

Dr. HIMANI CHAUHAN

Assistant professor
Department of Chemistry
Gargi College
University of Delhi
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Objective

Interested in teaching and research in the field of Inorganic Chemistry (Nanotechnology), Material Science, Green Synthesis, Energy Storage Devices and Catalysis. Thesis titled “**Synthesis, Characterization and Applications of a Few Nanostructured Metal Chalcogenides Semiconductors**”

Educational Qualification

Qualification	University	Year	Division
PhD Degree (Nanochemistry-inorganic)	UNIVERSITY OF DELHI	(2012– 2017)	-
Master Degree (Inorganic Chemistry)	RAMJAS, UNIVERSITY OF DELHI	(2009– 2011)	I
Bachelor Degree Chemistry (H)	ARSD, UNIVERSITY OF DELHI	(2006-2009)	I
JRF	UGC	2012	Qualified
GATE	IIT	2010, 2012	Qualified
PHD ENTRANCE	DU	2012	RANK 1

Awards:

- **DST-DAAD Indo-German** project based personnel exchange programme (INT/FRG/DAAD/P-242/2014, dated 22-04-2015),
- **Junior Research Fellowship (JRF)** awarded by UGC India, 2012 June.
- **Non-NET fellowship awarded**, through Ph.D Entrance examination (**RANK 1**), 2012 University of Delhi, Delhi, India.
- **Non-NET fellowship awarded**, through Ph.D Entrance examination, 2012, Delhi technological University, Delhi, India.

- **Non-NET fellowship awarded**, through Ph.D Entrance examination **IISC Bangalore**, 2012.
- **Top cited article award 2021 for article:** Himani Chauhan, Manoj K. Singh, Praveen Kumar, S. A. Hashmi, Sasanka Deka. Development of SnS₂/RGO nanosheets composite for cost-effective aqueous hybrid supercapacitors". **IOP Nanotechnology**, 2017, 28, 025401

Teaching Experience: 6 Years 5 months

- Assistant professor (Ad-hoc) in chemistry department (MSC Final) from 24 Jan 2017 to 26 May 2017. (6 months)
- Assistant professor (Ad-hoc) in Gargi College chemistry department from 20 July 2017 to till date.(6 years)

➤ Research Projects done with students

1. Pathfinder Project 2018-2019: Title; 'Effect of chemicals on stone monuments and ways to prevent the corrosion of Monuments'

Students Name - Dorothy, Priyanda and Shilpy Chemistry (H), (**won First prize**).

2. Pathfinder Project 2021-2022: Title: 'Green synthesis of zinc oxidenanoparticles from various plant extracts and their application in photo reduction and cosmetic products'

Students Name- Nandini Singh and Mansi Kapoor Chemistry (H) and Physical sciences.

3. DBT star Project: 2022-2023: Title: 'Synthesis of ZnS Nanoparticles from plant wasteland their application in catalysis'

Students Name- Aarzo and Kipa

4. Pathfinder Project: 2022-2023: Title: 'Synthesis of SnS Nanoparticles by hydrothermal methods and their application in energy storage devices'

Students Name- Sanskriti and Nidhi

➤ FDPs and Refreshers during teaching period

S.No.	Details	Place	Period		Sponsoring/Organising Agency
			From	To	
1	One week online National faculty development program	Development of Teachers e-kit and MOOC in four quadrants format of e content	15-9-2020	21-9-2020	Mhrd , certificate no : GAD TLC/2020-2021/OFDP17-391
2	One week online faculty development program on research methodology: tools and	ATMA RAM Sanatan Dharma College	5-6-2020	11-6-2020	MHRD,Ramanujan College certificate no RMTT/ARSD/226

3	One week online faculty development program on Emerging trends in applied Chemistry: a step towards sustainable Development	SGT university	31-5-2022	4-6-2022	SGT UNIVERSITY
4	Two day workshop on National Educational Policy 2020: a paradigm shift in education sector methodology: tools and techniques	Hansraj college, DU	6-6-2022	7-6-2022	Mahatma development centre faculty development centre
5	5 days online faculty development program on GChemPaint	Rajdhani College	29-6-2020	3-7-2020	Spoken- tutorial Project, IIT bombay
6	One week online faculty program on advanced research methodology applicable in new education policy	Online	22-6-22	28-6-22	Digvijai nath post graduate college, Gorakhpur, UP science tech institute Lucknow
7	6 Days FDP, Reserch techniques in science and technology	Gargi college	18-7-22	23-7-22	K R mangalam university in coloboration with Gargi college

➤ **Seminar/Workshops attended workshops and Conferences during teaching period**

1. Participated in two days National Webinar on “**Learnings from Corona Pandemic**” organized by Miranda House, University of Delhi on 24-25 September, 2020.
2. Participated in National Webinar on “**Infrared Spectroscopy : Fundamentals And Applications**” organized by Department of Chemistry, Deshbandhu College, University of Delhi on 8th April, 2021.
3. Participated in Online workshop on “**Laboratory Safety Measures and Chemical Waste Management for Ecological and Environmental Shield**” organized by Department of Chemistry, Rajdhani College, University of Delhi on **16 April, 2021**.
4. Participated in Online International Conference on “**Rethinking Science for Sustainable Development**” organized by Department of Chemistry, Rajdhani College, University of Delhi on **20-21 April, 2021** (RSSD-2021).

