


Yash N Athreya

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Education

Drexel University, College of Engineering, Department of Materials Science and Engineering
Post Graduation, *Master of Science in Nanomaterials (Energy Materials Track)*

2023 – Present
Philadelphia, Pennsylvania

RV College of Engineering, Department of Chemical Engineering (Alma Mater)
Under Graduation, *Bachelor of Engineering in Chemical Engineering, CGPA: 8.4*

2018 – 2022
Bangalore, India

Work Experience

A. J. Drexel Nanomaterials Institute, Drexel University

Graduate Research Assistant

September 2023 – Present

- Electrochemical ion transport
- Supercapacitors and energy storage
- MXenes

RV College of Engineering, Bangalore

Research and Teaching Assistant

August 2022 – August 2023

Assisting PhD candidates to pursue their thesis with respect to nano-synthesis, preparation, experimentation and paper writing. Teaching junior students core chemical engineering subjects such as Chemical Process Calculations and Mass Transfer

BOSCH RBAI, Naganathapura Plant

Engineering Intern

September 2021 – October 2021

To study and analyse in-house generated solvent for characteristics and composition; To suggest in-house treatment process for the generated solvent; To further check the feasibility of treatment possibility with primary treatment plant

Terragreen Technologies Pvt Ltd

Engineering Intern

July 2021 – August 2021

Online start-up training program on various waste management techniques in industries

Journal Paper Publications

1. KP Shwetha, MK Sudha Kamath*, **Yash N Athreya**, Chandresh Kumar Rastogi, Kathyayini Nagaraju, Ajit Khosla, C Manjunatha*, “Development of NiS@f-MWCNT nanocomposite-based high-performance supercapacitor coin cell prototype device”, *Elsevier Journal of Energy Storage*, (Proof Correction) (Q1, IF = 9.4, Cite Score = 10.3, Indexed in Scopus)
2. Beena S, Manjunatha C*, **Yash Athreya**, Shwetha KP, Nelsa Abraham*, V Suresh Babu*, Sudha Kamath MK, Girish Kumar S, Ajit Khosla, “Scalable synthesis of Ni₃B₂O₆ nanograins and fabrication of coin cell supercapacitor for powering temperature sensor device”, *ACS Applied Electronic Materials*, (23 August 2023) [DOI: 10.1021/acsaem.3c00765] (Q1, IF = 4.7, Cite Score = 6.4, Indexed in Scopus)
3. Shwetha KP, Manjunatha C*, Sudha Kamath MK*, Chandresh Kumar Rastogi*, Vivek Choudhary, Gyanprakash Maurya, **Yash Athreya**, Zhenhuan Zhao, Ajit Khosla*, “Fabrication and characterization of high energy density asymmetric supercapacitor prototype device employing f-mwCNT incorporated NiCo₂S₄ Nanocomposite”, *Elsevier Journal of Energy Storage*, (17 August 2023) V72, Part D, 108657, [DOI: 10.1016/j.est.2023.108657 © Elsevier] (Q1, IF = 9.4, Cite Score = 10.3, Indexed in Scopus)
4. Manjunatha C, Shwetha KP, **Yash N Athreya**, Girish Kumar S, Sudha Kamath MK, “Perspective – Supercapacitor-powered flexible wearable strain sensors”, *ECS Sensors Plus*, (20 January 2023) V02, 017002, [DOI: 10.1149/2754-2726/acb27a © IOP Science]
5. Shwetha KP, **Yash N Athreya**, Suraj L, Chandresh Kumar Rastogi, Sudha Kamath MK, Natarajan K, Ajit Khosla, Manjunatha C*, “Recent developments of hybrid metal chalcogenides for high performance supercapacitors”, *Materials Today: Proceedings*, (20 October 2022) V73, 274 – 285, [DOI: 10.1016/j.matpr.2022.09.543 © Elsevier] (Q2, Cite Score = 2.3, Indexed in Scopus)
6. Sudeep M, **Yash N Athreya**, Suryajeet Patil Nikam, Chandrakumar R, Ajit Khosla, Manjunatha C*, “Current Developments in CuS Based Hybrid Nanocomposite for Electrochemical Biosensor Application: A Short Review”, *ECS Transactions*, (03 May 2022) V107, 15745 – 15770, [DOI: 10.1149/10701.15745ecst © IOP Science] (Q4, h-index = 56, Cite Score = 1.1, Indexed in Scopus)
7. Anil Subash S, Shubha MB, **Yash N Athreya**, Ajit Khosla, Manjunatha C*, “Advances in printable, flexible and transparent graphene photodetectors for optoelectronics applications”, *ECS Transactions*, (03 May 2022) V107, 20193 – 20211, [DOI: 10.1149/10701.20193ecst © IOP Science] (h-index = 56, Cite Score = 1.1, Indexed in Scopus)
8. Ujwal S Meda, Khushi Vora, **Yash N Athreya**, Ujwal A Mandi, “Titanium dioxide based heterogeneous and heterojunction photocatalysts for pollution control applications in the construction industry”, *Journal of Process Safety and Environment Protection*, (24 March 2022) V161, 771 – 787, [DOI: 10.1016/j.psep.2022.03.066 © Elsevier] (Q1, IF = 7.8, Cite Score = 10.8, Indexed in Scopus)

