Dr.M.SIVAKUMAR
PROFESSOR

Contact

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

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

Teaching Experience: 26 Years

Research Experience: 26 Years

Additional Responsibilities

1. Director – Science Campus, Alagappa University from 26.06.2024
2. RUSA 2.0 Theme Coordinator for Physical Sciences since March 2024.
3. Coordinator – Entrepreneurship Development Cell (EDC), Alagappa University – since January 2022.
4. Programme Officer – NSS-YRC – Unit 03 of Alagappa University – during 2018-2023.

5. Coordinator- Students Facility Centre, and Canteen – Science Campus, Alagappa University – during 2017-18.
6. Programme Coordinator, Week-end M.Phil. Programme in Department of Physics, during July 2016-December 2019.
7. Member- Centre for Yoga Studies
8. Convener – 29th Convocation Committee for VIPs Guests Memento organizing
9. Convener – Teachers' day celebration Gift and Memento committee
10. Department Doctoral Committee Member
11. Member – Board of Studies to Dept. of Physics, Alagappa University.
12. Member – in CDC Board of Studies for PG and M.Phil. for Affiliated Colleges
13. Course Advisor (PG program timetable, CIA tests schedule, project allotment, scholarships, etc.)
14. Faculty co-ordinator of Science Club of Department of Physics.
15. Ph.D and M.Phil. scholars Selection committee member.
16. Staff In-charge for Department Colloquium for PhD and MPhil scholars.
17. In-charge for Atomic Force Microscope in the Department of Physics.
18. Doctoral Committee member in Anna University of Tech., Madurai.
19. Question paper setter in Bharathiar, Madurai Kamaraj, Alagappa, Periyar, Manonmaniam Sundaranar Universities for PG programme.
20. Question paper setter in Anna University, Jamal Mohammed College, etc. for B.Tech., B.E. and B.Sc., courses.
21. ACT NEXT – 2015 Convener.
22. VPP coordinator (2008, 2013).
23. Tour In-Charge for the year 2008-09 for the PG students and MPhil scholars.
24. Department Library In-Charge during 2008-2010.
25. University Representative for DDE Examinations in various centres of Alagappa University.

Areas of Research

Solid State Ionics, Lithium Electrodes and Electrolytes, Sodium and Sulfur electrodes, Supercapacitors, Redox Flow Batteries, Biodiesel, Crystal Growth.

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	15 – 12 As Guide+ 3 As Co-Guide	8+1(coguiding)
	M.Phil.	39	-
Project	PG		5
	UG / Others	3	Xx

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
157	131	Xx	132	5

Cumulative Impact Factor (as per JCR) : 387
h-index : 24
i10 index : 48
Total Citations : 2357

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	DST-SERC major project	20.01.2010	19.01.2013	**SYNTHESIS AND CHARACTERIZATION OF NANO CRYSTALLINE $LiFePO_4$ CATHODE MATERIALS FOR LITHIUM BATTERY FABRICATION BY POLYOL PROCESS**	25.51
2	Alagappa University	Nov' 2009	Jan' 2011	**STUDIES ON CONDUCTIVE ELEMENTS COATED $LiCoO_2$ AND $LiFePO_4$ CATHODE MATERIALS FOR LITHIUM BATTERIES**	0.64
3	DST-NSC	01.04.2010	31.03.2013	**SYNTHESIS AND CHARACTERIZATION OF VANADIUM BASED CATHODE MATERIALS FOR LITHIUM ION SECONDARY BATTERIES**	~26.0 Lakh-Taiwan 13.0 L for India
4	UGC	01.07.2012	31.12.2015	**STUDIES ON COMPOSITE POLYMER ELECTROLYTES BASED ON COPOLYMERS FOR SECONDARY LITHIUM BATTERIES**	11.21
5	DST-SERB major project	24.10.2017	23.10.2020	**A PURSUIT OF PROSPECTIVE LAYER / OLIVINE TYPE ELECTRODE MATERIALS FOR SODIUM BATTERIES**	35.25

Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	RUSA-2.0	18.09. 2018	07.07. 2021	**Theme: Advanced Nano Materials for Sustainable Energy and Sensors Applications**	5.0
2	RUSA-2.0	08.07. 2021	Till date	**Theme: Advanced Nano Materials for Sustainable Energy and Sensors Applications**	5.0

Ongoing Projects (Department Projects- As a Member)

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

Combined Department Projects: (Completed- As a Member)

S. No	Agency	Period		Budget (Rs. In lakh)
		From	To	
1.	UGC-SAP (DRS I)	2004	2009	82.25 (Participated from 2007 onwards)
2.	UGC-SAP (DRS II)	2009	2014	70.50
3.	DST FIST (Level I)	2005	2009	35.00 (Participated from 2007 onwards)
4.	DST-PURSE	2011	2014	600.00 (For all Science Departments)

Consultancy Projects (As a Member)

S. No	Agency	Period	Project Title	Budget (Rs.)
	Universities, Colleges, Institutions	2007	Consultancies on Characterization	51841
		2008		272504
		2009		498034
		2010		623963
		2011		764546
		2012		844966
		2013		1005138
		2014		1186090
		2015		1210880
		2016		1479061
		2017		1563140
		2018		1842875
		2019		1312247
		2020		471041
		Total		13126326

Others

Note: Budget must be rounded to two decimal places

Patents

1. ---
2. ---

Distinctive Achievements / Awards

1. **Post-Doctoral Fellowship –** 15.11.2004 to 31.07.2006 –National Science Committee, Taiwan ROC.

2. **Principal Indian Scientist** of DST-NSC supported India – Taiwan Collaborative Research Project from 2011-14.

3. Received **Vallal Alagappar Research Recognition Award 2020** towards the contribution in research outcome of the University in the form of **"h" index** on 13.01.2021.

4. **Shining Researcher Award** - In recognition of the contribution made towards Excellence in Research at Alagappa University on 05.09.2022.

5. **Best Faculty and Research Excellence Award - Best Achiever Award 2021** - by *Dr.Guna Swathi Education and Research Trust*, Rameswaram 31.03.2021

6. **Outstanding Reviewing Contribution in Electrochimica Acta, Elsevier Publications. 2017**

7. **Best Paper Award** for our paper entitled **"***Effect of ZrO_2 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.

