Fu-Ming Wang, M Sivakumar^{*}

Journal of Minerals, Metals & Materials Society -(JOM), 72 (2020) 2260-2268. IF: 2.029 DOI: 10.1007/s11837-020-04165-w

Effect of Polyaniline on Sulfur/Sepiolite Composite Cathode for Lithium-Sulfur Batteries
 C. Kalaiselvi¹, V.Priyanka¹, R. Subadevi^{1,*}, Wei-Ren Liu², Chia-Hung Huang³ and
 M.Sivakumar^{1,*}

Polymers, 12 (2020) 755. IF: 3.426 DOI:10.3390/polym12040755

20. Graphene oxide-crowned poly(acrylonitrile)/sulfur as a lithium–sulfur battery cathode: performance and characterization

K.Krishnaveni, R.Subadevi, M.Sivakumar*

SN Applied Sciences, 2 (2020) 766. IF:- DOI: 10.1007/s42452-020-2576-8

21. High Capacity Prismatic Type Layered Electrode with Anionic Redox Activity as an Efficient Cathode Material and PVdF/SiO₂ Composite Membrane for a Sodium Ion Battery

Arjunan Ponnaiah, Subadevi Rengapillai*, Diwakar Karuppiah, Sivakumar Marimuthu*, Wei-Ren Liu and Chia-Hung Huang

Polymers, 12 (2020) 662. IF:3.426 DOI:10.3390/polym12030662

22. Micro-/Mesoporous Nature of Carbon Nanofiber/Silica Matrix as an Effective Sulfur Host for Rechargeable Lithium-Sulfur Batteries

P.Rajkumar, K.Diwakar, R.Subadevi*, RM.Gnanamuthu, Fu-Ming Wang, M.Sivakumar*

Journal of Physics D: Applied Physics, 53 (2020) 265501. IF:3.169 DOI:10.1088/1361-6463/ab8137

23. Enhanced Performance on layered O3-Na_{0.95}CrO₂ cathode material for emerging sodium ion Batteries

M.Kouthaman, P.Arjunan, K.Kannan, R.Subadevi*, M.Sivakumar*

Ionics 26 (2020)3929-3936, IF:2.394 DOI:10.1007/s11581-020-03523-7

24. Superior Ionic Transferring Polymer with Silicon dioxide composite Membrane via Phase Inversion Method designed for High Performance Sodium-Ion Battery

Arjunan Ponnaiah, Kouthaman Mathiyalagan, Subadevi Rengapillai*, Diwakar Karuppiah, Wei-Ren Liu, Chia-Hung Huang, Sivakumar Marimuthu* *Polymers*, 12(2) (2020) 405. *IF*:3.426 DOI:10.3390/polym12020405

25. Egg Shell Membrane Derived Carbon Coated On Li₂FeSiO₄ Cathode Material for Li-Ion Batteries

Diwakar Karuppiah, Rajkumar Palanisamy, Arjunan Ponnaiah, Wei-Ren Liu, Chia-Hung Huang, Rengapillai Subadevi *, Sivakumar Marimuthu * Energies, 13(4) (2020) 786. IF:2.702 DOI:10.3390/en13040786

26. Effect of downsizing the maricite type α phase sodium cobalt phosphate (α-NaCoPO₄) in sodium-ion battery

G.Savithiri, V.Priyanka, R.Subadevi*, M.Sivakumar*

Journal of Nanoparticle Research, 22:29 (2020) 1-11. IF:2.132 DOI:10.1007/s11051-019-4733-9

27. Sulfur nested with mixture of MnO₂/AB composite as efficient host for high performance Li-S batteries

G.Radhika, R.Subadevi, M.Sivakumar*

Journal of Chemical Sciences, 132 (2020) 1-9. IF: 1.406 DOI:10.1007/s12039-020-1755-x

28. Carbon Loaded Nano-Designed Spherically High Symmetric Lithium Iron Orthosilicate Cathode Materials for Lithium Secondary Batteries

K.Diwakar, P.Rajkumar, R.Subadevi*, Wei-Ren Liu, Chia-Hung Huang, and M.Sivakumar*

Polymers 11(2019) 1703; IF:3.426 DOI:10.3390/polym11101703

29. Exploration of sulfur in mixt anchor materials for lithium sulfur batteries

G.Radhika, R.Subadevi, M.Sivakumar*

Materials Research Express 6(11) (2019) 115522 IF:1.929 DOI:10.1088/2053-1591/ab49a5

