

TANVI SHARMA

(Research Scientist)

#452/8, New Bishan Nagar, Patiala, Punjab, India PIN: 147002

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CAREER OBJECTIVES

Being a young, energetic and confident person, I firmly believe in deep understanding of the subject and to learn and apply the knowledge for personal development.

AREA'S OF INTEREST

- Nanotechnology- Designing formulations independently.
- Preparation of Nanomaterials, MWCNT- Functionalization, Dispersions.
- Synthesis and assembly of batteries & supercapacitors using porous NM's for EV's.
- Targeted Drug Delivery.
- Quantum dots for electronic applications.
- Polymer nanocomposites for commercial applications.
- Cancer therapy with MOF's.

EDUCATIONAL QUALIFICATION

- Matriculation from Punjab School Education Board (2008-2009): 75%
- (10+2) Punjab School Education Board (Science group) (2010-2011): 80%
- M-tech (5year-Integrated course) in Nanotechnology (2011-2016): Sri Guru Granth Sahib World University: Ist Division (7 /10)

EXHIBITION AND CONFERENCES

- Poster Presentation in **16th International Nanotech Symposium & Nano-Convergence Exhibition (NANO KOREA 2018)** on "Comparative study of hydrothermally synthesized Zinc based Metal Organic Frameworks for batteries and super capacitors" organized by Korea Nano Technology Research Society and Nano Technology Research Association of Korea.
- Poster Presentation in International Conference on **Renewable Energy for Sustainable Environment: Challenges and Remedies – 2017** entitled "Multiwall carbon nanotubes (MWCNT) based nanocomposites as electrode material for rechargeable Li-ion batteries" organized by Shri Mata Vaishno Devi University, Katra, Jammu, during March 20th -21st 2017.
- Poster presentation entitled "An efficient and simple route for Stable Dispersion of Copper Nanoparticles" in **11th Chandigarh science congress i.e. CHASCON-2017** organized by CKRIC, Punjab University, Chandigarh on 09-11 march. 2017.

- Poster presentation in **2nd CKRIC Nanoscience day** organized by institute of Nanoscience and technology held on 8, august. 2016.
- Poster Presentation in 4th National Conference on “**Nanoscience Instrumentation Technology (NCNIT-2016)**” entitled “Anti BSA-Cu MOFs Functionalized Long Period Grating Sensors for Sensitive Detection of Bovine Serum Albumin Molecules” held at National Institute of Technology, Kurukshetra, India.
- Delivered Oral Presentation in **National Technical Seminar at DRDO-SASE**, Chandigarh on March 11, 2016.
- Participated in **National Scientific and Technical Seminar at RCMA**, Chandigarh on March 30, 2016.
- Poster Presentation at one day seminar on “**Fascination of Light and Photonics for Life**” held at Post Graduate Government Collage for Girls, Sector-11, Chandigarh on January 22, 2016.
- Paper Presentation at an international conference on **Recent Advances in Nano Science and Technology 2015. (RAINSAT-2015)** held at Satyabhama University, Chennai on July 08, 2015 to July 10, 2015.
- Poster Presentation at National Conference on **Emerging Horizons in Science and Technology** held at S.G.G.S.W.U, Fatehgarh sahib on January 17-18, 2014.

TECHNICAL SKILLS

Equipment Handling & Analysis Skills

- Dynamic light scattering
- XRD (X-ray Diffraction) analysis
- Pin-on-disc Machine.
- Glove-box handling
- Raman spectroscopy instrumentation
- Photoluminescence spectroscopy
- U.V- Vis. Spectroscopy
- Gold sputter coater, carbon sputter coater
- Critical point drying
- Muffle furnace
- Ball milling

SOFT SKILLS

- Validation of innovative and creative thinking of various concepts using the following tools
- **Origin 8** and **MATLAB**.
- **Microsoft office** (excel, PowerPoint, and Word). Also know basics of the **C language**, **Adobe Photoshop package**.

WORK EXPERIENCE

- **Currently employed as Research Scientist (Dept. Head) at eSmart energy solutions limited, Nasik, Maharashtra, India. (Nov.2020).**

Work Description:

- Planning & synthesis of carbon based highly conductive porous nanomaterials.
- Supervising a project “Synthesis of battery electrode and its assembly for EVs”.
- Completed project entitled “Highly efficient recycled waste engine oil using nanotechnology”.
- Managing all the planning in production, raw material selection and other things involving improvement of super capacitors, and synthetic lubricating oil.

