Sajid Naeem (Ph.D.)

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Objective:

A highly motivated and skilled researcher seeking a right position to further develop expertise in research & innovation. Dedicated to contributing to cutting-edge research in industry and academic excellence.

Research Experience:

- Conducted research on the electrochemical deposition of cobalt-based metal hydroxides for supercapacitor applications.
- Optimized the deposition parameters to enhance the electrochemical performance of the materials.
- Expertise in material synthesis, electrochemical deposition technique and electrode / thin film fabrication.
- Investigated the structural, morphological and electrochemical properties by XRD, SEM, EDS, CV, GCD, and EIS.
- Published a total of 18 papers, including 4 in SCI journals, 11 in Scopus journals, and 3 in non-Scopus journals.
- Served as the first author on 8 papers, the corresponding author on 10 papers, a co-author on 6 papers, and the single author on 1 paper.
- Presented research finding in 6 international conferences and participated in many workshops / seminars.

Education Details:

- Ph.D. in Electronic Science, Savitribai Phule Pune University, India **(2018-2024)**
  Dissertation: Electrochemical deposition of cobalt-based metal hydroxides and their applications in supercapacitors
- M.Sc. in Electronic Science, Savitribai Phule Pune University, India **(2008-2010)**
  Core Subjects: Analog, Digital, Instrumentation, Embedded System, Control System, Mechatronics, Semiconductor, etc
  Project: Design and Control Robotics Arm by using 8051 Microcontroller
- B.Sc. in Electronic Science, Savitribai Phule Pune University, India **(2005-2008)**
  Core Subjects: Electronics, Physics, Mathematics and Statistics
  Project: Digital Versatile Timer for Seminar and Conference

Teaching Experience:

- Assistant Professor, Department of Applied Sciences, MMANTC Malegaon, India **(2021-2024)**
- Assistant Professor, Department of Electronic Science, MSG College Malegaon, India **(2013-2019)**
- Lecturer, Department of Electronic Science, Poona College, Pune, India **(2010-2013)**

Notable Skills:

- Self-motivated, quick-learner and proactive with exemplary scientific problem-solving skills
- Proficient in manuscript writing, reviewing, and designing graphical abstracts
- Strong ability to collaborate effectively and work independently in research
- Accomplished in mentoring and supervising students on academics and project-based learnings
- Expertise in designing, conducting, and analysing research studies, particularly in the fields of energy storage, supercapacitors, and materials science.
- Strong ability to write and publish research papers in reputable journals, including SCI and Scopus-indexed publications.

Operating System	Software	Languages	Internet	Hardware
• Windows 10/11	• MATLAB	• C	• Google Workspace	• PCB Design
• Linux	• LabView	• Assembly	• Domain / Hosting	• Microcontroller
	• SCAPS	• HTML/CSS	• Blogging	• DAQ Card
	• Proteus	• Wordpress	• Digital Marketing	• PLC

Honors & Awards:

- Qualified state level competitive exam MH-SET for Assistant Professor, Government of Maharashtra, India **(2016)**
- Awarded a scholarship for Post Graduate Diploma in Embedded Programming, ACTS CDAC, Pune, India **(2010)**
- Won district level "Teacher's Got Talent" Prize, Jamia Mohammedia Education Society, Mumbai, India **(2020)**

Conferences:

1. International Conference on Advanced Materials for Physical, Chemical, and Biological Applications 2023 organized by the Department of Physics and Chemistry, KB Patil College, Navi Mumbai (India), held from 3rd to 4th March **2023**.
2. International Conference on Innovation in Applied Science for Sustainable Development (IASSD-2023) organized by IQAC & Department of Science, MGV's LVH Arts, Sci & Comm College, Nashik held during 13th to 14th March **2023**.
3. International Conference on Advanced Material Synthesis, Characterization and Applications (AMSCA 2022) organized by the Department of Physics, SPPU- Pune (India), held during 18th to 20th October **2022**.
4. International Conference on Science, Technology, and Sustainability – ICSTS 2022 organized by MMANTC, Malegaon (India), held from 5th to 6th November **2022**.
5. International E-Conference on Plagiarism & Emerging Trends in Research Development & Methodology (ICPERM-2022) organized by Milliya Arts, Science & Management Science College, Beed (India) held online on 5th February **2022**.
6. International Conference on Innovations in Nanomaterials & Their Applications (ICINA-2018), organized by Faculty of Science, LVH College, Punchavati Nashik (India) held from 18th to 20th Jan **2018**.

Publications:

