Dr. Shwetha K P

Designation :Assistant Professor
Qualification :M.Sc, M.Phil, Ph.D
Experience :Teaching-17 years
Area of Interest :Energy storage devices- Supercapacitors.
Date of Joining at RVCE :17/11/2023
Email ID :shwethakp@rvce.edu.in

Project:
Number of Doctorate Students

Completed: 00 Guiding: 00

Publication

National Journals	National Conferences	International Journals	International Conferences	Book/Book Chapter Published	Patent Granted/Published
		08	06		00/03

List of International Journal Publications:

1. *Development of NiS@f-MWCNT nanocomposite-based supercapacitor coin cell prototype device* **K.P. Shwetha**, M.K. Sudha Kamath , Yash N. Athreya , Chandresh Kumar Rastogi, Kathyayini Nagaraju , Ajit Khosla , C. Manjunatha Journal of Energy Storage, 2024. 75: p. 109404. https://doi.org/10.1016/j.matpr.2022.09.543 Quartile:**Q1**,Impact factor:**9.4**

2. *Fabrication of super-high energy density asymmetric supercapacitor prototype device employing $NiCo_2S_4$@f-MWCNT nanocomposite* **K.P. Shwetha** ,C. Manjunatha , M.K. Sudha Kamath , Chandresh Kumar Rastogi , Journal of Energy Storage, 2023. 72: p. 108657. https://doi.org/10.1016/j.est.2023.108657 Quartile:**Q1**,Impact factor:**9.4**

3. *Recent developments of hybrid metal chalcogenides for high performance supercapacitors* **K.P. Shwetha**, Yash Athreya, L. Suraj, Chandresh Kumar Rastogi, M.K. Sudha Kamath , K. Natarajan , Ajit Khosla , C. Manjunatha Materials Today: Proceedings, 2023. 73: p. 274-285. https://doi.org/10.1016/j.matpr.2022.09.543. Quartile:**Q2**

4. *Morphology-controlled synthesis and structural features of ultrafine nanoparticles of Co_3O_4: An active electrode material for a supercapacitor* **K P Shwetha**, C Manjunatha, M K Sudha Kamath, Vinaykumar, M G Radhika, Ajit Khosla Applied Research, 2022. 1(4): p. e202200031. https://doi.org/10.1002/appl.202200031 Quartile:**Q3**

5. *Synthesis and electrochemical characterization of mesoporous graphitic carbon nitride for super capacitor applications* **K.P. Shwetha** , S.G. Divakara , M.K. Sudha Kamath , Tribrikram Gupta Materials Today: Proceedings, 2023. 76: p. 219-226. https://doi.org/10.1016/j.matpr.2023.01.049 Quartile:**Q2**

6. *Perspective—Supercapacitor-Powered Flexible Wearable Strain Sensors* C. Manjunatha, **K**. **P. Shwetha**, Y. Athreya, S. G. Kumar and M. K. Sudha Kamath, ECS Sensors Plus, 2023. 2(1): p. 017002. DOI 10.1149/2754-2726/acb27a. Quartile:**Q2**

7. *Probing the influence of mixed alkaline electrolytes towards the fabrication of melamine-derived porous Co_3O_4-based supercapacitor* V.M. Ashwini Chavan , C. Manjunatha , **K.P. Shwetha** , G. Shireesha , S. Girish Kumar , M.K. Sudha Kamath , Sumira Malik , Ajit Khosla. Materials Chemistry and Physics, 2023. 308: p. 128209. http://dx.doi.org/10.1016/j.matchemphys.2023.128209 Quartile:**Q1**,Impact factor:**4.6**

8. *Scalable Synthesis of $Ni_3B_2O_6$ Nanograins and Fabrication of a Coin Cell Supercapacitor for Powering Temperature Sensor Devices* Beena Somanath, Manjunatha C, Yash Athreya, **Shwetha KP**, Nelsa Abraham,Suresh Babu Viswanathan, Sudha Kamath MK, S. Girish Kumar, and Ajit Khosla, ACS Applied Electronic Materials, 2023. 5(9): p. 5005-5016.https://doi.org/10.1021/acsaelm.3c00765 Quartile:**Q1**,Impact factor:**4.7**