8. **Best Paper Presentation** for our paper entitled *"Optimization of S/MnO_2 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.

9. **Best Poster Presentation** for our paper entitled "*Synthesis and characterization of P2-$NaxMn_{1/2}Fe_{1/2}O_2$ 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.

10. **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.

11. **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.

12. **Best Oral Presentation** for our paper entitled "Synthesis and characterization of O3-type layered cathode material for sodium rechargeable batteries"
M.Kouthaman, L.Priya, P.Arjunan, K.Kannan, R.Subadevi*, M.Sivakumar*
Presented in the international conference on international virtual conference on recent trends in energy materials (INCRTEM-2020) organized by the Department of Physics, Alagappa University, Karaikudi-600 003 during 20-22, September 2020.

13. **Best Paper Award** for our paper entitled "O3 type Layered $NaMnNiCuO_2$ cathode material for rechargeable sodium batteries"
L.Priya, R.Subadevi*, M.Sivakumar*
14-15, July 2021, presented in **National Conference on Recent Trends in Energy Materials RTEM-2021,** organized by the Department of Physics, Arumugam Pillai Seethai Ammal College, Tiruppathur, Tamil Nadu, India.

14. **Best Paper Award (ORAL)** for our paper entitled "Investiation of Fe_2O_3/ZnO nanocomposite as electrode material for redox flow battery application"
L.Priya, R.Subadevi*, M.Sivakumar*
Presented in the National Conference on New Avenues and Advancements in Material Science **(NAAMS-2022)**, 26.09.2022.

15. **1st Prize in Oral Presentation** for our paper entitled "Fabrication of two dimensional MoS_2-ZrO_2 nanocomposite for a high-performance asymmetric supercapacitor"
S.S.Pradeepa, K.Sutharthani, R.Subadevi*, M.Sivakumar*
Presented in the International Conference on Current Research and Advancement in Materials Science Spectroscopy (ICCAMS-2023), organized by Dept. of Physics, St.Joseph's College, Tiruchirappalli in association with Indian Spectrophysics Association, Chennai, held at St.Joseph's College (Autonomous), Tiruchirappalli-620002, during 10-11, February 2023.

16. Award for Outstanding Contribution in Reviewing in Electrochimica Acta – Elsevier Publications

17. Award for Contribution in Reviewing in Materials Chemistry and Physics – Elsevier Publications

18. Award for Contribution in Reviewing in Energy – Elsevier Publications

19. Award for Contribution in Reviewing in Chemical Physics Letters – Elsevier Publications

20. Award for Contribution in Reviewing in Thin Solid Films – Elsevier Publications

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 30

1. Organized Alagappa University Celebrates Themed Nobel Excellence Talks – 2022 **ACT NEXT-2022**, Department of Physics, Alagappa University, Karaikudi on 10.01.2023 as **Member**.
2. Organized **My Story - Motivational Session by Successful Entrepreneur/Start-up Founder** on 15.11.2022, held at Alagappa University, as **Convenor,** by Entrepreneurship Development Cell (TN Scheme) of Alagappa University.
3. Organized One day Workshop on "Entrepreneurship and Innovation" as Career Opportunity, on 14.11.2022, held at Alagappa University, as **Convenor,** by Entrepreneurship Development Cell (TN Scheme) of Alagappa University.
4. Organized **World Standards Day** on 14.10.2022 in the Department of Physics, Alagappa University as **Member.**
5. Organized **World Standards Day** on 13.11.2021 in the Department of Physics, Alagappa University as **Convener.**
6. Organized Alagappa University Celebrates Themed Nobel Excellence Talks – 2020 **ACT NEXT-2020**, Department Of Physics, Alagappa University, Karaikudi during 12.02.2021 as **Member**.
7. Organized **World Standards Day** on 14.10.2020 in the Department of Physics, Alagappa University as **Member**.
8. **International conference on international virtual conference on recent trends in energy materials (INCRTEM – 2020)** Department Of Physics, Alagappa University, Karaikudi during 09-11 September 2020 as Member and Felicitator.
9. Organized Alagappa University Celebrates Themed Nobel Excellence Talks – 2019 ACT NEXT-2019, **as a Member** on 28th August 2020.
10. 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.**
11. 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**.
12. Organized a National Workshop on **Business Oriented Analytical Research and Development 2018 (BOARD-2018)** as a Member, organized by the Department of Physics, Alagappa University, Karaikudi-630 003 during 31st Jan' to 1st Feb' 2018.
13. 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 Coordinator.**
14. Organized Alagappa University Celebrates Themed Nobel Excellence Talks – 2016 ACT NEXT-2016, **as a Member** on 28th April 2017.
15. Organized UGC sponsored "National Conference on Futuristic Materials (NCFM-2017)" **as a Member** in the Department of Physics, Alagappa University, Karaikudi, India held during 27-28, March 2017.
16. 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.
17. Organized "Alagappa University Inter Collegiate Yoga Competition 2016-17" as a **Member** of Centre for Yoga Education, Alagappa University, Karaikudi-630003 on 24th February 2017.

18. Organized "Workshop and Activity based Yoga (WAY-2017)" as a **Member** of Centre for Yoga Education, Alagappa University, Karaikudi-630003 on 8th February 2017.
19. 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.
20. Organized a "National Seminar on "Recent Advancements in Frontier Areas of Materials Science" as a **Co-convener** in the Department of Physics, Alagappa University, Karaikudi, India held on 23-24th March, 2016.
21. Organized Alagappa University Celebrates Themed Nobel Excellence Talks – 2015 ACT NEXT-2015, **as a Convener** on 18th March 2016.
22. 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.
23. 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.
24. Organized a "National Workshop on Characterization Techniques (NWCT-1, 2012)" as a **member** of Organizing committee in the School of Physics, Alagappa University, Karaikudi on 24 & 26, March 2012.
25. Organized an "**International Workshop on Advanced Energy Materials (IWAEM-2012)**" as a **Convener** in the School of Physics, Alagappa University, Karaikudi, India during 9-10, February 2012.
26. Organized a "State Level Workshop on Structure solving by Powder X-ray diffraction (SLWSSP-XRD 2011) as a member of Organizing committee in the School of Physics, Alagappa University, Karaikudi during 26-27, July 2011.
27. Organized a "**National Conference on Recent Trends in Advanced Energy Materia**ls" as **Convener** held on 10th & 11th March, 2010 in the School of Physics, Alagappa University, Karaikudi.
28. 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.
29. Organized a National Workshop on "Crystal Growth and Characterization" as a **member** of organizing committee in the School of Physics, Alagappa University on March 16, 2009.
30. Organized a National Workshop on "Recent Advances in Materials Science" as a **member** of organizing committee in the School of Physics, Alagappa University, on March 07, 2008.