30. Physicochemical Exfoliation of Graphene Sheet using Graphitic Carbon Nitride

V.Priyanka, G.Savithiri, R.Subadevi*, V.Suryanarayanan, M.Sivakumar* New Journal of Chemistry 6(43) (2019) 16200-16206 *IF:3.288* DOI: 10.1039/c9nj02149c

31. Kombucha scoby based carbon and Graphene oxide wrapped sulfur/ Poly (acrylonitrile) as a high-capacity cathode in lithium–sulfur batteries K.Krishnaveni, R.Subadevi, M.Sivakumar*, M.Raja, T.Premkumar

Frontiers of Chemical Science and Engineering, (2020). IF:3.552 DOI:10.1007/s11705-019-1897-x

32. Investigations on partially reduced graphene oxide capped sulfur/polyaniline composite as positive electrode material for lithium-sulfur battery

P.Rajkumar, K.Diwakar, R.Subadevi^{*}, RM.Gnanamuthu, M.Sivakumar^{*} Materials Research Express 6 (2019) 094005 IF:1.929 DOI: 10.1088/2053-1591/ab2e59

33. A solution-processed binary composite as a cathode material in lithium-sulfur batteries

K.Krishnaveni, R.Subadevi, M.Sivakumar*

Applied Physics A 125 (2019) 469 IF:1.81 DOI: 10.1007/s00339-019-2758-7

- 34. Sway of MnO₂ with poly (acronitrile) in sulfur based electrode for lithium sulfur batteries
 G. Radhika, K. Krishnaveni, C.Kalaiselvi, R. Subadevi, M. Sivakumar* *Polymer Bulletin (2019). IF:2.014 DOI:10.1007/s00289-019-02963-0*
- 35. An enhanced electrochemical properties of novel tin based layered Li(Ni-Sn-Mn)O₂ cathode material for rechargeable Li-ion batteries

G.Kumar Gopika; S.Kumaraguru; T.Partheeban; M.Sasidharan; V. Kumaran; P.Rajkumar; R. Subadevi; M.Sivakumar; RM. Gnanamuthu

Materials Research Express, 6 (2019) 084007 IF:1.929 DOI: 10.1088/2053-1591/ab2216

36. Sulfur Cloaked with Different Carbonaceous Materials for High Performance Lithium Sulfur Batteries

P.Rajkumar, K.Diwakar, R.Subadevi^{*}, RM.Gnanamuthu, M.Sivakumar^{*}

Current Applied Physics, 19 (2019) 902-909 IF:2.281 DOI: 10.1016/j.cap.2019.05.001

37. Kombucha scoby-based carbon as a green scaffold for high-capacity cathode in lithium– sulfur batteries

K.Krishnaveni, M.Sivakumar, R.Subadevi, M.Raja, T.Premkumar

Ionics, 25 (2019) 4637-4650. IF:2.394 DOI: 10.1007/s11581-019-03018-0

38. Synthesis and characterization of graphene oxide capped sulfur / polyacrylonitrile composite cathode by simple heat treatment

K.Krishnaveni, R.Subadevi, M.Sivakumar, M.Raja, T.Premkumar Journal of Sulfur Chemistry, 40(4) (2019) 377-388. IF: 1.963 DOI:10.1080/17415993.2019.1582655.

39. Effect of silicon dioxide in sulfur/carbon black composite as a cathode material for lithium sulfur batteries

```
P. Rajkumar, K. Diwakar, G. Radhika, K. Krishnaveni, R. Subadevi, M. Sivakumar Vacuum, 161 (2019) 37-48. IF:2.906 DOI: 10.1016/j.vacuum.2018.12.016
```

40. Role of pH on synthesis and characterization of cerium oxide (CeO₂) nano particles by modified co-precipitation method

M. Ramachandran, R. Subadevi, M. Sivakumar

Vacuum, 161 (2019) 220-224. IF:2.906 DOI: 10.1016/j.vacuum.2018.12.002

41. A sulfur/PAN/ acetylene black composite prepared by a solution processing technique for lithium–sulfur batteries

K.Krishnaveni, R.Subadevi, M.Raja, T.Premkumar, M.Sivakumar

Journal of Applied Polymer Science, 135 (2018) 46598. IF:2.52

DOI:10.1002/app.46598

42. Structural and Morphological Studies on Li₂Fe_{0.5}Mn_{0.5}SiO₄/C Composite Synthesized using PVA for Energy Storage Devices

