CURRICULUM VITAE

Dr. Mohd Arif Dar

(Ph.D., M.Phil., M.Sc., B.ed)

Project Fellow (IUAC Delhi)

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Research interest:

Nano-Materials Synthesis and Fabrication
Material Characterization,
Metal Chalcogenide Semiconducting Materials
Supercapacitors
Electrode Fabrication
Magnetism

RESEARCH EXPERIENCE: 4-year in Ph.D. and 6-year teaching experience

Teaching Experience:

1. Two years of Experience as **Lecturer** (Contractual) in **Govt. Degree college Handwara Jammu & Kashmir**, India from April - 2013 to April - 2015.
2. One year of Experience as **Assistant lecturer** (Contractual) in Govt. **Degree college Kupwara, Jammu & Kashmir,** India from June - 2015 to march - 2016.
3. One year of Experience as **Assistant lecturer** (Contractual) in **Govt. Degree college Bandipora and Uri**, Jammu & Kashmir, India from May - 2016 to Feb - 2017.
4. One year of Experience as **Assistant lecturer** (Contractual) in **Govt. Degree college Sopore, Jammu & Kashmir**, India from April - 2017 to November - 2017.
5. One year of Experience as **Assistant Professor** in **MAM College of Engineering and Technology Trichirapalli**, Tamil Nadu, India from December - 2017 to December - 2018.
6. Presently working as Lecturer in **Govt. Degree college Sopore, Jammu & Kashmir**, India from March - 2023.

Education:

Ph.D in physics: Department of physics, Annamalai University, Tamil Nadu, India, on 22-06-2022.
Thesis Title: "*Structural, morphological and electrochemical properties of pure and metal ions (Cr, Fe and Mn) doped SnS nanomaterials synthesized by Solvothermal method"*.
M. Phil in physics: Barkatullah university Bhopal, Madhya Pradesh, India in Aug - 2012.
M. Sc in physics: Barkatullah University Bhopal, Madhya Pradesh, India in Jul - 2011.

B. Sc: University of Kashmir Srinagar, Jammu and Kashmir, India in Jul - 2009.
B. Ed: University of Kashmir Srinagar, Jammu and Kashmir, India in June - 2014.

Research internships:

- Project Sanctioned by IUAC Delhi on synthesis of tin sulfide nanomaterials as photocatalytic and energy storage devices. Project code: 67104 from Jan – 2020 to till date.
- Worked in collaboration with King Abdullah University of Science and Technology, Saudi Arabia, (2019 to till date).
- Worked in collaboration with National Institute of Technology Tiruchirappalli, Tamil Nadu, India (2019 to till date).
- Worked in collaboration with SRM Institute of Science and Technology, Chennai, India (2019 to till date).
- Worked in collaboration with Manomanian Sundaranar University Tirunelveli, Tamil Nadu, India (2020 to till date).
- Worked in collaboration with university of Kashmir Srinagar, Jammu and Kashmir, India (2019 to till date).

Research skills:

- Working as **Reviewer** with the international journal of '**Materials Chemistry Frontiers**" (Royal Society of Chemistry Publications).

Research interests and expertise

1. Synthesis of nanoparticles using novel techniques and characterizations (structural, optical, morphological, magnetic and electrical properties, etc.,).

2. Fabrication of energy storage devices for modern-day applications such as supercapacitors, batteries and Photovoltaic for DSSCs etc.,

3. Electrochemical investigation of a new type of activated carbon electrodes and supercapacitor devices from biomass/organic wastes (Research Process going on).

4. Electrochemical investigation of a new type of Fiber electrodes for supercapacitor applications (Research Process going on).

Publications:

1. **Dar Mohd Arif**, D. Govindarajan, Khalid Mujasam Batoo, C Siva, "Supercapacitor and Magnetic properties of Fe doped SnSnanoparticles synthesized through Solvothermal method" **Journal of Energy storage (Elsevier) 2022, IF: 8.90,** https://doi.org/10.1016/j.est.2022.105034
2. **Mohd Arif Dar,** Nazir Ahmed Mala, D. Govindarajan, S.Rafi Ahamed, C Siva, Aafaq A. Rather, Toward new energy storage devices: Electrochemical and photovoltaic performance of SnSe/Fe, SnSe/Ni nanospherical composites, **Inorganic Chemistry Communications (Elsevier) 2022, IF: 3.5,** https://doi.org/10.1016/j.inoche.2022.110318.
3. **Dar Mohd Arif**, Yasir Ahmad., Mala, N. A., Hilal Ahmad Rather, Sabarinathan Venkatachalam, Nagarajan Srinivasan "Structural, Morphological and Supercapacitor Applications of SnS Nanomaterials Prepared in Three Different Types of Solvents" **Materials today proceedings (Elsevier) 2022, IF: 1.46,** https://doi.org/10.1016/j.matpr.2022.05.264
4. **Dar Mohd Arif**, D. Govindarajan, G. N. Dar, Facile synthesis of SnS nanostructures with different Morphologies for Supercapacitor and dye-sensitized solar cell Applications, "**Journal of Materials Science: Materials in Electronics (JMSE)", (Springer) 2021, IF: 2.5,** https://doi.org/10.1007/s10854-021-06550-w