Events Participated (optional)

Conferences / Seminars / Workshops: 15

1. Participated in the 14th International Conference on Ecomaterials organized by CSIR-NIIST, Thiruvananthapuram, India, during 5-7, February 2020.

2. 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.

3. 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.

4. Participated in National Workshop on Expansion and Enrichment of Distance Learning (EEDL-2012) organized by the Directorate of Distance Education, Alagappa University, Karaikudi, Tamil Nadu, during 27-28, March 2012.

5. Participated in the National Seminar on Recent Trends in Functional Materials (FUNMAT'12) organized by the Department of Physics, Ultra College of Engineering & Technology for Women, Madurai on 17th February 2012.

6. Attended International Workshop on Advances in Functional Nanomaterials organized by Center for Nanoscience and Nanotechnology, Anna University, Chennai Tamil Nadu, India during February 21-24, 2011.

7. Participated DAE-BRNS Theme Meeting on Covariance Error Matrix in Nuclear Data and its Applications in Reactor Fuel Cycle and Technology, organized by the Dept. Statistics, Manipal University, Manipal, Karnataka, India during 25-28, February 2008.

8. Participated International Conference on Stochastic Modelling (ICSM09) organized by the Department of Mathematics, Alagappa University, Karaikudi, Tamil Nadu, India during Feruary 12-14, 2009.

9. Participated in the National Workshop on Bio-diesel, organized by School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai, Tamil Nadu during 2007.

Other Training Programs

1. Orientation Program conducted at the ASC, Madurai Kamaraj University, Madurai during 24.09.2008 to 21.10.2008.
2. Refresher Course entitled "Recent Trends in Physics" conducted at the ASC, Madurai Kamaraj University, Madurai, during 03.11.2009 to 23.11.2009.
3. 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.
4. Faculty Development (Enrichment) Programme, 6-12, January 2017 organized by IQAC, Alagappa University, Karaikudi.
5. AICTE-ISTE sponsored A Short Term Course on "Smart materials and structures", organized by the Department of Physics, Thiagarajar College of Engineering, Madurai during 03.12.2018 to 08.12.2018.
6. A Short Term Course in "Research Methodology" conducted in the UGC-Human Resource Development Centre, Bharathidasan University, Khajamalai Campus, Tiruchirappalli, during 15.02.2019 to 21.02.2019.

Overseas Exposure / Visits

1. Post Doctoral Fellow – National Taiwan University, Taipei, Taiwan from 15.11.2004 to 27.07.2006
2. Indian side Principal Visiting Scientist 2011-14 – Made 3 Visits bilaterally
3. Invited Speaker – 2023 ISCM-1, during Jan'31, 2023 to Feb'03, 2023, in National University of Tainan, Taiwan, ROC.

Membership in

Professional Bodies

1. Life Member : Indian Association of Physics Teachers (IAPT)
2. Life Active Member : Society for Advancement of Electrochemical Science and Technology (SAEST)
3. Life Member : Society for Polymer Science India – Tiruvananthapuram Chapter (SIPS)
4. Life Member – Indian Physics Association
5. Life Member - Indian Society for Electroanalytical Chemistry (ISEAC)
6. Fellow Member - Bose Science Society

Editorial Board

1. **Review Editor**- Energy Storage Specialization- in **Frontiers in Energy Research.**

2. **Editorial Member – Electronics Science Technology and Application**, Universe Scientific Publishing Pte Ltd.

3. **Edited** the **Abstracts & Souvenir** of the **NATIONAL CONFERENCE ON RECENT TRENDS IN ADVANCED ENERGY MATERIALS** held at the School of Physics, Alagappa University, Karaikudi, on 10th & 11th March, 2010. ISBN: 978-93-80400-14-3

4. **Edited** the **Proceedings** of the **NATIONAL CONFERENCE ON RECENT TRENDS IN ADVANCED ENERGY MATERIALS** held at the School of Physics, Alagappa University, Karaikudi, on 10th & 11th March, 2010. ISBN:978-93-80697-40-6.

5. **Co-edited the Proceedings** of the **National Conference on Futuristic Materials (NCFM-2017)** held at the Department of Physics, Alagappa University, Karaikudi-630 003 during 27-28, March 2017. **ISBN: 978-81-791229-2-1.**

6. **Edited the Abstracts & Souvenir of the International Conference on Momentous Role of Nanomaterials in Renewable Energy Devices (ICMNRE-**

2018) held at the Department of Physics, Alagappa University, Karaikudi, on 01-02, March, 2018. ISBN:978-81-934473-2-1.

Advisory Board

1. Lady Dock College – Special Invitee in Syllabus Framing

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

1. Chairman - PG Physics Board in Bharathidasan University, Tiruchirappalli from Apr'2017 to till date.
2. Chairman - MPhil Physics Board Bharathidasan University, Tiruchirappalli during Apr'2019 and Apr'2020.
3. Member BOS- PG Board Physics for Affiliated Colleges, Alagappa University, Karaikudi.
4. Member BOS- UG Board Physics for Affiliated Colleges, Alagappa University, Karaikudi.
5. Member BOS- PG Board Physics for University Department, Alagappa University, Karaikudi.