R.Dhanalakshmi, K.Diwakar, P.Rajkumar, R.Subadevi, Wei-Ren Liu and M.Sivakumar

Journal of Nanoscience and Nanotechnology 18 (2018) 296-300. IF:1.134 DOI: 10.1166/jnn.2018.14573

43. Effect of dispersoid on sulfonium ionic liquid based gel polymer electrolyte for lithium secondary battery

R.Muthupradeepa, M.Sivakumar, R.Subadevi, V. Suryanarayanan and Wei-Ren Liu

Journal of Nanoscience and Nanotechnology, 18 (2018) 215-222. IF:1.134 DOI:10.1166/jnn.2018.14601

44. Synthesis and electrochemical performance of PEG-MnO₂-sulfur composites cathode materials for Lithium-Sulfur batteries

G.Radhika, R.Subadevi, K.Krishnaveni, Wei-Ren Liu and M.Sivakumar

Journal of Nanoscience and Nanotechnology, 18 (2018) 127-131. IF:1.134 DOI:10.1166/jnn.2018.14568

45. Facile synthesis and characterization of ZrO₂ nanoparticles via modified co-precipitation method

M. Ramachandran, R. Subadevi, Wei-Ren Liu and M. Sivakumar

Journal of Nanoscience and Nanotechnology, 18 (2018) 368-373. IF:1.134 DOI:10.1166/jnn.2018.14562

46. Carbon Wrapping Effect on Sulfur/Polyacrylonitrile Composite Cathode Materials for Lithium Sulfur Batteries

K.Krishnaveni, R.Subadevi, G.Radhika, T.Premkumar, M.Raja, Wei-Ren Liu, M.Sivakumar

Journal of Nanoscience and Nanotechnology, 18 (2018) 121-126. IF:1.134 DOI: 10.1166/jnn.2018.14561

47. Polyol technique synthesis of Nb₂O₅ couture on lithium iron phosphate cathode materials for lithium ion batteries

R.Muruganantham, R.Subadevi, M.Sivakumar

Ionics, 24 (2017) 1-11. IF:2.394 DOI: 10.1007/s11581-017-2264-x

48. Sulfonium cation based ionic liquid incorporated polymer electrolyte for lithium ion battery

R. Muthupradeepa, M. Sivakumar, R. Subadevi and V. Suryanarayanan

Polymer Bulletin, 74 (2017) 1677-1691. IF:2.014 DOI:10.1007/s00289-016-1796-y

49. An efficacy of 'nano' in brannerite-type CoV₂O₆ conversion electrode for lithium batteries

M. Sivakumar, P. Prahasini, R. Subadevi, Wei-Ren Liu and Fu-Ming Wang

RSC Advances, 6 (2016) 112813. IF:3.119 DOI: 10.1039/c6ra20989k

50. Synthesis and electrochemical characterization of olivine type lithium iron phosphate cathode materials via different techniques

R.Muruganantham, R.Subadevi, M.Sivakumar

Ionics, 22 (2016) 1557-1565. IF:2.394 DOI: 10.1007/s11581-016-1676-3

51. 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. IF:2.394* DOI: 10.1007/s11581-015-1559-z 52. 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

Journal of Materials Science: Materials in Electronics, 27 (2016) 3292-3297. IF:2.22 DOI: 10.1007/s10854-015-4157-y

53. Enhanced rate performance of multiwalled carbon nanotube encrusted olivine type composite cathode material using simple polyol technique

R.Muruganantham, R.Subadevi, M.Sivakumar

Journal of Power Sources, 300 (2015) 496-506. IF:8.247

DOI:10.1016/j.jpowsour.2015.09.103

54. Investigations on the rate performance of LiFePO₄/ CeO₂ composite materials via polyol technique for rechargeable lithium batteries

M. Sivakumar, R. Muruganantham, R. Subadevi

RSC advances, 5(2015)86126-86136. IF:3.119 DOI: 10.1039/C5RA12418B

55. Synthesis of surface modified LiFePO₄ cathode material via polyol technique for high rate Lithium secondary battery

M.Sivakumar, R.Muruganantham, R.Subadevi

Applied Surface Science, 337 (2015) 234-240. IF:6.182

DOI:10.1016/j.apsusc.2015.02.100

56. Studies on graphene enfolded Olivine composite electrode material via Polyol technique for high rate performance in Lithium ion batteries

R.Muruganantham, M.Sivakumar, R.Subadevi, S.Ramaprabhu, N-L.Wu Electronic Materials Letters, 11 (2015) 841-852. IF:1.894 DOI:10.1007/s13391-015-5061-6