- Professional Experience (4 years)

September, 2016 – October, 2020

Research Scientist

Intelligent Materials Pvt. Ltd. (in collaboration with Nanoshel LLC, USA)

Punjab, India

www.nanoshel.com

Work Description:

- My work is to Synthesize, Fabricate, Purify, and characterize various Nanomaterials (like Metal Nanopowder, Quantum Dots, and Metal oxides etc.), Nanostructures.
- Completed the various projects named as:
 - Multiwall carbon nanotubes (MWCNT) based nanocomposites as electrode material for rechargeable Li-ion batteries”.
 - Preparation of silver & copper-based disinfectants for antibacterial & antimicrobial sprays.
 - Synthesis of Pesticide loaded chitosan nanoparticles for agricultural applications.
 - Synthesis of Metal organic framework for Gas storage
 - MWCNT and polymer-based nanocomposites using Epoxidized soya bean oil for industrial applications
 - Synthesis of metal organic frameworks for drug delivery systems.
- Provide mentorship to the Master’s students and help them to complete their thesis.
- Solving the query of the customer and provide them a satisfactory response.
- Organize the co-curricular events on various occasions.

PROJECTS and TRAINING SUMMARY

- 2 months Summer Training on “**Liquid Crystals and their Applications**” under the supervision of Dr. Shantanu Kumar pal at Indian Institute of Science Education and Research, Mohali. (**June.2013-July.2013**)
- 2 months Summer Training on “**Synthesis and characterization of Solid Lipid Nanoparticles from Micro emulsions**” under the supervision of Dr. S.K Mehta at Punjab University, Chandigarh. (**June.2014-July.2014**)
- MINOR PROJECT in 8th sem. on “**Synthesis and Characterization of Metal Organic Frameworks for microencapsulation of Docetaxel**” under the supervision of Dr. Deepak Kukkar at S.G.G.S.W.U, Fatehgarh Sahib. (**May.2015-July.2015**)
- M.Tech dissertation in CSIR-CSIO, Chandigarh on “**Study of Metal Organic Frameworks functionalized Long Period Grating Sensors for Gas Sensing**” under the guidance of Dr. Umesh Tiwari, Scientist and Mr. Rajesh, Senior Scientist. (**Jan.2016-July.2016**)

PUBLICATIONS

1. Tanvi Sharma, Harpreet Kaur, Amandeep Kaur, Mandeep Singh, Navdeep Kaur, Mukesh Kanwar & Deepak Kukkar, “Synthesis of Iron Based Biocompatible Metal Organic Frameworks for Microencapsulation of Docetaxel”, Volume 12, Page 74-78, 2016
DOI: 10.4028/www.scientific.net/NHC.12.74

COMMUNICATION SKILLS

- Good speaking and writing skills in English
- Excellent skills in speaking Punjabi and Hindi.

STRENGTHS

- Positive attitude
- Ability to work on multiple tasks at a time.
- Eager to learn, willing to work for extended hours.
- Self-motivated

PERSONAL DETAILS

Full Name: Tanvi Sharma
Father's Name: Sh. Dinesh Kaushik
D.O.B: 12.08.1994
Nationality: Indian
Marital Status: Single
Address: #452/8 New Bishan Nagar, Patiala, Punjab, India. (147002)

ACHIVEMENTS:

At University Level:

- Got 3rd prize in Oral presentation organized by Judicial Committee at district level.
- Participated in celestial Tech. Fest at University.
- Coordinated various events.
- Provided guidance and supported members through daily activities

REFERENCES

1. Dr. Deepak Kukkar
Visiting Professor
Department of Civil and Environmental Engineering
Hanyang University
Seoul
Republic of Korea
Email: dr.deepakkukkar@gmail.com, deepakkukkar@gmail.com
2. Dr. Umesh Tiwari
Principal Scientist
Photonics V-4 division
CSIO-CSIR, Chandigarh, India.
Email-uktiwari_2003@yahoo.co.in
3. Mr. Ajay Vaidya
General Manager
eSmart energy Solutions Ltd.
Nashik, Maharashtra, India.
Email: ajeyvaidya@gmail.com

Declaration

I hereby declare that I would perform every task with full determination and to the best of my skills and the information mention above is best of my knowledge.

Tanvi Sharma