International Conference Attended:

1. International conference on recent trends in material science and devices 2023 Presented a paper titled “Synthesis of Mn-doped NiS2 nanostructures and fabrication high-performance asymmetric coin cell type supercapacitor” held in online mode 22-23 July 2023 at GAV degree collage, Haryana.
2. ·International Winter School 2022 presented a poster titled” Fabrication of high-performance asymmetric supercapacitors using NiCo2S4@f-MWCNT nanocomposites”, held at Jawaharlal Nehru Center for Advanced Scientific Research on 5-9 Dec 2022.
3. ·Recent Advances In Science & Technology- 2020 Participation in One week Faculty Development Programme, Department of Physics, Don Bosco Institute of Technology, from 17th - 21st July 2020.
4. Century of Quantum Mechanics and Still Going Strong Participation in three days Faculty Development Programme, Department of Physics Maharaja Syajirao University of Baroda in association with Gujarat Science Academy from 15 - 17 June 2020.
5. Graphene-based Supercapacitors: Challenges and Opportunities, Online webinar organized by the Department of Physics, R V College of Engineering, Bangalore on 24 June 2020.
6. Research Methodology And Latex Participation in a three-day workshop, at VTU e-learning center, Mysuru at Don Bosco Institute of Technology from 19-21 July 2019.

Patents filed/Published:

P**atent 1:** Synthesizing $NiSe_2$ Active Electrode Nanoparticles for High Energy Density Asymmetric Supercapacitor Coin Cell.Inventors: 1) Manjunatha C, 2) **Shwetha K P**, 3) Sudha Kamath M K, 4) Yash Athreya, 5) Suraj L, 6) Shweta A Ram, 7) Ananda Islakar, 8) Rajalakshmi M. Applicant: RV College of Engineering.Applicant: RV College of Engineering. Mysore Road, R. V. Vidyaniketan Post, Bangalore – 560059, Karnataka, India. Bangalore.Application Number: 202341000518 A.

Date of Filing / Publication: 04/01/2023; 17/02/2023.Patent Office Journal No./ Page No: 07/2023;**1**1242.

Patent 2: A Preparation Method of Tungsten Oxide Nanocubes Having High-Specific Capacitance for Electrochemical Energy Storage Applications.Inventors: 1) Manjunatha C, 2) **Shwetha K P**, 3) Sudha Kamath M K, 4) Yash Athreya, 5) Suraj L, 6) Vinay Kumar, 7) Mamtha V. Applicant: RV College of Engineering. Mysore Road, R. V. Vidyaniketan Post, Bangalore – 560059, Karnataka, India. Bangalore.Application Number: 202341017602A.

Date of Filing / Publication: 16/03/2023; 14/04/2023.Patent Office Journal No./ Page No: 15/2023; 31703.

Patent 3: A Two-Step Synthesis Method for Preparing $NiSe_2$@WO_3 Nano-Composite Inventors: 1) Manjunatha C, 2) **Shwetha K P**, 3) Sudha Kamath M K, 4) Yash Athreya, 5) Suraj L.

Applicant: RV College of Engineering. Mysore Road, R. V. Vidyaniketan Post, Bangalore – 560059, Karnataka, India. Bangalore.Application Number: 202341089261.Date of Filing of Application: 2023/12/28 11:04:42.

Awards:

1. Received the Teachers Silver Medal for consecutive 3 years at Don Bosco Institute of Technology for getting 100% results in the Engineering Physics Subject.
2. Received Best paper presentation award for the paper titled “Synthesis and electrochemical characterization of mesoporous graphitic carbon nitride for supercapacitor applications” at the International Conference on Advances in Chemical and Material Sciences organized by the Indian Institute of chemical engineers on April 14 -16 2022