Others

1. JRF, SRF Assessment Committee Member in AcSIR, CECRI, Karaikudi
2. PhD Selection Committee Member - AcSIR, CECRI, Karaikudi for Aug'2020.
3. Project Assistant, Project Associate, Research Associate Selection Committee Member - AcSIR, CECRI, Karaikudi.

Resource persons in various capacities

Number of Invited / Special Lectures delivered: 24

1. 12.01.2008 – Dept. Physics, NPR Arts & Science College, Uluppakudi, Natham – Chief Guest and Invited Talk – *Introduction Energy Storage Devices*.
2. 21-22, August 2009 – **National Conference on Recent Advances in Materials Science-2009 (RAMS-09)**, Dept.Physics, Sri Sevugan Annamalai College, Devakkottai, *Production and Fuel properties of Bio-diesel from Mahua oil*
3. 13.09.2010 – Special Address on the occasion of Special program under Autonomous Fund – Dept.Physics, V.V.Vanniapperumal College for Women, Virudhunagar, *Introduction to Electrochemical storage devices and Bio fuels*

4. 27.11.2009 – One day **National Workshop on "Recent Trends in Modern Analytical Techniques and Energy Storage Devices**" in Latha Mathavan Engg. College, Alagar Kovil, Madurai – Keynote Address and Invited Talk on "*Recent Trends in Electrochemical Energy Storage Devices*".
5. 26.10.2010 – **PHYSKNIT-2K10, State Level Inter Collegiate Meet** organized by Dept.Physics, Fatima College, Madurai, *Renewable Energy*.
6. March, 4, 2011. **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 – **Valedictory Address and Invited Talk** on "*Electrochemical Energy Technology*".
7. October, 21-22, 2011. "Developments of Polymer Electrolytes" as an Invited Talk in the **National Seminar on Polymers Synthesis, Characterization and Applications (POLYCAP'2011)** organized by the Department of Physics, Mannar Thirumalai Naicker (MTN) College, Madurai-625 004.
8. 22nd January 2013. "Bio-Fuels And Energy Storage Devices" as an Invited Talk in the **National Seminar on Crystal Growth and Bio-fuels**, organized by the Department of Physics, Meenakshi College, Madurai.
9. 08.03.2014 **"Lithium Electrodes** - **A Review"** organized by the Department of Physics, Cousannel College, Muthupettai, Ramnad in the **National Level Seminar on Recent Advances in Nanomaterial Synthesis and Characterization (RANSSAC-2014)**.
10. 26.01.2014 "**Introduction to Fuel Cells**" organized by the Department of Physics, Sri Sevugan Annamalai College, Devakkottai in the International Seminar on Advanced Materials"
11. 08.08.2014 "**Energy Storage using Nano crystalline Materials for Lithium Batteries"** organized by the Department of Physics, National College, Tiruchirappalli, in the National Conference on Crystal Growth and Energy Storage, during 7-9, August 2014.
12. 08.09.2014 "**Functional Materials – A Review"** organized by Department of Physics, Idhaya College for Women, Sarugani, Sivagangai District, Tamil Nadu, in An One day National Seminar on Recent Advances in Functional Materials-2014 on 08.09.2014.
13. 19.12.2014 "**AN ANODIC RECITAL OF OXYGEN DEFICIENT COPPER VANADATE FOR LITHIUM BATTERIES"** organized by School of Chemical Sciences, Mahatma Gandhi University, Kottayam, India in International Conference on Nanostructured Materials and Nanocomposites (ICNM-2014) during 19-21, December 2014.
14. 03.03.2015 "**Nano Electrodes for Energy Storage Devices – An Overview**" organized by the Department of Electronics & Communication and Physics, Syed Hameedha Arts & Science College, Kilakarai, Ramanathapuram District, in National Seminar on Nanotechnology and Nanosensors – NASON-15.
15. 12.12.2015 "**Development of carbonaceous materials coated positive electrodes for Li-ion batteries"** organized by Hindustan College of Science and Technology, Farah, Mathura, UP., India in the 3rd International Conference on Nanostructured Materials and Nanocomposites (ICNM-2015) during 12-14, December 2015.
16. 10.08.2016 "Energy Materials" in **TEQIP sponsored Faculty Development Programme** organized by the Department of Physics, Alagappa Chettiar College of Engineering and Technology, Karaikudi-3.
17. Chaired a Technical Session in **National Seminar on Advanced Materials Research NSAMR-2017** held in the Department of Physics, Alagappa University, Karaikudi-630003, Tamil Nadu, India on 19.01.2017.
18. **Chaired Technical Session** in "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.
19. **Chaired** Theme Lecture session in **ACTNEXT-2016** held in the Department of Physics, Alagappa University, Karaikudi-630 003, on 28.04.2017.

