



# Miranda House

## UNIVERSITY OF DELHI

Name: VINEETA

Department: PHYSICS

Current Designation: ASSISTANT PROFESSOR

Email id: vineeta@mirandahouse.ac.in

Academic Qualifications (reverse chronological order):

DEGREE	INSTITUTION	BOARD/UNIVERSITY	YEAR OF PASSING	AGGREGATE %
M.Sc. (PHYSICS)	ST.STEPHEN'S COLLEGE	UNIVERSITY OF DELHI	2015	66.67
B.SC(H) (PHYSICS)	ST. STEPHEN'S COLLEGE	UNIVERSITY OF DELHI	2013	82.7
XII <sup>TH</sup>	NAVIN BHARTI SR. SEC. SCHOOL	CBSE	2008	88.2
X <sup>TH</sup>	NAVIN BHARTI SR. SEC. SCHOOL	CBSE	2006	90.5

National Level Exams:

EXAM	YEAR	SUBJECT	SCORE/RANK
GATE	2016	PHYSICS	434
UGC – NET JRF	2016	PHYSICAL SCIENCES	59
IIT-JAM	2014	PHYSICS	685

Research Degree(s) (reverse chronological order):

Field of Specialization under the Subject/Discipline: CONDENSED MATTER PHYSICS

Total Teaching Experience: NIL

Teaching at Miranda House since: 10<sup>th</sup> March 2023



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### List of Publications(reverse chronological order):

(Articles in referred/peer-reviewed/UGC Care journals/ Books/Book Chapters)

1. **Vineeta Singh**, V. G. Sathe, Shyama Rath, *Raman spectroscopic study of the layer-dependent Davydov splitting and thermal conductivity of chemically vapor deposited two-dimensional MoSe<sub>2</sub>*. **Applied Physics Letters** **122** (2023), **042201**. DOI: <https://doi.org/10.1063/5.0123628> (Impact factor = 3.82) ISSN No. = 0167-2789.
2. **Vineeta Singh**, Dattatray J. Late, Anshu Goyal, Shyama Rath, *Raman Spectroscopic investigations of the selenization of MoO<sub>3</sub> in the chemical vapor deposition process to form two-dimensional MoSe<sub>2</sub>*. **Applied Surface Science** **538** (2021), **147946**. DOI: [10.1016/j.apsusc.2020.147946](https://doi.org/10.1016/j.apsusc.2020.147946) (Impact factor = 6.707) ISSN No. = 0169-4332.
3. **Vineeta Singh**, Dattatray J. Late, Shyama Rath, *Tunable light emission from chemical vapor deposited two- dimensional MoSe<sub>2</sub> by layer variation and S incorporation*. **Journal of Vacuum Science & Technology A** **38** (2020), **023402**. DOI: <https://doi.org/10.1116/1.5124998> (Impact factor = 2.427) ISSN No. = 0734-2101.
4. **Vineeta Singh**, Shyama Rath, *Improved morphology and excitonic emission of 2D MoS<sub>2</sub> by incorporating mechanical grinding in the liquid phase exfoliation synthesis process*. **Physica E: Low- dimensional Systems and Nanostructures** **128** (2021) **114617**. DOI: <https://doi.org/10.1016/j.physe.2020.114617> (Impact factor = 3.37) ISSN No. =0167-2789.
5. **Vineeta**, Shyama Rath, *Optimization of the concentration of Molybdenum Disulfide(MoS<sub>2</sub>) for formation of atomically thin layers*. **Springer Proceedings in Physics** **215** (2019) DOI: [10.1007/978-3-319-97604-4\\_7](https://doi.org/10.1007/978-3-319-97604-4_7).
6. **Vineeta Singh**, Dattatray J. Late, Shyama Rath, *Spectroscopic probe of atomically thin domains of CVD- grown MoSe<sub>2</sub>*. **AIP Conference Proceedings** **2265** (2020), **030687**. DOI: <https://doi.org/10.1063/5.0017096>.

