

## CURRICULUM-VITAE

**Monika Nehra**

**Ph.D Student**

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### Education:

Degree	Year	University/Board	Percentage	Division
Matriculation	2006	HBSE, Bhiwani	82.8	First
Polytechnic Diploma (Elect. & Commun. Engg.)	2009	SBTE, Haryana	80.8	First
B.Tech (Elect. & Commun. Engg.)	2012	KUK, Kurukshetra	78.7	First
M.Tech. (Elect. & Commun. Engg.)	2014	GJUS&T, Hisar	80.9	First
Ph.D (Elect. & Commun. Engg.)	2016 onwards	GJUS&T, Hisar	--	Pursuing

### Academic Achievements

- Qualified **Graduate Aptitude Test in Engineering (GATE) 2015** in Electronics and Communication Engineering conducted by Indian Institute of Technology Kanpur, Uttar Pradesh, India.
- Qualified **National Eligibility Test (UGC NET) Dec. 2014** in Electronics Science conducted by the Central Board of Secondary Education (CBSE), India on behalf of the University Grants Commission (UGC), India.

- Awarded **UGC NET Junior Research Fellowship (JRF) (June 2015)** by University Grants Commission (UGC), India.
- Awarded **UGC NET Senior Research Fellowship (SRF) (June 2017)** by University Grants Commission (UGC), India.
- Awarded **Best Poster Presentation** entitled “Engineered nanostructures governing the performance of solar photovoltaic devices” at **Indo-US International Conference on Green Chemistry/Engineering and Technologies for Sustainable Development (GCET-2017)**, jointly organized by Department of Chemistry, PU, Chandigarh (India) and Florida Polytechnic University, Lakeland (USA) from 20th to 22th of April, 2017.
- Awarded **Travel Grant** for a poster presentation entitled “**Synthesis and Characterization of Highly-Ordered Cu Nanowires using Electrodeposition Template Method**” at the **International Workshop on Advanced Materials (IWAM) 2018**, organized and sponsored by the Ras Al Khaimah Center for Advanced Materials (RAK CAM), held at Ras Al Khaimah, United Arab Emirates from the 18th to 20th of February, 2018.
- Awarded **Travel Grant** from the conference organizers for paper presentation entitled “**Utilization of Metal Organic Frameworks for Efficient Removal of Phosphate**” at the **2<sup>nd</sup> International Conference on Bioresources, Energy, Environment, Materials Technology (BEEM 2018)**, organized by Korea University, Korea, Korea Institute of Energy Research, Korea, Chonbuk National University, Korea, and many more, held at Hongcheon, Gangwon Province, South Korea from June 10-13, 2018.
- Awarded **Financial Assistance** from Haryana State Council for Science & Technology, Haryana, India for attending the **2nd International Conference on Bioresources, Energy, Environment, Materials Technology (BEEM 2018)** from 10th June, 2018 to 13th June, 2018 at Gangwon Province, Korea.
- Awarded **Financial Assistance** from the conference organizers for paper presentation entitled “**Structural Studies of Cu Nanowires in Ion-track Membranes using SAXS Measurements**” at the XVII International Small Angle Scattering Conference, organized by Argonne National Laboratory, USA, held at Traverse City, Michigan, USA from the October 07-12, 2018.

## Current Research Interests

- Advanced nanomaterials for energy and environment applications

## Others

- Language Skills: EMBEDDED C, ASSEMBLY, MATLAB, VHDL etc.
- Knowledge of Softwares: KEIL, XILINX, PROTEUS, MENTOR GRAPHICS, OPTSIM, MATLAB etc.
- Excellent communication and interpersonal skills that enables me to work in groups.
- Good presentation and analytical skills.
- Good with integration of electronic devices in circuit design.
- Good with synthesis and characterization of advanced nanomaterials.
- Problem solving and technically challenging skills.