20. **Chaired** Technical Sessions in the **National Theme Meet on University-Industry Interface 2017 (NTM U2I-2017)** during 20-21, September 2017, organized by the Department of Physics, Alagappa University, Karaikudi-630 003.
21. **Chaired** Technical Session in the National Workshop on **Business Oriented Analytical Research and Development 2018** (**BOARD-2018**) organized by the Department of Physics, Alagappa University, Karaikudi-630 003 during 31st Jan' to 1st Feb' 2018.
22. **Chaired** Technical Sessions in the **International Conference on Momentous Role of Nanomaterials in Renewable Energy Devices – 2018 (IC MNRE-2018)** during 1-2, March 2018 organized by the Department of Physics, Alagappa University, Karaikudi-630 003.
23. **Chaired** Technical Session 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.
24. 16.12.2019, Presented an Invited Talk in the **13th National Conference on Solid State Ionics** (**NCSSI 13**) entitled ***Alternative High Performance Electrodes: Role of Sulfur and Sodium Electrode Materials in Energy Storage Application*** organized by the Department of Physics, Indian Institute of Technology (IIT R), Roorkee, Uttraghand, India, during 16-18, December 2019.
25. 08.02.2020 Chief Guest, Science Day Celebration 2020, with a special lecture "Electrochemical Energy Storage Devises" in Department of Physics and Chemistry, VPM Govt. Arts College, Pulankurichi.
26. 16.12.2020 Invited Lecture entitled **"Recent Advances in Energy Storage Materials and the Alternatives"** in the Refresher Course in **RECENT ADVANCES IN PHYSICS (RAP-2020)** 9th December, 2020 - 22nd December, 2020 organized by Academic Staff College, Madurai Kamaraj University, Madurai.
27. 14-15, July 2021, Invited Lecture entitled **"***Recent Trends in Energy Storage Materials and their Alternatives***"** presented in **National Conference on Recent Trends in Energy Materials RTEM-2021,** organized by the Department of Physics, Arumugam Pillai Seethai Ammal College, Tiruppathur, Tamil Nadu, India.
28. 21.07.2021 ATAL-AICTE Faculty Development Programme on "**STRATEGIES AND OUTCOMES TO ENHANCE SUSTAINABLE GREEN ENVIRONMENT**" in virtual mode organized by Department of Chemistry, Anna University-UCE-BIT Campus, Tiruchirappalli- 24, Tamil Nadu, India during 19.07.2021 to 23.07.2021.
29. 17.06.2022 Faculty Development Programme **REVIEW ON THE DEVELOPMENT OF ENERGY MATERIALS FOR VARIOUS ENERGY STORAGE APPLICATIONS** organized by the Department of Physics, Alagappa Chettiar Govt.College of Engineering and Technology (ACGCET), Karaikudi, India.
30. 08.10.2022, 2.0-5.0 p.m., presented Invited Lecture entitled "An appraisal on the progress of energy materials for various energy storage applications**" in** Refresher Course in *Recent Advances in Physics of Materials (RAPM – 2022)* during 07.10.2022 to 21.10.2022, organized by Department of Physics, Madurai Kamaraj University, Madurai, India.
31. 31.01.2023, **An intensive pursuit on sulfur electrode using various carbonaceous materials for energy storage application**

32. Invited Talk in 2023, **International Symposium on Carbon Materials for Energy, Environment, Sustainability and Bio-applications** with the 6th Taiwan Carbon Connference (**2023, ISCM-1**), held at National University of Tainan, Tainan, Taiwan, ROC during Jan'31 to Feb'03, 2023.

Others

1. Articles published in Newspapers / Magazines : -
2. Products developed : xx
3. No. of PhD Thesis evaluated : 15 (As Internal) +3 (As External)
4. No. of PhD Public Viva Voce Examination conducted : 6
5. Sequences submitted in GenBank-

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

Recent Publications

Papers published in International Journals SCI/WOS

1. Two-dimensional layered Ti_3C_2 MXene nanosheets decorated with ZrO_2 nanospheres for the high-performance solid-state supercapacitors
   S.S. Pradeepa, K. Sutharthani, R. Subadevi*, M. Sivakumar*
   Journal of Energy Storage (Accepted for Publication) https://doi.org/10.1016/j.est.2024.112821 ***IF:8.9***
2. Fabrication of 1.8 V hybrid supercapacitor based on molybdenum disulfide- Zinc oxide nanocomposite electrode alongside polyvinyl alcohol (PVA) gel electrolyte
   S.S. Pradeepa, K. Sutharthani, R. Subadevi*, M. Sivakumar*
   Advanced Powder technology 35(2024) 104490-104512
   https://doi.org/10.1016/j.apt.2024.104490 **IF: 4.2**
3. Sulfur encapsulated carbon templet as a structured cathode material for secondary sodium-sulfur battery
   Premnahth Jeyaraj Janshirani[a], Subadevi Rengapillai[a,*], Soundarrajan Elumalai[b], Raghu Subashchandrabose[b], and Sivakumar Marimuthu[a*]
   Ionics 30 (2024) 2643-2656, **IF:2.4 DOI :** 10.1007/s11581-024-05422-7
4. Eco-friendly production of carbon electrode from biomass for high performance Lithiu and Zinc ion capacitors with hybrid energy storage characteristics
   P.Rajkumar, V.Thirumal, G.Radhika, RM.Gnanamuthu, R.Subadevi, M.Sivakumar, Kisoo Yoo, Jinho Kim
   Materials Letters 354 (2024) 135320 **IF: 2.7**
   https://doi.org/10.1016/j.matlet.2023.135320

5. Porous carbon derived from bacteria and yeast: the potential electrode material for the development of symmetric high energy density supercapacitors

   K.Krishnaveni, V.Thirumal, G.Radhika, P.Rajkumar, R.Subadevi, M.Sivakumar, Kisoo Yoo, Jinho Kim

   Journal of Materials Science: Materials in Electronics 34 (2023) 1904 **IF: 2.8** https://doi.org/10.1007/s10854-023-11316-7

6. NiO/ZnO Composite Derived Metal-Organic Framework as Advanced Electrode Materials for Zinc Hybrid Redox Flow Battery

   L.Priya, J.J.Premnahth, R.Subadevi*, M.Sivakumar*

   ChemPhysChem 24(2023) e202300283 DOI: 10.1002/cphc.202300283 **IF:2.3**

7. Investigation on two-dimensional molybdenum oxide-graphitic carbon nitride (MoO_3-g-C_3N_4) heterostructures based hybrid electrodes for the fabrication of high energy density solid state supercapacitors

   S.S.Pradeepa, K.Sutharathani, R.Subadevi*, Wei-Ren Liu, M.Sivakumar*

   Journal of Taiwan Institute of Chemical Engineers 154 (2024) 105084 https://doi.org/10.1016/j.jtice.2023.105084 **IF:5.5**

8. An impact of sea sponge-derived hard carbon with the symbiosis of sodium ion battery and biomedical applications

   T.Meenatchi[a], R.Subadevi[a,*], P.Kumar[b], S.Raghu[c], Wei-Ren Liu[d,*], M.Sivakumar[a,*]

   Journal of Taiwan Institute of Chemical Engineers 154 (2024) 105083 https://doi.org/10.1016/j.jtice.2023.105083 **IF:5.5**

9. Dual metal (Fe and Mg) substituted layered titanium-based P2 and O3-type negative electrodes for rechargeable sodium batteries

   K.Kannan, M.Kouthaman, R.Suba Devi*, M.Sivakumar*

   Advanced Powder Technology 34 (2023) 104038 **IF: 4.2 https://doi.org/10.1016/j.apt.2023.104038**

10. Structural and Electrochemical Properties of Musa acuminata Fiber Derived Hard Carbon as Anode of Sodium-Ion Batteries.