57. Comparative studies on biodiesel from rubber seed oil using homogeneous and heterogeneous catalysts

R.Meenadevi, R.Subadevi, Samuel Paul Raj, M.Sivakumar

International Journal of Green Energy, 12 (2015) 1215-1221. IF:1.388 DOI:10.1080/15435075.2014.893879

58. A facile synthesis and characterization of LiFePO₄/C using simple binary reactants with oxalic acid by polyol technique and other high temperature

R.Muruganantham, M.Sivakumar, R.Subadevi, N-L.Wu

Journal of Materials Science: Materials in Electronics, 26 (2015) 2095-2106. IF:2.22 DOI: 10.1007/s10854-014-2653-0

59. Structural, morphology and ionic conductivity studies on composite PS-MMA –ZrO₂ polymer electrolyte for lithium polymer battery

M.Ramachandran, R.Subadevi, Fu-Ming Wang, Wei-Ren Liu, M.Sivakumar International Journal of ChemTech Research 6 (2014) 1687-1689.

60. Studies On The Effect Of Dispersoid (ZrO₂) In PVdF-co-HFP Based Gel Polymer Electrolytes

M.Sivakumar, R.Subadevi and R.Muthupradeepa

AIP Conference Proceedings, 1536 (2013) 857-858.

DOI:10.1063/1.4810498

61. Structural and magnetic properties of LiFePO₄ cathode materials prepared by polyol technique

R.Muruganantham, R.Subadevi, M.Sivakumar

Elixir Magnetic Materials, 50 (2012) 10609-10612.

62. A Polyol Route LiFePO₄ Cathode Material For Li-Batteries

R.Muruganantham, R.Subadevi, M.Sivakumar

Advanced Materials Research, 584 (2012) 341-344.

DOI:10.4028/www.scientific.net/AMR.584.341

63. Synthesis and characterization of Cu Doped LiCoO₂ 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.

DOI: 10.4028/www.scientific.net/AMR.584.345

64. 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:2.394* DOI: 10.1007/s11581-011-0629-0

65. 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 Journal of Applied Polymer Science, 119 (2011) 1-6. IF: 2.52 DOI:10.1002/app.29710

66. 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 European Polymer Journal, 43 (2007) 4466-4473. IF: 3.862 DOI:10.1016/j.eurpolymj.2007.08.001

67. 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 Journal of Applied Polymer Science, 103 (2007) 3950-3956. IF:2.52 DOI:10.1002/app.24863

68. Electrochemical studies on [(1-x)PVA-xPMMA] solid polymer blend electrolytes complexed with LiBF₄

M.Sivakumar, R.Subadevi, S.Rajendran, N.-L.Wu, J.-Y.Lee Materials Chemistry and Physics, 97 (2006) 330-336. IF:3.408 DOI:10.1016/j.matchemphys.2005.08.018

69. 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:3.107

DOI:10.1016/j.ssi.2004.01.020

70. Characterization of PVA-PVdF based Solid Polymer Blend Electrolytes

S.Rajendran, M.Sivakumar, R.Subadevi, M.Nirmala

Physica B, 348 (2004) 73-78. IF:1.902 DOI:10.1016/j.physb.2003.11.073

71. 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:3.204 DOI:10.1016/S0167-577X(03)00585-8

72. XRD, FTIR, Impedance and Thermal Studies of PVA-PMMA solid polymer blend electrolyte

S.Rajendran, M.Sivakumar, R.Subadevi, J.Merciline Leonora *Bulletin of Electrochemistry, 20 (2004) 87-92.*

73. Effect of salt concentration in poly(vinyl alcohol)-based solid polymer electrolytesS.Rajendran, M.Sivakumar, R.Subadevi

Journal of Power Sources, 124 (2003) 225-230. IF:8.247 DOI: 10.1016/S0378-7753(03)00591-3

74. Effect of plasticizers in Poly(vinyl alcohol) based hybrid solid polymer electrolytes

S.Rajendran, M.Sivakumar, R.Subadevi Journal of Applied Polymer Science, 90 (2003) 2794-2800. IF:2.52 DOI:10.1002/app.12937

75. Bio-Diesel from palm oil: The clean and green fuel for diesel

R.Meenadevi, Samuel Paul Raj, R.Subadevi, M.Sivakumar

Pro.8th Asian Academic Network for Environmental Safety and Waste Management (AANESWM), December 10-13, 2006, Anna University, Chennai, India, pp.439-444.