## Publications

1. **Monika Nehra**, Neeraj Dilbaghi, Nitin Kumar Singhal, Ashraf Aly Hassan, Ki-Hyun Kim, and Sandeep Kumar, “Metal organic frameworks MIL-100(Fe) as an efficient adsorptive material for phosphate management” *Environmental Research*, 169 (2019), 229-236. <https://doi.org/10.1016/j.envres.2018.11.013> (IF: 4.73)
2. Sarita Alhan, **Monika Nehra**, Neeraj Dilbaghi, Nitin Kumar Singhal, Ki-Hyun Kim, and Sandeep Kumar, “Potential use of ZnO@activated carbon nanocomposites for the adsorptive removal of Cd<sup>2+</sup> ions in aqueous solutions” *Environmental Research*, 173 (2019) 411-418. <https://doi.org/10.1016/j.envres.2019.03.061> (IF: 4.73)
3. Sandeep Kumar, **Monika Nehra**, Deepak Kedia, Neeraj Dilbaghi, K. Tankeshwar, and Ki-Hyun Kim, “Nanodiamonds: Emerging face of future nanotechnology” *Carbon*, 143 (2019), 678-699. <https://doi.org/10.1016/j.carbon.2018.11.060> (IF: 7.08)
4. Sandeep Kumar, **Monika Nehra**, Neeraj Dilbaghi, Giovanna Marrazza, Ashraf Aly Hassan, and Ki-Hyun Kim, “Nano-based smart pesticide formulations: Emerging opportunities for agriculture” *Journal of Controlled Release*, 294 (2019), 131-153. <https://doi.org/10.1016/j.jconrel.2018.12.012> (IF: 7.877)
5. Sandeep Kumar, **Monika Nehra**, Deepak Kedia, Neeraj Dilbaghi, K. Tankeshwar, and Ki-Hyun Kim, “Carbon Nanotubes: A potential material for energy conversion and storage”, *Progress in Energy and Combustion Science*, 64 (2018), 219-253. <https://doi.org/10.1016/j.pecs.2017.10.005> (IF: 25.242)
6. Sandeep Kumar, Sarita, **Monika Nehra**, Neeraj Dilbaghi, K. Tankeshwar, and Ki-Hyun Kim, “Recent advances and remaining challenges for polymeric

nanocomposites in healthcare applications”, *Progress in Polymer Science*, 80 (2018), 1-38. <https://doi.org/10.1016/j.progpolymsci.2018.03.001> (IF: 24.558)

7. Sandeep Kumar, **Monika Nehra**, Akash Deep, Deepak Kedia, Neeraj Dilbaghi, and Ki-Hyun Kim, “Quantum-sized nanomaterials for solar cell applications”, *Renewable and Sustainable Energy Reviews*, 73 (2017), 821-839. <https://doi.org/10.1016/j.rser.2017.01.172> (IF: 9.184)

## Book Chapter

1. Monika Nehra, Neeraj Dilbaghi, Ashraf Aly Hassan and Sandeep Kumar “**Carbon-based nanomaterials for the development of sensitive nanosensor platforms**” in Elsevier Book entitled “Advances in Nanosensors for Biological and Environmental Analysis” 2018 (In press).

## International Conferences

1. Paper presentation entitled “Engineered nanostructures governing the performance of solar photovoltaic devices” at **Indo-US International Conference on Green Chemistry/Engineering and Technologies for Sustainable Development (GCET-2017)**, jointly organized by Department of Chemistry, Panjab University, Chandigarh (India) and Florida Polytechnic University, Lakeland (USA) from 20th to 22th of April, 2017.
2. Paper presentation entitled “Synthesis and characterization of highly-ordered Cu nanowires using electrodeposition template method” at the **International Workshop on Advanced Materials (IWAM) 2018**, organized and sponsored by the Ras Al Khaimah Center for Advanced Materials (RAK CAM), held at Ras Al Khaimah, United Arab Emirates from the 18th to 20th of February, 2018.
3. Paper presentation entitled “Controlled growth of ZnO nanostructures over thin film substrates” at **International Symposium on Functional Materials (ISFM-2018): Energy and Biomedical Applications**, jointly organized by Indian Institute of Technology, Kanpur, Panjab University, Chandigarh, and University of Illinois, Chicago, USA from 13th to 15th of April, 2018.
4. Paper presentation entitled “Utilization of metal organic frameworks for efficient removal of phosphate” at the **2nd International Conference on Bioresources, Energy, Environment, Materials Technology (BEEM 2018)**, organized by Korea University, Korea, Korea Institute of Energy Research, Korea, Chonbuk National

University, Korea, and many more, held at Hongcheon, Gangwon Province, South Korea from June 10-13, 2018.