5. Participated and presented poster entitled “**Mind and Malady (Covid-19)**” in the online National Conference on COVID-19 and its Psychological Effects organized by Department of Chemistry, Rajdhani College, University of Delhi on 30 April, 2021.

➤ **Student related co-curricular, extension and field based activities during teaching period**

S.No	Nature of Activity	Level (UG/PG)	Institution/Department	Period	
				From	To
1	Convenor of Chemical Society	UG	Department of Chemistry	2022	2023
2	Member of Gargi Price committee	UG	Gargi College	2019	2020
3	Member of Gargi Price committee	UG	Gargi College	2020	2021
4	Member of Gargi Price committee	UG	Gargi College	2021	2022
5	Member of Gargi Price committee	UG	Gargi College	2022	2023
6	Member of Enactus society	UG	Gargi College	2019	2020
7	Working On NAAC Criterion 2	UG	Department of Chemistry	2019	2020
8	Working On NAAC Criterion 6	UG	Department of Chemistry	2019	2021
9	Working On NAAC Criterion 6	UG	Department of Chemistry	2021	2022

Computer Skills:

Platforms : MS-Windows, MS-DOS

Packages : Origin, Easy plot, Digital micrograph, Image J, Chem Draw, PCW

List of Publications:

1. **Himani Chauhan**, Yogesh Kumar and Sasanka Deka, New synthesis of two-dimensional CdSe/CdS core@shell dot-in-hexagonal platelet nanoheterostructures with interesting optical properties, **Nanoscale**, **2014**, 6, 10347. (**Impact factor 7.8**)
2. Subhasis Das, Biswarup Satpati, **Himani Chauhan**, Sasanka Deka, Chinnakonda. Gopinath and Tanushree Bala, Preferential growth of Au on CdSe quantum dots using Langmuir–Blodgett technique. **RSC Adv.**, **2014**, 4, 64535. (**Impact factor 3.83**)
3. **Himani Chauhan**, Manoj K. Singh, S. A. Hashmi and Sasanka Deka, Synthesis of surfactant-free SnSnanorods by a solvothermal route with better electrochemical properties towards supercapacitor applications **RSC Adv.**, **2015**, 5, 17228. (**Impact factor 3.83**)
4. Subhasis Das, Biswarup Satpati, **Himani Chauhan**, Sasanka Deka, Manoj Kumar Ghosalya, Chinnakonda S. Gopinath and Tanushree bala, Seeding of Au on CdSe/CdS nanoplates using Langmuir-Blodgett technique. **RSC Adv.**, **2016**, 6, 14658–14665. (**Impact factor 3.83**)
5. **Himani Chauhan**, Kiran Soni, Mukesh Kumar, and Sasanka Deka. Tandem Photocatalysis of Graphene-Stacked SnS₂ Nanodiscs and Nanosheets with Efficient Carrier Separation. **ACS Omega** **2016**, 1, 127–137. (**Impact factor 5.8**)

