

## CURRICULUM VITAE

### **DR. JASPREET KAUR**

Faculty of Chemistry, School of Basic Sciences,  
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### **ACADEMIC PROFILE**

#### **Doctor of Philosophy (Ph.D.)- Chemistry (2022);**

Department of Chemistry & Centre of Advanced Studies in Chemistry,  
Panjab University, Chandigarh, India.

#### **Master of Science (Hons.)-Chemistry (2015): First Division;**

Department of Chemistry & Centre of Advanced Studies in Chemistry,  
Panjab University, Chandigarh, India.

#### **Certificate course in German (2016): First Division;**

Department of German, Panjab University, Chandigarh

#### **Bachelor of Science- Life Sciences (2013): First Division;**

Post Graduate Government College for Girls-11, Chandigarh, India.

### **FELLOWSHIPS AWARDED**

Awarded *Direct Senior Research Fellowship* by Council of Scientific & Industrial Research (CSIR), Government of India (2020-2022).

Awarded *Commonwealth Split-site Scholarship* tenable at the University of York, U.K. for a period of one year (2018-2019).

Awarded with *Panjab University Scholarship* from Nov. 2016 to Nov. 2018 for securing 2<sup>nd</sup> Rank in the University entrance exam.

### **RESEARCH & TEACHING EXPERIENCE**

**Masters Research Program (2014-2015):** Research experience of 18 months and worked on fabrication of Nanoemulsion for the delivery of poor water-soluble drugs/nutraceuticals.

**Research Project Assistant (2015- 2016):** Assisted in the formation and characterization of nanovesicles for optimizing drug encapsulation and delivery.

**Doctoral Research Scholar (Nov, 2016- Jan, 2022):** Working as a Senior Research Fellow in the field of Nano-Chemistry at the Department of Chemistry, Panjab University, Chandigarh, India. The title of the thesis is 'Fabrication of metal-based nanostructures as potential scaffolds for water remediation'.

**Graduate Teaching Assistant (2017-2018):** Worked as a Graduate Teaching Assistant in Department of Chemistry, Panjab University, Chandigarh.

**Visiting Research Scholar (2018-2019):** Research experience of one year in Green Chemistry Centre of Excellence (GCCE), University of York, UK. Worked on biomass-based metal oxide nanoparticles for water treatment.

**Supervision (2017-2023):** Guided 4 students in their project work on- Biocompatible nanoemulsion for nutraceutical delivery (2017), Transition metal based fluorescent probes for sensing (2018), Metal oxide based nanozymes for heavy metal ion sensing (2018-2019) and MOF based nanoparticles for catalytic applications (2021-present).

**Visiting Faculty (May, 2022- July, 2022):** Worked in Amity University as a Visiting Faculty in Physical Chemistry.

**Guest Faculty (Oct, 2022- Present):** Working as a Guest Faculty of Chemistry in Indian Institute of Information Technology (IIIT), Una.

### **PUBLICATIONS**

- Khushwinder Kaur, **Jaspreet Kaur**, Raj Kumar and S.K. Mehta, Formulation and physiochemical study of  $\alpha$ -Tocopherol based oil in water nanoemulsion stabilized with non-toxic, biodegradable surfactant: Sodium Stearoyl lactate. *Ultrasonics Sonochemistry*, 2017 (38), 570-578. Impact factor- 9.336
- **Jaspreet Kaur**, Khushwinder Kaur, S.K. Mehta and Avtar S. Matharu, A novel molybdenum oxide–Carbon catalyst for wastewater remediation. *Journal of Materials Chemistry A*, 2020, 8, 14519-14527. Impact factor- 12.73