Patents Filed/Published

1. Manjunatha C, Shwetha KP, Sudha Kamath MK, **Yash Athreya**, L Suraj, Vinay Kumar, Mamtha V, “*A preparation method of Tungsten Oxide Nano-cubes having high specific capacitance for electrochemical energy storage applications*”, Indian Patent Office, Application Number: 202341017602, Filing Date: 16 March 2023, Publication Date: 14 April 2023
2. Manjunatha C, Shwetha KP, Sudha Kamath MK, **Yash Athreya**, L Suraj, Shweta A Ram, Ananda I, Rajalakshmi M, “*Synthesizing Nickel diselenide active electrode nanoparticles for high energy density asymmetric supercapacitor coin cell*”, Indian Patent Office, Application Number: 202341000518. Filing Date: 4 January 2023, Publication Date: 17 February 2023

Certificates

- **Poster Presentation** **July 2023**
International Conference on Recent Trend on Materials and Devices (2023) *GAV Degree College, Haryana, India (Online)*
Synthesis of Mn-doped NiS₂ nanostructures and fabrication of high-performance asymmetric coin cell type supercapacitor
- **Best Project Award** **July 2022**
Indian Institute of Chemical Engineers – Bangalore Regional Center *MSRIT, Bangalore, India*
1st place awarded for work on “Development of metal chalcogenide based high performance prototype supercapacitor”
- **Poster Presentation** **April 2022**
Vasudhev Kutumbakam 3 International Conference *Delhi University, India (Online)*
2nd prize in Young Researcher Talk – Materials Engineering on “Review on development of hybrid metal chalcogenide based high performance supercapacitor”
- **Poster Presentation** **December 2019**
International Conference on Nanoscience and Nanotechnology (2019) *VIT, Vellore, India*
One pot synthesis of goethite (FeOOH) for high performance electrocatalytic hydrogen evolution reaction
- Certificate of participation in online 5-day Summer MXene Course organised by AJ Drexel Nanomaterials Institute, Drexel University
- Certificate of participation in 5-day Winter School 2022 – Frontiers in Material Science held at JNCASR, Bangalore
- Certificate on participation in “Hands-on training in SEM and FTIR Spectroscopy” at CIIRC, Bangalore
- Certificate of completion of 1-month internship at BOSCH RBAI
- Certificate of participation in poster presentation at VK3 (Vasudhev Kutumbakam) Online International Conference
- Certificate of completion of Online Start-up Training Program - An Industrial Internship provided by Terragreen Technologies Pvt Ltd
- Certificate of completion of a 12-week course on Polymers: Concepts, Properties, Uses and Sustainability offered by NPTEL (MOOC course)
- Certificate of completion of an online 6-week course on Excel skills for Business: Essentials by University of Macquarie, Australia
- Certificate of completion of a 4-week internship program on Macro-electronics supported by M/s Hind High Vacuum Pvt. Ltd
- Certificate of participation in poster presentation at ICNAN’19 Conference, Vellore, India

Key Skills

Soft Skills:	Good interpersonal, presentation and communication skills
Technical Skills:	XRD, SEM, Raman, FTIR, UV-Vis, BET
Software Skills:	OriginPro, ImageJ, Match!, MS Excel, Latex, MATLAB
Hobbies:	Guitar, Music production, Swimming, Badminton
Languages:	English (Professional), Kannada (Native), German (A2)

References

Dr Manjunatha C <i>Assistant Professor (Senior), Department of Chemistry, RV College of Engineering</i>	+91-9036651227 <i>manjunathac@rvce.edu.in</i>
Dr Vinod Kallur <i>HoD, Department of Chemical Engineering, RV College of Engineering</i>	+91-9916437940 <i>vinodkallur@rvce.edu.in</i>
Dr Sudha Kamath MK <i>HoD and Associate Professor, Department of Physics, RV College of Engineering</i>	+91-9480404395 <i>sudhakamath@rvce.edu.in</i>