5. Paper presentation entitled “Structural studies of Cu nanowires in ion-track membranes using SAXS measurements” at the **XVII International Small Angle Scattering Conference (SAS2018)**, organized by Argonne National Laboratory, USA, held at Traverse City, Michigan, USA from the October 07-12, 2018.
6. Paper presentation entitled “One-pot synthesis of Cu-based metal-organic frameworks for environmental applications” at the **63<sup>rd</sup> DAE Solid State Physics Symposium**, organized by Bhabha Atomic Research Centre, Mumbai, held at Guru Jambheshwar University of Science and Technology, Hisar from the December 18-22, 2018.

### Workshop Details

1. Participation in UGC sponsored one-week interaction programme-cum-workshop on “**Research Methodology for Ph.D. Scholars in Science & Engineering**” w.e.f. 09-02-2015 to 14-02-2015, held at GJUS&T, Hisar, Haryana, India.
2. Participation in GIAN workshop on “**Nanotechnology: Insights from Properties of Materials from Computational Modeling Methods**” w.e.f. 16-10-2016 to 20-10-2016, organized by GJUS&T, Hisar, Haryana, India.
3. Participation in GIAN workshop on “**X-ray Absorption Spectroscopy: Materials inside – Analysis Tool**” w.e.f. 03-10-2017 to 08-10-2017, organized by PU, Chandigarh, India.
4. Participation in RUSA sponsored short term programme on “**Advanced Analytical Instrumentation Techniques**” w.e.f. 02-11-2017 to 08-11-2017, held at GJUS&T, Hisar, Haryana, India.
5. Participation in GIAN workshop on “**Mammalian Reproductive Biotechnologies-Tools, Techniques & Methods**” w.e.f. 11-12-2017 to 15-12-2017, organized by GJUS&T, Hisar, Haryana, India.
6. Participation in Global Initiative of Academic Networks (GIAN) workshop on “**Nanotechnology: Nanoparticle Synthesis and Conjugation Chemistry for Bioapplications**” w.e.f. 16-07-2018 to 20-07-2018, organized by GJUS&T, Hisar, Haryana, India.
7. Participation in Photovoltaic Users and Mentorship Programme (PUMP) Hands-on Training Workshop on “**Fabrication & Characterization of Crystalline Silicon**”

**Solar Cell**” w.e.f. 27-08-2018 to 31-08-2018, held at Indian Institute of Technology (IIT), Bombay, Maharashtra, India.

8. Participation in Haryana State Council for Science & Technology, Department of Science & Technology, Govt. of Haryana sponsored one-day national workshop on “**Intellectual Property Rights & Patents**” on 30-01-2019, organized by GJUS&T, Hisar, Haryana, India.
9. Participation in TEQIP course on “**Fundamentals and Characterization of Solar Cells**”, held at Indian Institute of Technology (IIT), Kanpur from 19<sup>th</sup>-23<sup>rd</sup> February, 2019, Uttar Pradesh, India.
10. Participation in short course on “**Surface Area and Porous Material Characterization**”, held at Indian Institute of Technology, New Delhi, India on March 12, 2019.
11. Participation in one day symposium cum workshop on “**Small Angle X-ray Scattering and its Applications**”, held at Victor Menezes Convention Centre (VMCC), Indian Institute of Technology, Bombay, Maharashtra, India, on May 6, 2019.

## Personal Information

**Date of Birth:** 05-10-1990

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