- **Jaspreet Kaur**, Khushwinder Kaur, Naveed Pervaiz and S.K. Mehta, Spherical MoO<sub>3</sub> for photocatalytic removal of Eriochrome Black T. *ACS Applied Nano Materials*, 2021, 4 (11), 12766-12778. Impact factor- 5.097
- Kumari Mansi, Raj Kumar, **Jaspreet Kaur**, S.K. Mehta, Satish Kumar, Deepak Kumar, Ashutosh Dash and Neeraj Gupta, DL-Valine assisted fabrication of quercetin loaded CuO nanoleaves through microwave irradiation method: Augmentation in its catalytic and antimicrobial efficiencies. *Environmental Nanotechnology, Monitoring & Management*, 2020 (14), 100306. Impact factor- 5.647
- Kumari Mansi, Raj Kumar, **Jaspreet Kaur**, Sushila Devi and S.K. Mehta. Solvent controlled synthesis of quercetin loaded CuS nanostructure: A versatile treatment against harmful bacteria and carcinogenic organic moiety in water. *Journal of Molecular Liquids*, 2021 (332), 115834. Impact factor- 6.165
- **Jaspreet Kaur**, Khushwinder Kaur and S.K. Mehta, Poor Bioavailability of Isothiocyanates, Spectrum of Isothiocyanate Chemistry and its Applications, *Nova Science Publishers*, 2021, ISBN: 978-1-53619-005-2.
- **Jaspreet Kaur**, Rekha Bhar, Khushwinder Kaur and S.K. Mehta, Metallosurfactants as Nanoreactors for Nanoparticle synthesis, Metallosurfactants- From Fundamentals to Catalytic and Biomedical Applications, *Wiley-VCH*, 2022, ISBN: 978-3-527-34868-8.
- Kirandeep\*, **Jaspreet Kaur\***, Indu Sharma, Ennio Zangrando, Kaushik Pal, S.K. Mehta and Ramesh Kataria, Fabrication of Novel Copper MOF nanoparticles for nanozymatic detection of mercury Ions. *Journal of Materials Research and Technology*, 2023, 22, 278-291. Impact factor- 6.267
- R. Chandrashekhar, Y. Satyanarayana, Ch. Ramakrishna, J. Vaikunta Rao, **Jaspreet Kaur** and S.K. Mehta, A case study of the effect of seawater intrusion on the water quality index of the Indian southeastern coastal region. *ACS ES&T Water*, 2023, 3(6), 1610-1619.
- **Jaspreet Kaur**, Khushveer Kaur, Khushwinder Kaur, Avtar S. Matharu and S.K. Mehta. Greener aspects of nanoparticle synthesis for water remediation: Challenges and future perspective, *Advances in Environmental and Engineering Research*, 2023, 4(2), 27.
- Indu Sharma\*, **Jaspreet Kaur\***, Gargi Poonia, S.K. Mehta and Ramesh Kataria. Nanoscale designing of Metal Organic framework moieties as efficient too for environmental decontamination, *Nanoscale Advances*, 2023, DOI: 10.1039/D3NA00169E. Impact factor- 5.598
- Richa, N. Kushwaha, E. Jaiswal, A. Kumar, **Jaspreet Kaur**, S. Sharma, A. Jian, J. Sindhu, S. K. Mehta, V. Saini and Ramesh Kataria. Mixed Ligand approach for novel hydrazide copper (II) complexes: Structural aspects, theoretical investigation and their biological evaluation, *Applied Organometallic Chemistry*, 2023, e7118, DOI: 10.1002/aoc.7118. Impact factor- 4.072

### LABORATORY TECHNIQUES

Hands on experience of handling and result analysis in High Resolution Transmission Electron Microscopy (*HR-TEM*), Field Emission Scanning Electron Microscopy (*FE-SEM*), *Solid State* <sup>13</sup>C NMR, Electron Paramagnetic Resonance spectroscopy (*EPR*), X-Ray Diffraction (*XRD*), Porosimeter/*BET*, Thermogravimetric Analysis (*TGA*) and Differential Scanning Calorimetry (*DSC*) undertaken via specialised training in the University of York (U.K.) for a period of one year. Further, proficient in handling UV-visible absorption spectroscopy (*UV-vis*), Fluorescence spectroscopy, Infrared Spectroscopy (*IR*), Dynamic light scattering (*DLS*), Zeta sizer, Viscometer, Tensiometer, Rheometer and other general lab techniques

### CONFERENCES ATTENDED & ORAL/POSTER PRESENTED

- Attended three day “Going Global Workshop on Sustainable Chemistry Education Today for a Sustainable Tomorrow” held at Maidens Hotel, New Delhi on May 27-29, 2022.
- Participated in two-day ACS seminar on “Advances in Multifunctional Nanomaterials” at IIT Mandi on May 05-06, 2022.
- Attended a one-day online workshop on “Fundamentals of Intellectual Property Right” organised by CSIR on March 12, 2021.
- Felicitated with a Certificate of Appreciation in “Professor Ram Chand Paul National Symposium (Virtual) On Chemistry and Interdisciplinary Sciences” held on March 5, 2021.
- Awarded with Certificate of Recognition for being an *invited speaker* at the International Webinar on Green, Sustainable & Analytical Chemistry, held during September 23-25, 2020.
- Participated in Webinar on "Surface Engineering of Polymer Membrane" conducted by Centre of Chemistry & Chemical Excellence (CCCE) on September 9, 2020.
- Participated in UGC sponsored 3<sup>rd</sup> National conference on Innovations in Bioscience and Technology (NCIBT-2020) held on March 7, 2020.