5. **Dar Mohd Arif**, D.Govindarajan, Khalid Mujasam Batoo, Mohd Hadi, G. N. Dar, Photovoltaic and Supercapacitor performance of SnSe nanoparticles prepared through co-precipitation method, "**Materials Technology: Advanced Performance Materials", (Taylor and Francis) 2021, IF: 3.5,** https://doi.org/10.1080/10667857.2021.1950887

6. **Dar Mohd Arif**, D. Govindarajan, G. N. Dar, Comparing the Electrochemical performance of bare and Cr doped SnS nanoparticles synthesized through Solvothermal method, "**Physics of the Solid State", (Springer) 2021, IF: 0.99**, https:// DOI: 10.1134/S1063783421090055

7. **Dar Mohd arif**., Mala, N. A., Md Yasir Bhat, S Rafi Ahmed., Bilal Ahmad Reshi, M. Ashok., Aaafaq A. Rather, "Preserved crystal phase and morphology: Improving the Magnetic and Electrochemical performance of Sulfur doped tin oxide nanoparticles synthesized via the hydrothermal method" **Applied Surface Sciences Advances 2022 (Elsevier),** https://doi.org/10.1016/j.apsadv.2022.100360

8. **Mohd arif dar,** Nazir Ahmed Mala, Md. Yasir Bhat, S. Rafi Ahamed, Khalid Mujasam Batoo, G. N. Dar, Zubair Ahmad**,** "Supercapacitor performance of bare and Mg doped SnO_2 nanorods synthesized through Solvothermal method" **Bulletin of material science 2023, IF: 2.5,** https://10.1007/s12034-023-02893-8

9. Mala, N. A., **Dar Mohd Arif**, Mehraj ul din rather, S. Sivakumar, Shahid Hussain, Khalid Mujasam Batoo "Enhanced electrochemical properties of zinc-manganese (Zn– Mn) co-doped NiO nanoparticles for high-performance supercapacitor", **Inorganic Chemistry Communications (Elsevier) 2022, IF: 2.5,** https://doi.org/10.1016/j.inoche.2022.109661

10. Mala, N. A., **Dar Mohd Arif**, S. Sivakumar, Khalid Sultan Bhat, Gudipati Neeraja Sinha, Khalid Mujasam Batoo, "Electrochemical supremacy of cobalt doped nickel oxide and its supercapacitor applications with its mesoporous morphology" **Journal of Materials science: Materials in Electronics, (Springer) 2022, IF: 2.5,** https://doi.org/10.1007/s10854-022-08130-y

11. Mala N. A., **Dar M. A.**, Sivakumar S., Dar T. A., & Manikandan E., Review article on the performance of electrochemical capacitors when altered metals doped with nickel oxide nanomaterials. **Journal of Nanoparticle Research 2022, (Springer), IF: 2.5**, https://doi.org/10.1007/s11051-022-05605-1

12. **Dar Mohd Arif**, S.Rafi Ahamed, Mudasir A yatoo, Faiza Habib, Zubair Ahmed, "Electrochemical and Ferromagnetism behaviour of $Sn_{x-0}Mn_xS$ nanomaterial electrodes for future generation supercapacitors and data storage devices " **Journal of Alloys and Compunds, IF: 6.5, (Elsevier), (revision submitted).**

13. **Dar Mohd Arif**, D. Govindarajan, Khalid Mujasam Batoo,S. Rafi Ahamed, G. N. Dar, Sajjad Hussain, "Morphological nanoflowers of Ni doped SnS for high performance electrode materials for supercapacitors" **Journal of Energy Storage, IF: 8.90 (Elsevier), (revision submitted).**

14. **Dar Mohd Arif**, Nazir Ahmad Mala, G. N. Dar, S Satheesh kumar and D Govindarajan, Structural, optical, antibacterial analysis of Se NPs synthesized by precipitation method, **Adv. Nat. Sci.: Nanosci. Nanotechnol.,** IOP, 11, (2020). https://doi.org/10.1088/2043-6254/abb36a.