6. **Himani Chauhan**, Yogesh Kumar, Jayanta Dana, Biswarup Satpati, Hirendra N. Ghosh and Sasanka Deka. Photoinduced ultrafast charge separation in colloidal 2-dimensional CdSe/CdS-Au hybrid nanoplatelets and corresponding application in photocatalysis. **Nanoscale**, **2016**, **8**, 15802-15812. (**Impact factor 7.8**)
7. **Himani Chauhan**, Manoj K. Singh, Praveen Kumar, S. A. Hashmi, Sasanka Deka. "Development of SnS₂/RGO nanosheets composite for cost-effective aqueous hybrid supercapacitors". **IOP Nanotechnology**, **2017**, **28**, 025401. (**Impact factor 3.5**)
8. Tonkeswar Das, **Himani Chauhan**, Sasanka Deka, Shanky Chaudhary, Ratan Boruah, Binoy K Saikia. Promising supercapacitor electrode materials from coal-derived carbon nanosheets **Mesoporus and Microporus Materials**, **2017 (accepted)** (**Impact factor 3.7**).
9. **Himani Chauhan**, Mukesh Kumar, Biswarup Satpati, Ritu Kumari, Alvin Varghese, Sasanka Deka, Yolk Type Asymmetric Ag-Cu₂O Hybrid Nanoparticles on Graphene Substrate as Efficient Electrode Material for Hybrid Supercapacitors. **Z.Phys.Chem.** **2018**, **233**, **10**.
10. Lakshya kumar, **Himani Chauhan**, Neetu Yadav, S A Hashmi and Sasanka Deka, Faster ion switching NiCo₂O₄ nanoparticle electrode based supercapacitor device with high performances and long cycling stability, **ACS Applied Energy Materials**, **2018**, **12**, **6999**.
11. Geeta Saini, **Himani Chauhan**, Aeshna Gupta, Disha Gangotia, Synthesis and biodegradation study of Starch/PVA/Nanoclay blend, **Journal of Material Nanoscience**, **2018**, **5**, **1**, **2394**.
12. **Book chapter: Himani Chauhan** and Sasanka "**Fundamentals And supercapacitor Applications of 2D material. Chapter -6 supercapacitor based on two- dimensional transition metal dichalcogenides and their hybrid.**2021, pages 159-191, *Elesvier, Sciences Direct*
13. **Himani Chauhan**, Chandana Mukherjee, Manisha Singla, Dorothy, Priyanda and Shilpi, Effect of chemicals on stone monuments and ways to prevent the corrosion of Monuments, **Journal of Material Nanoscience**, **2022 (Communicated)**
14. **Himani Chauhan**, Chandana Mukherjee, Manisha Singla, Nandi and Mansi Kapoor, Green synthesis of zinc oxidenanoparticles from various plant extracts and their application in photo reduction and cosmetic products , **2022, Journal of Material Nanoscience (Communicated)**.

Paper presentations:

International:

1. Attended Indo-German Workshop (IGSTC) on "New Prospective for Nano Carriers in Biomedical Applications", held at University of Delhi, Delhi on 14th January- 2013.
2. Attended and presented paper (poster): Himani Chauhan and Sasanka Deka, "High temperature colloidal synthesis of fluorescent monodisperse CdSe/CdS core/shell 2D hexagonal nanocrystals and their characterizations", International Conference on Science and Technology (CONSAT), held at Punjab University Mohali, Chandigarh on 2nd -5th March-2014.
3. Attended and presented paper (poster): Himani Chauhan, Yogesh Kumar and Sasanka Deka, "Colloidal Synthesis of Fluorescent Monodisperse 2D Dot-in-hexagonal Nanohetroplatelets CdSe/CdS Core@Shell with Interesting Optical Properties", DAE-BRNS 5th Interdisciplinary Symposium on Materials Chemistry (ISMC), held at Bhaba Atomic Research Centre (BARC), Bhavnagar, Mumbai on 9th to 13th December- 2014.
4. Attended and presented paper (poster): Himani Chauhan, M. K Singh, S. A. Hashmi, S. Deka "Solvothermal synthesis of surfactant-free SnS nanorods with better electrochemical properties

towards supercapacitor applications” Indo-German workshop on supramolecular chemistry, held on University of Delhi, Delhi, on 30th March-2015.

5. Attended and presented paper (poster): Himani Chauhan, Kiran Soni and Sasanka Deka, “Graphene Stacked SnS₂ Nanoflakes for Photocatalytic Conversion of Nitrobenzene and Enhanced Photocatalytic Activity for the Degradation/Reduction of Various Water Polluting Dyes and Toxic Cr (VI)”, International Conference on Materials Science & Technology, University of Delhi, held on 01st - 04th March- 2016.

National:

1. Attended “Science Academies Lecture Workshop On “Nanoscience and Nanotechnology” held at, Jamia Millia Islamiya, Delhi on 1st-2nd March- 2013
2. Attended and presented paper (poster): Himani Chauhan and Sasanka Deka, “Colloidal synthesis of fluorescent monodisperse CdSe/CdS core/shell 2D hexagonal nanocrystals and their characterizations”, Nanoscience and Nanotechnology, held at University of Delhi, Delhi, on 14th March- 2014.
3. Attended and presented paper (poster): Himani Chauhan, Yogesh Kumar and Sasanka Deka, “Colloidal Synthesis of Fluorescent Monodisperse 2-Dimensional CdSe/CdS Core@Shell Nanoheteroplatelets with Interesting Optical Properties” New Advances and Horizons in Nanoscience and Nanotechnology (NanoSci-2014), Institute of Advanced Study in Science and Technology (IASST) Guwahati, Assam on 20th- 21st December 2014.
4. Attended IUCR Workshop on “XRD systems and its applications”, at Delhi University, 2014, Delhi on 15th July-2015
5. Challenges and opportunities in Chemistry, Maitree College, 22-23 sept 2016.

References:

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Declaration

I hereby declare that all the statements made above are correct to the best of my knowledge and belief.

Dr. Himani Chauhan