- Participated in “Basic and Advance Skill for Water Testing and Analysis” programme jointly organised by CSIR-CSIO, Chandigarh and IEEE AcSIR-CSIO Nanotechnology Council Student Branch Chapter, under CSIR Integrated Skill Initiative on December 16-20, 2019 held at CSIR-CSIO Chandigarh.
- Gave an *oral presentation* in International Conference “Indo-UK Workshop 2019-Wastewater Treatment: Approaches, Management, and Capacity building” held on July 3-5, 2019.
- Participated in GIAN International course on “Nanostructured metal oxides for sensing and environmental applications” held on August 06-10, 2018.
- Gave an *oral presentation* in international conference on “Translational research in Life sciences” under the aegis of CRIKC & DST-CPR in association with Stanford University, USA held during July 5-7, 2018.
- Gave an *oral presentation* in Prof. R.C. Paul National Symposium on Triumphs of Sustainable Progress in Chemistry held on Feb 22, 2018.
- Presented a poster in National Conference on Futuristic Aspects of Chemical Science and Technology-2018.
- Participated in National Workshop on Small Angle X-Ray Scattering (NSAXS-2017) held on November 6-8, 2017.
- Presented a poster in XXXVI Annual Conference Indian Council of Chemists 26<sup>th</sup>-28<sup>th</sup> December, 2017 held in School of Chemistry, Andhra University, Vishakhapatnam.

### **ACADEMIC HONOURS & AWARDS ACHIEVED**

- Awarded with *Young Researcher Award 2022* by InSc, Institute of Scholars.
- Nominated by Department of Science and Technology (DST), Government of India for ‘70<sup>th</sup> Lindau Nobel Laureate Meeting’.
- Secured 3<sup>rd</sup> prize in poster presentation at UGC sponsored 3<sup>rd</sup> National conference on Innovations in Bioscience and Technology (NCIBT-2020), held in Patiala on March 7, 2020.
- Awarded *Being All Round Best Graduate Student of the year* award in 2013.
- Awarded *Roll of Honour* for securing overall 3<sup>rd</sup> position in Panjab University and 2<sup>nd</sup> in the College in aggregate in B.Sc.
- Secured 2<sup>nd</sup> position in poster presentation in 9<sup>th</sup> CHASCON-2015 Conference held in Chandigarh.
- Secured 2<sup>nd</sup> prize in the Science Quiz at VORTEX 2013 held on 11<sup>th</sup> feb,2013 at Department of Physics, Panjab University, Chandigarh.
- Secured 1<sup>st</sup> prize in the quiz competition on ‘World Wildlife Week’ held on 5<sup>th</sup> oct,2012.
- Secured 3<sup>rd</sup> prize in quiz competition organized by GREEN THUMBS- ‘Botanical society of the college’ held on 28<sup>th</sup> Sep, 2010.
- Secured 1<sup>st</sup> prize in the quiz competition on the topic ‘Water borne diseases’ organized by the ‘Community Health and Hygiene Society’ in the year 2012.
- Secured 1<sup>st</sup> prize in the Essay writing competition on the topic ‘Vector borne diseases’ organized by the ‘Community Health and Hygiene Society’ in the year 2012.

### **EXTRA-CURRICULAR ACTIVITIES**

- Organised and participated in various conferences under the Global Initiative of Academic Networks (GIAN) from 2015 to 2020.
- Won Labs Gold and overall Gold in ‘*GREEN IMPACT AWARD*’ as a team member for Green Chemistry Society (University of York, UK) recognizing sustainability at work for 2018-2019.
- Elected as ‘*PRESIDENT*’ of the Environment Society ‘PRAKRITI’ for the session 2012-2013 aimed at creating awareness on conservation of environment.
- Attended the National Winter Adventure Camp- 2011, conducted by NAF chapter Rajasthan, Bikaner in association with National Service Scheme (NSS), Govt. Of India, New Delhi at Bikaner from Jan 11 2012 to Jan 18 2012.
- *Editor* of the Science section of the college magazine ‘ABHA’ for the session 2012-2013.

### **DECLARATION**

I certify that the foregoing information is correct and complete to the best of my knowledge and belief, and nothing has been concealed/distorted.

**Place: Una (India)**  
**Date: 22.06.2023**

**Sd/-**  
**(JASPREET KAUR)**