    Meenatchi Thenappan[1], Kouthaman Mathiyalagan, Mozaffar Abdollahifar[2], Subadevi Rengapillai * and Sivakumar Marimuthu*

    Energies 16(2) (**2023)** 979 **IF:3** **https://doi.org/10.3390/en16020979**

11. Exploration of Magnetic Sesquioxide Nanocomposite as a Potential Electrode Material for the Fabrication of High Energy density Asymmetric Supercapacitors

    S.S. Pradeepa, K. Sutharthani, R. Subadevi*, M. Sivakumar*

    Journal of Electroanalytical Chemistry 928 (2023) 117043, **IF: 4.1**

    https://doi.org/10.1016/j.jelechem.2022.117043

12. Hard Carbon Reprising Porous Morphology Derived from Coconut Sheath for Sodium-ion Battery

    Meenatchi Thenappan, Subadevi Rengapillai* and Sivakumar Marimuthu*

    Energies 15 (2022), 8086-8105, **IF:3,**

    Doi: https://doi.org/10.3390/en15218086

13. Study on the effect of co-substitution of transition metals on O3-type Na-Mn-Ni-O cathode materials for promising sodium-ion batteries

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

    Journal of the Taiwan Institute of Chemical Engineers 140 (2022) 104565-573, **IF: 5.5**

    DOI: https://doi.org/10.1016/j.jtice.2022.104565

14. Turning trash to treasure: Reusable glucose kit as a cell using ZnO derived from Metal organic framework (MOF) electrode for redox flow battery

    Priya Lakshmanan [1], Subadevi Rengapillai[2], Sivakumar Marimuthu[2]*, and Suryanarayanan Vembu [2,]

    Energies,15(20)(2022)7635,**IF:3,**Doi:https://doi.org/10.3390/en15207635

15. A reign of bio-mass derived carbon with the synergy of energy storage and biomedical applications

    Rajkumar Palanisamy a,f,i , Diwakar Karuppiah a , Subadevi Rengapillai a,* , Mozaffar Abdollahifar b,c,d , Gnanamuthu Ramasamy e , Fu-Ming Wang f , Wei-Ren Liu g , Kumar Ponnuchamy h , Joongpyo Shim i , Sivakumar Marimuthu a,*

    Journal of Energy Storage 51 (2022) 104422-32, **IF: 8.9**, Doi: https://doi.org/10.1016/j.est.2022.104422

16. High-performance asymmetric supercapacitor fabricated with a novel MoS_2/Fe_2O_3/graphene composite electrode

    RajkumarPalanisamy[a] DiwakarKaruppiah[a] SethuramanVenkatesan[a] SaravananMani[a] MadhanKuppusamy[a] SenthilkumaranMarimuthu[a] AravinthKaruppanan[a] RadhikaGovindaraju[b] SivakumarMarimuthu[c]

SubadeviRengapillai[c] MozafarAbdollahifar[de] AswinKumarAnbalagan[f] RamasamyPerumalsamy[a]

Colloid and Interface Science Communications 46(2022)100573 **IF:4.7** Doi: https://doi.org/10.1016/j.colcom.2021.100573

17. A combined first principles and experimental study on Al-doped $Na_3V_2(PO_4)_2F_3$ cathode for rechargeable Na batteries

Shu-HanZhuang[a] Chun-ChuenYang[b] MingtaoZheng[cd] SubadeviRengapillai[e] Sivakumar Marimuthu[e] Yu-Shen Chiang[f] Bor KaeChang[f] Chia-HungHuang[gh] Wei-RenLiu[a]

Surface and Coatings Technology 434 (2022) 128184- **IF: 5.3** https://doi.org/10.1016/j.surfcoat.2022.128184

18. Layered O3-type $Na_{9/10}Cr_{1/2}Fe_{1/2}O_2$ as new cathode for rechargeable sodium-ion battery

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

Colloids & Surfaces A: Physicochemical and Engineering Aspects 633 (2021) 127929 **IF:4.9** Doi: https://doi.org/10.1016/j.colsurfa.2021.127929

19. Influence of cerium oxide as a dispersoid in blend poly(styrene-co-methylmethacrylate) electrolyte for lithium ion battery

M.Ramachandran, R.Subadevi, P.Rajkumar, R.Muthupradeepa, M.Sivakumar*

Polymer International **71** (2022) 310-316 **IF:2.9** DOI 10.1002/pi.6331

20. Effect of tungsten and carbon in germanium oxide as a high-performance electrode for energy storage application

K.Diwakar, P.Rajkumar, R.Subadevi*, P.Arjunan, M.Sivakumar*

ACS- Applied Energy Materials 4 (2021) 9692-9700 **IF:5.4**

Doi: https://doi.org/10.1021/acsaem.1c01674

21. Enriched energy storage capability and bi-functional ability of boron doped graphene as efficient electrode for supercapacitors and lithium sulfur batteries

P.Rajkumar[a], K.Diwakar[a], M.Ramachandran[a,b], A.Mozaffar[c], RM.Gnanamuthu[d], R.Subadevi[a]*, M.Sivakumar[a]*

Journal of Materials Science: Materials in Electronics (Published Online) **IF: 2.8** Doi: https://doi.org/10.1007/s10854-021-06650-7

22. Enhanced enactment of graphene amalgamated sodium cobalt phosphate composite electrode material in sodium-ion battery

G.Savithiri, V.Priyanka, R.Subadevi*, Bijoy Kumar Das, M.Sivakumar*

Journal of the Taiwan Institute of Chemical Engineers 126 (2021) 197-204 **IF: 5.5** Doi: https://doi.org/10.1016/j.jtice.2021.07.021

23. Cobalt substituted Layered O3 and P2-type Na-Ti-Ni-Co-O anode materials for emerging Sodium-ion Batteries

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

    Journal of Industrial and Engineering Chemistry 102 (2021) 363-369 **IF: 5.9** Doi**:**https://doi.org/10.1016/j.jiec.2021.07.021