1. **Sajid Naeem***. (2024). Electrodeposited Cobalt Hydroxide Thin Films: A Comprehensive Investigation from Synthesis to Advanced Electrochemical Behavior for High-Performance Energy Storage. Transactions on Electrical and Electronic Materials, 1-11, **Scopus Journal (IF 1.6)** (Link)
2. **Sajid Naeem*,** Arif V Shaikh, AV Patil, et al (2023). Enhancing Supercapacitor Performance through Electrodeposition of Cobalt Hydroxide Thin Film: Structural Analysis, Morphological Characterization, and Investigation of Electrochemical Properties, Ionics International Journal of Ionics the Science and Technology of Ionic Motion (Springer Nature), **SCI Journal (IF 2.9).** (Link)
3. **Sajid Naeem***, S., Shinde, U. P., & Patil, A. V. Cobalt hydroxide-based electrodes for supercapacitors: Synthesis, characterization, and electrochemical performance optimization. Energy Storage, e516. **Scopus Journal (IF 3.2).** (Link)
4. **Sajid Naeem**, S., Patil, A. V., Shaikh, A. V., Shinde, U. P., Husain, D., Alam, M. T., ... & Ahmad, A. (2023). A Review of Cobalt-Based Metal Hydroxide Electrode for Applications in Supercapacitors. Advances in Materials Science and Engineering, 2023. **Scopus Journal.** (Link)
5. **Sajid Naeem*,** AV Shaikh, UP Shinde, and AV Patil (2023). Electrochemical Deposition, Synthesis, and Characterization of Dopant-Free Cobalt Hydroxide as an Enhanced Electrode Material for Supercapacitors, ES Energy & Environment, 21, 915, **Scopus Journal.** (Link)
6. **Sajid Naeem***, Ali, A., Memon, K., Bavluwala, M., Shinde, U. P., & Patil, A. V. (2023). A review of flexible high-performance supercapacitors for the Internet of Things (IoT) and artificial intelligence (AI) applications. Energy and Thermofluids Engineering, 3, 1-9. (Link)
7. **Sajid Naeem***., Husain, D., Ahmad, S., Faisal, S., Ansari, Y., & Patil, A. V. (2024). Investigating the Electrical and Thermal Properties of Cu and Al-Doped ZnO Thick Films Using the Screen-Printing Technique for Thermal Resistance Applications. Journal of the Indian Chemical Society, 101292, **SCI Journal (IF 3.2)**. (Link)
8. Pardeshi, O. M., **Sajid Naeem***, & Patil, A. V. (2024). Synthesis of FeVO4 nanoparticles using sol-gel auto-combustion method and their application in supercapacitors. Energy Storage, 6(5), e683, **Scopus Journal (IF 2.9)**. (Link)
9. Shaikh, A. V., Sayyed, S. G., **Sajid Naeem**, & Mane, R. S. (2020). Electrodeposition of n-CdSe/p-Cu2Se heterojunction solar cells. Engineered Science, 13(2), 79-86. **Scopus Journal.** (Link)
10. Maria, A., Ahmad, I., **Sajid Naeem***, Husain, D., Patil, A. B., Halwar, D. K., & Patil, A. V. (2024). Green Synthesis and Characterization of Crystalline Copper Nanoparticles via Sodium Borohydride Reduction Towards Enhanced Gas Sensing Application. Journal of the Indian Chemical Society, 101157, **SCI Journal (IF 3.2)**. (Link)

11. Dhumal, S., Jadhav, N., **Sajid Naeem***, Dighavkar, C. G., Patil, A. B., & Patil, A. V. (2024). Enhancing photovoltaic efficiency in perovskite solar cells through synergistic blending of polyvinyl alcohol and F-127 polymer in a sandwich architecture. Journal of the Indian Chemical Society, 101, 101306. **SCI Journal (IF 3.2)**. (Link)
12. Akhter, S. M. H., Siddiqui, V. U., Ahmad, S., Husain, D., **Sajid Naeem**., & Alam, M. T. (2024). Sustainable synthesis of zinc oxide nanoparticles using Terminalia chebula extract: Effect of concentration and temperature on properties and antibacterial efficacy. Nano-Structures & Nano-Objects, 38, 101158. (Link)
13. Salunke, V. T., Kulkarni, S. C., **Sajid Naeem***, Shaligram, A. D., Borse, R. Y., & Buchade, P. B. (2024). Integrated Approach to the Optimization, Synthesis, Fabrication, and Application of ZnO-Based Sensors for Portable LPG Leakage Detection Systems. Energy and Thermofluids Engineering, 4, 11-16. (Link)
14. **Sajid Naeem**, A.V. Patil, U.P. Shinde, Abid Ali, Khalid Memon, Applications and aspects of supercapacitor in IoT devices as a sustainable energy source, Journal of Research in Engineering and Applied Sciences 8 (2), 15 (Link)

Book Chapters:

1. **Sajid Naeem**, Husain, D., Tewari, K., Zafar, N., Alam, M. T., & Hussain, N. (2023). Carbon Footprint of Pipe Production Using Waste Plastics. In Environmental Assessment of Recycled Waste (pp. 1-12). Singapore: Springer Nature Singapore. **Scopus Journal.** (Link)
2. Baig, M. S., Husain, D., Ahmad, S., Bilal, F., Ansari, F., **Sajid Naeem**, & Sharma, M. (2023). Carbon Footprint and Economic Assessment of LED Bulbs Recycling. In Environmental Assessment of Recycled Waste (pp. 29-41). Springer Nature Singapore. **Scopus Journal.** (Link)
3. Dube, A. P., Mazumdar, B. D., Mishra, K. **Sajid Naeem**, & Husain, D. IoT Paradigm for Healthcare System to Secure the Patients Real-Time Data. Smart Healthcare and Machine Learning, 195, (2024)., **Scopus Journal**. (Link)
4. Rasool, A., Kossar, S., Amiruddin, R., Rasool, U., **Sajid Naeem**, & Ahmed, B. (2024). Design of Biosensor with High Sensing Margin. Handbook of Emerging Materials for Semiconductor Industry, 211, **Scopus Journal**. (Link)

Ph.D. Supervisor : **Prof. AV Shaikh** (MSc, MPhil, PhD, PDF KIST-Korea)
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Co-supervisor : **Prof. AV Patil** (MSc, PhD)
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