**Educational Resource Material Developed** (reverse chronological order): NIL

**Research Guidance** (reverse chronological order): NIL



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**Research Projects** (reverse chronological order):

**Membership Of Professional Bodies**(reverse chronological order):

**Administrative Responsibilities**(reverse chronological order):

**Invited talks/Session chair/Resource person** (reverse chronological order):

**Conferences Organised** (reverse chronological order):

**Seminars/Workshops/Conferences attended** (reverse chronological order):

1. **DAAD Research Seminar** on 21st November 2016 at University of Delhi.
2. **Combined Confocal Raman – AFM System: Basics & Research Applications** on 02–03rd February 2017 at AIRF, JNU, New Delhi
3. **National Workshop on Nanotechnology: Emerging Frontiers & Applications** on 30 & 31<sup>st</sup> January 2017 at University of Delhi.
4. **GIAN-MHRD, Government of India Sponsored Workshop-Course** on New methods for the production and chemical manipulation of 2D Nanomaterials and carbon nanotube from 20- 30th March, 2017 at Centre for Nanoscience and Nanotechnology, Jamia Millia Islamia, New Delhi.
5. **INUP Hands-on-training Workshop** conducted from 14- 23rd February 2018 at IISc, Bangalore.
6. **CSIR Sponsored Workshop on Recent Trends in Computational Physics**, 6-7th April 2018, Jaypee Institute of Information Technology, Noida.
7. **National workshop on “In- Silico Approach for Modelling New Materials: Methodology and Applications”**, conducted from 14th to 20rd January 2019 at Central University of Himachal Pradesh.
8. **Virtual National Webinar Series on Experimental & Computational Tools for Materials Research (ECTMR 2020)** 01-08th June 2020, Discipline of Natural Sciences, PDPM Indian



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Institute of Information and Technology, Design and Manufacturing Jabalpur and Department of Physics, Central University of Rajasthan.

### CONFERENCES/POSTER PRESENTATION:

1. **Participated in International Conference on Technologically Advanced Materials & Asian Meeting on Ferro-electricity (ICTAM – AFM 10)** on November 07-11th 2016, University of Delhi.
2. **Poster presentation: International Workshop on The Physics of Semiconductor Devices (IWPSD)** on December 11-15th, 2017, IIT Delhi, Hauz Khas, New Delhi. *"Optimization of the concentration of molybdenum disulfide (MoS<sub>2</sub>) for formation of atomically thin layers"*.
3. **Participated in International Conference on Optoelectronic and Nanomaterials for Advanced Technology (ICONMAT)** on January 03-05th 2019, Cochin University of Science and Technology, Kochi.
4. **Poster presentation: 64th DAE Solid State Physics Symposium** on 18-22nd December 2019, organized by Bhabha Atomic Research Centre, Mumbai. Sponsored by Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy, Govt. of India, Indian Institute of Technology Jodhpur. *"Spectroscopic Probe of Atomically Thin Domains of CVD- Grown MoSe<sub>2</sub>"*.
5. **Oral presentation: International Conference on Advanced Materials and Nanotechnology (AMN-2020)** on 20-22nd February 2020, Department of Physics and Materials Science and Engineering. Jaypee Institute of Information Technology, Noida. *"The direct and tunable band gap of chemical vapor deposited two- dimensional MoSe<sub>2</sub> by layer variation and S incorporation."*
6. **Oral Presentation: Advanced Materials: Theory and Application (NCAMTA)** on 26- 28th September, 2019, Hansraj College, University of Delhi. *"Effect of grinding on liquid phase exfoliation of MoS<sub>2</sub>."*
7. **Poster presentation: Virtual Conference: # IOPP poster conference Twitter Poster Conference** on 15-16th July 2020. *"Direct and tunable band gap of chemical vapor deposited two- dimensional MoSe<sub>2</sub> by layer variation and S incorporation"*.
8. **Oral presentation: International Conference on Materials for the Millennium – (MATCON 2021)** on 15-19th March 2021, Department of Applied Chemistry at the Cochin University of Science and Technology. *"Raman Spectroscopic investigations of the selenization of MoO<sub>3</sub> in the chemical vapor deposition process to form two- dimensional MoSe<sub>2</sub>"*.



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**Synergy** (work with other organizations outside the college):