24. A Facile One-Pot hydrothermal synthesis of Zn, Mn co-doped $NiCo_2O_4$ as an efficient electrode for Supercapacitor applications

    S.S. Pradeepa, P. Rajkumar, K. Diwakar, K. Sutharthani, R. Subadevi*, M. Sivakumar*

    Chemistry Select 6 (2021) 6851-6862 **IF:1.9 DOI: 10.1002/slct.202101708**

25. Influence of the concentration of capping agent on synthesizing and analyses of Ceria nano-filler using Modified co-precipitation technique

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

    International Journal of Applied Ceramic Technology 18 (2021) 1533-1541 **IF:1.8** DOI:10.1111/ijac.13815

26. Electrochemical Analyses Of ZrO_2 dispersoid incorporated Poly (styrene-methyl methacrylate) blend gel electrolytes for Lithium-ion Battery

    M.Ramachandran, R.Subadevi, P.Rajkumar, R.Muthupradeepa, M.Sivakumar*

    J.Applied Polymer Science 138 (2021) 51180-88 **IF:2.7** DOI: 10.1002/app.20210319

27. Fabrication of $Li(Ni–Zn–Mn)O_2$ layered cathode material for energy conversion and storage performance in lithium-ion batteries

    S.Kumaraguru[a], C.Senthil[b,c], T.Kesavan[c], M.Vivekanantha[c], R.Subadevi[d], M.Sivakumar[d], Chang Woo Lee[b], RM.Gnanamuthu[a,*]

    Solid State Sciences 118 (2021) 106630-634 **IF: 3.4** DOI: https://doi.org/10.1016/j.solidstatesciences.2021.106630

28. A study on High rate and high stable Sodium vanadium phosphate electrode for Sodium Battery Alongside air exposure treatment

    K Diwakar, P Rajkumar, R Suba Devi*, P Arjunan, M Sivakumar*

    Journal of Materials Science: Materials in Electronics **32** (2021) 14186-14193 **IF.2.8,** DOI : 10.1007/s10854-021-05969-5

29. Gradual development of maricite $NaMnPO_4$ with the influence of diols chain length in polyol process of surpassed sodium intercalation

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

    ACS Industrial & Engineering Chemistry Research 60 (2021) 5861-5868 **IF: 3.8** DOI: 10.1021/acs.iecr.1c00102

30. Improved electrochemical properties of P2 type layer electrode through extended diffusion path by using post-transition metal doping

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

    Materials Characterization 175 (2021) 111078-083 **IF: 4.8**

    Doi: https://doi.org/10.1016/j.matchar.2021.111078

31. Upshot of concentration of zirconium (iv) oxynitrate hexa hydrate on preparation and analyses of zirconium oxide (ZrO_2) nanoparticles by modified co-precipitation method

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

    Journal of Nanoscience and Nanotechnology 21 (2021) 5707-5713 **IF;-1.354** DOI: https://doi.org/10.1166/jnn.2021.19488

32. Electrospun assisted antimony phosphate ($SbPO_4$) anode for elevated performance in sodium and lithium ion charge storage application

    K. Diwakar, P. Rajkumar, R. Subadevi*, P. Arjunan, M. Sivakumar*

    Journal of Alloys and Compounds 870 (2021) 159317 **IF:5.8**

    Doi: https://doi.org/10.1016/j.jallcom.2021.159317

33. Improved tin oxide nanosphere material via co-precipitation method as an anode for energy storage application in Li-ion batteries

    S. Kumaraguru[1], S. Raghu[2], P. Rajkumar[3], R. Subadevi[3], M. Sivakumar[3], Chang Woo Lee[4], RM. Gnanamuthu[1]

    Ionics 27 (2021) 1049-1059 **IF: 2.4**

    Doi: https://doi.org/10.1007/s11581-021-03901-9

34. Study on Efficient Electrode from Electronic waste renewed carbon material for sodium battery applications

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

    Journal of Environmental Chemical Engineering 9 (2021) 105024 **IF: 7.4**

    Doi: https://doi.org/10.1016/j.jece.2021.105024

35. Carbon scaffold VPO_4 as an anode for Lithium and sodium ion batteries

    K.Diwakar, P.Rajkumar, R.Subadevi*, P.Arjunan, M. Sivakumar*

    Journal of Solid State Electrochemistry 25 (2021) 1231-1236 **IF:2.6** DOI: 10.1007/s10008-020-04893-8

36. Optimization of Prismatic Type Layered Electrode Materials for High Performance Sodium Battery

    P.Arjunan, J.Prashanth, K.Diwakar, M.Kouthaman, R.Subadevi*, M.Sivakumar*

    International Journal of Energy Research, 45 (2021) 8497-8507 **IF:4.3** Doi:https://doi.org/10.1002/er.6383

37. Probe on Hard Carbon electrode derived from Orange Peel for energy storage application

    T.Meenatchi[1], V.Priyanka[1], R.Subadevi[1,*], Wei-Ren Liu[2], Chia-Hung Huang[3], M.Sivakumar[1,*]

    Carbon Letters **31**(2021) 1033–1039, **IF:5.5**

    Doi: https://doi.org/10.1007/s42823-020-00217-y

38. Exploration of the Effect of Transition Metal on the Divergence of Orthorhombic Sodium Orthophosphate ($NaXPO_4$) Via Polyol Process

    Venkatachalam, Priyanka; Palanisamy, Rajkumar; Rengapillai, Subadevi*; Ganesan, Savithiri; Marimuthu, Sivakumar*

    ACS Applied Energy Materials 4 (2021) 586-594 **IF: 5.4**

    Doi: 10.1021/acsaem.0c02473

39. Enhancing structural stability of layered O3-type Na-Mn-Ni-Cu-O cathode material through copper substitution for sodium batteries

    M. Kouthaman[a], P. Arjunan[a], K. Kannan[a], V. Priyanka[a], R. Subadevi[a,*], V. Kumaran[b], RM. Gnanamuthu[b], M. Sivakumar[a,*]