15. Mala, N. A., **Dar Mohd Arif,** S. Sivakumar, Khalid Mujasam Batoo, Bilal Ahmad Reshi, **"**Supercapacitor and magnetic properties of NiO and manganese-doped NiO nanoparticles synthesized by chemical precipitation method**" Journal of Materials science: Materials in Electronics, (Springer), IF: 3.5,** https://doi.org/10.1007/s10854-023-09907-5.

16. Adil Gania, Naira Noor, Faizan Jain, **Dar Mohd Arif**, Resistant starch Type 2 from Lotus stem: Ultrasonic effect on physical and nutraceutical properties, **Ultrasonics Sonochemistry, Elsevier 2021, IF 7.49**, https://doi.org/10.1016/j.ultsonch.2021.105655.

17. **Mohd Arif Dar**, Zubair Ahmad, Hilal Ahmad Rather, Reyaz Ahmad Mir, S. Rafi Ahamed, G. N. Dar, Sethu Loganathan, Chinnasamy Ragavendran, Enhancing Anticancer, Antioxidant and Antibacterial activities of SnO_2 nanoparticles by adding Cu and Zn dopants, **Nanomaterials (Elite Journal), IF 8.1, (Communicated).**

18. Mohd Arif Dar, Sheikh Rizwan Ahmed, Mohd Aslam Rather, S. Kalpana, S. Rafi Ahamed, Zubair Ahmad, Solvothermal Synthesis of SnSe Nanosheets and Nanoflowers for Supercapacitor Applications, **Inorganic Chemistry Communications (Elsevier) 2022, IF: 2.5, (Submitted).**

Papers presented in International and National conferences

1. **Mohd Arif Dar**, D.Govindarajan, Gulam Nabi Dar, Altaf Hussain Pandith, Influence Of Reducing Agents on The Reactivity of A Se-Precursor And Phase Transformation of SnSe Nanoparticles Prepared Through Co-Precipitation Method, National Conference on "Advanced Materials and its Applications" (NCAMA-2022), Department of Physics, Faculty of Arts, Science, Commerce and Management, Karpagam Academy of Higher Education, Coimbatore, Tamil Nadu, India. **ISBN: 978-93-5627-442-6.**

2. Mohd Arif Dar, Nazir Ahmad Mala, Hilal Ahmed Rather, G. N. Dar, Preserved crystal phase and morphology: improving the magnetic and electrochemical performance of sulfur doped tin oxide nanoparticles synthesized via the hydrothermal method, 2nd International Conference on Sustainable Materials and Technologies for Bio and Energy Applications (SMTBEA – 2022), Sri Sivasubramaniya Nadar College of Engineering, Department of Electronics and Communication Engineering (ECE) & SSN Research Centre. Chennai, India. **(Best Paper Presentation Award)**

3**. Mohd Arif Dar** and D. Govindarajan, Synthesis of Selenium Nanoparticles as Antibacterial Applications, 5th International Conference on Chemical and Environmental Research (ICCER -2020), Jamal Mohammad College Trichirappalli, Tamil Nadu, India.

4. Hilal Ahmad Rather and **Mohd Arif Dar**, Botanical Synthesis of Mgo Nanoparticles Using Azadirachta Indica A. Juss And Their Fungicidal Property Against Major Apple Pathogens, International Conference on Application of Smart Materials (ASM - 2020), Annamalai University Chidambaram, Tamil Nadu, India.

5. **Mohd Arif Dar**, D. Govindarajan, Ghulam Nabi Dar, Enhancing Conductive Properties of Tin Selenide Nanoparticles Prepared Through Solvothermal Method, TNSCHE Sponsored "International Conference on Advanced Materials Processing and Technology (ICAMPAT – 2020), Arignar Anna Government Arts College, Villupuram, Tamil Nadu, India.

6. **Mohd Arif Dar**, D. Govindarajan, Supercapacitor Applications of Metal Chalcogenides (A Review), National Conference on Recent Developments in Physical Sciences for Multidisciplinary Research (PSMR - 2020), Department of Physics, PRIST Deemed to Be University, Puducherry Campus, Abhishekapakkam, Puducherry - 605 007, India.

7. **Mohd Arif Dar**, D. Govindarajan, G. N. Dar and Altaf Hussain Pandith, Calculation of Kinetic Parameters and Optical Properties of SnSe NPs by utilizing TG-DTA and Absorption Data, A virtual 6th International Conference on Chemical and Environmental Research (ICCER-2020), Jammal Mohammad College Trichirappalli, Tamil Nadu, India.

Links:

https://www.researchgate.net/profile/Mohd-Dar-9
https://scholar.google.com/citations?user=NvEeldkAAAAJ&hl=en

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