    Journal of the Taiwan Institute of Chemical Engineers 117 (2020) 86-92 **IF:5.5** Doi:https://doi.org/10.1016/j.jtice.2020.11.032

40. Iron Substituted Layered P2-type $Na_{1/2}Ti_{6/10}Ni_{3/10}Fe_{1/10}O_2$ as innovative Anode Material for Rechargeable Sodium Batteries

    K.Kannan[a], M.Kouthaman[a], P.Arjunan[a], V.Priyanka[a], R.Subadevi[a,*], L.Kumaresan[b], M.Sivakumar[a,*]

    Inorganic Chemistry Communications 124 (2021) 108383 **IF:4.4** **Doi:**https://doi.org/10.1016/j.inoche.2020.108383

41. Titanium deputized layered O3-type $NaFe_{9/20}Cr_{9/20}Ti_{1/10}O_2$ cathode material for Sodium-ion batteries

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

    Materials Letters, 285 (2021) 129119 **IF:2.7** Doi:https://doi.org/10.1016/j.matlet.2020.129119

42. 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 40 (2021) 5248-5253 **IF: 1.46** Doi:https://doi.org/10.1016/j.matpr.2020.11.157

43. Physical and electrochemical chattels of phosphonium ionic liquid based solid and gel-polymer 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 31 (2020) 22933–22944 **IF:2.779**
    DOI: 10.1007/s10854-020-04820-7

44. 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 45 (2021) 5214-5223 1-10 IF:**4.3**
    Doi:https://doi.org/10.1002/er.6136

45. 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: 5.1** Doi:https://doi.org/10.1016/j.ceramint.2020.08.178

46. 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 27 (2020) 1837-1845 **IF: 2.523** DOI: 10.1007/s10934-020-00963-4

47. Effect of TiO_2/carbon black in sulfur based composite cathode for lithium sulfur batteries

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

    Ionics 26 (2020) 5463-5470 **IF:2.4** Doi: https://doi.org/10.1007/s11581-020-03691-6

48. An Emerging Electrochemically Active Maricite $NaMnPO_4$ as Cathode Material at Elevated Temperature for Sodium-Ion Batteries

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

    Applied Nanoscience, 10 (2020) 3945-3951. **IF:3.869** Doi:https://doi.org/10.1007/s13204-020-01506-8

49. 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, 25 (2020) 939-948 **IF:2.6** Doi:https://doi.org/10.1007/s10008-020-04747-3

50. Tweaking the Electrochemical Activity of Maricite $NaMnPO_4$ 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. **IF:3.2** Doi:https://doi.org/10.1016/j.jssc.2020.121551

51. Novel Layered O3-$NaFe_{0.45}Co_{0.45}Ti_{0.1}O_2$ cathode material for Sodium Batteries

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

    Materials Letters, 276 (2020) 128181. **IF:2.7**

    DOI**:** 10.1016/j.matlet.2020.128181

52. An Imprint of Sulfur/SiO_2 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:2.5** DOI:10.1007/s00339-020-03617-z

53. Titanium based Layered O3-$NaTi_{7/10}Ni_{3/20}Mg_{3/20}O_2$ anode material for Sodium ion batteries

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

    Materials Letters, 273 (2020) 127950. ***IF:2.7*** DOI**:**10.1016/j.matlet.2020.127950

54. 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: 2.2*** DOI:10.1007/s11665-020-04825-7

55. 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 26 (2020) 4543–4551. ***IF:2.4*** DOI:10.1007/s11581-020-03592-8

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

    K.Diwakar, P.Rajkumar, P.Arjunan, R.Subadevi*, M.Sivakumar*

    International Journal of Energy Research, 44 (2020) 7591-7602. ***IF:4.3*** DOI:10.1002/er.5492

57. 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: 2.6***

    DOI:10.3389/fmats.2020.00109

58. 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: 2.1*** DOI: 10.1007/s11837-020-04165-w

59. Effect of Polyaniline on Sulfur/Sepiolite Composite Cathode for Lithium-Sulfur Batteries

    C. Kalaiselvi[1], V.Priyanka[1], R. Subadevi[1,*], Wei-Ren Liu[2], Chia-Hung Huang[3] and M.Sivakumar[1,*]

    Polymers, 12 (2020) 755. ***IF: 4.7*** DOI:10.3390/polym12040755

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

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

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141. Optimization of blend of polymethyl methacrylate (PMMA) with poly vinylidene chloride-co-acrylonitrile (PVdC-co-AN) composite electrolytes

M.Shanthi, R.Subadevi*, M.Ramachandran, M.Sivakumar*

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142. Effect of reaction temperature on synthesis and characterization of cerium oxide (CeO_2) nano particles via modified co-precipitation method

M.Ramachandran, M.Shanthi, R.Subadevi, M.Sivakumar*

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143. Studies on silica wrapping sulfur electrode material for lithium sulfur batteries

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

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144. Study of synthesis and characterization of P2 type layered $Na_{2/3}[Ni_{1/3}Mn_{2/3}]$ O_2 cathode material for sodium ion secondary batteries

P.Arjunan, R.Subadevi, M.Sivakumar*

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145. The preparation of Fe-transition-metal oxide host silicate as a positive electrode candidate for Li-ion secondary batteries

V.Meenakshi, R.Dhanalakshmi, R.Subadevi, M.Sivakumar*

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146. Structural studies of $NaFePO_4$ nanocomposite for sodium ion batteries

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

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R.Dhanalakshmi, K.Diwakar, P.Rajkumar, X.Christin Vinotha, R.Subadevi, M.Sivakumar*

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148. Experimental investigations of specific gravity on transesterified rubber seed methyl ester

R. Meena Devi, R.Subadevi, M. Sivakumar *

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R.Meena Devi, R.Subadevi and M.Sivakumar*

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152. Investigation of the role different plasticizers in Poly(vinylidene chloride-co-acrylonitrile) based composite gel polymer electrolyte.

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154. Optimization of temperature on synthesis of zirconia (ZrO_2) nano particles

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156. Production of an alternative fuel from a low cost feedstock - an economical view

J.K. Sabatini Rabeka, R.Meena Devi, R.Subadevi, M. Sivakumar

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