

CURRICULUM VITAE

Dr. Shriniwas Yadav

CONTACT DETAILS

Dr. Shriniwas Yadav, Technical Officer Level-II,
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SKILLS AND STRENGTH

- Hand on operation, basic maintenance and management over various high-end materials characterization equipments like **High Resolution Transmission Electron Microscope** (HRTEM with EDS, FEI Tecnai T20 Netherland), **Scanning Probe Microscope** (SPM/AFM, Brukers Multimode 8.0 Germany), **Confocal Micro Raman Spectrometer with PL**(AIRIX Corp. STR500, Japan), **X-ray Diffractometer** (XRD, Panalytical X-pert powder, Netherland), **X-ray Photoelectron Spectroscopy** (XPS, Omicron Nanotechnology, ESCA+, Germany).
- Have expertise and understanding of various clean room processes and fabrication systems like **Silicon Wafer Cleaning, Thermal Oxidation, Metallization, Photolithography, Electron Beam Lithography** (EBL), **Dip Pen Nanolithography** (DPN), **Reactive Ion Etching** (RIE), Thin film deposition processes (RF-DC Sputtering, Electron Beam and Thermal Deposition, Chemical Vapor Deposition).
- Have experimental research experience in area of **Flexible Electronics, Transparent and Conductive electrodes, Nanomaterials, Graphene and Carbon Nanotubes**, synthesis, functionalization, conjugation, thin film fabrication, optoelectronic properties, electrochemical and sensing applications.

EDUCATIONAL QUALIFICATION

Qualification	Board/University	Name of Institution	Marks Secured
Ph.D. (Engineering Sciences), 2018	AcSIR, New Delhi	CSIR-CSIO Chandigarh, IISER - Mohali	8.18 CGPA
Ph.D. Thesis title: “Fabrication of graphene thin film transparent electrodes for nanodevices” Supervisor: Prof. Inderpreet Kaur, Principal Scientist, Nanotechnology Division, CSIR-CSIO Chandigarh Cosupervisor: Dr. AnanthVenkatesan, Associate Professor, Physical Sciences Department, IISER-Mohali.			
M.Tech. (Nanotechnology), 2012	NIT Kurukshetra	NIT Kurukshetra	9.25CGPA
M.Tech. Thesis title: “Fabrication of nano-dimensional gap using dip pen nanolithography” Supervisors: Dr. Pankaj B. Agarwal, Principal Scientist, CSIR-CEERI Pilani Prof. Ashwani Kumar, Physics Department, NIT Kurukshetra			
B.Tech. (Electronics Instrumentation& Control Engineering), 2010	RTU, Kota	St. Margaret Engineering College Neemrana, Alwar.	70.90%
12th (Physics, Chem., Maths, English, Hindi), 2006	RBSE, Ajmer	Govt. Sr. Sec. School Bansur. Alwar.	68.00%
10th (General subjects), 2004	RBSE, Ajmer	Govt. Sec. School Hazipur. Alwar.	73.67%

TECHNICAL AND RESEARCH EXPERIANCE

Period	Employer	Designation	Nature of Work
30/12/2021 to till date	IIT-Roorkee	Technical Officer Level-II	Managing Various Sophisticated Testing Equipments
22/04/2021 to 29/12/2021	MANIT Bhopal	Technical Officer	Central Research Facility development (Lab Preparation, Procurement, Technical specifications formulation, Installations of various high end scientific instruments)
05/11/2015 to 21/04/2021	MNIT Jaipur	Senior Technical Assistant	Materials Research and Characterization (HRTEM, XPS, AFM, RAMAN, XRD and Thin Film Deposition Systems)
13/08/2012 to 03/11/2015	CSIR-CSIO Chandigarh	Senior Project Fellow	Research and Development

RESEARCH PUBLICATIONS

INTERNATIONAL SCI JOURNALS

1. **Shriniwas Yadav** and Inderpreet Kaur. "Low temperature processed graphene thin film transparent electrodes for supercapacitor applications." **RSC Advances** 6.82 (2016): 78702-78713.
2. **Shriniwas Yadav**, Vanish Kumar, Shweta Arora, Sukhbir Singh, DeepikaBhatnagar, and Inderpreet Kaur. "Fabrication of ultrathin, free-standing, transparent and conductive graphene/multiwalled carbon nanotubes film with superior optoelectronic properties." **Thin Solid Films**, Volume 595, Part A, 30 November 2015, Pages 193–199, (2015).
3. **Shriniwas Yadav** and Inderpreet Kaur. "Solution processed simple and scalable graphene patterning method for nanodevices application." **Materials Research Express** 3.12 (2016): 125011.
4. DeepikaBhatnaga, Sukhbir Singh, **Shriniwas Yadav**, Anil Kumar and Inderpreet Kaur, Experimental and theoretical investigation of relative optical band gaps in graphene generations. **Materials Research Express**, 4.1 (2017), 015101.
5. Vanish Kumar, Aditi Chopra, Sweta Arora, **Shriniwas Yadav**, Suresh Kumar, Inderpreet Kaur, "Amperometric sensing of urea using edge activated Graphene Nanoplatelets." **RSC Advances** 5 (2015) 13278-13284.
6. AK Sharma, **S. Yadav**, S Sharma, R Sharma "Scalable Synthesis of Highly Conductive Graphene-Based Thin Film for Supercapacitor Application" **IEEE Transactions on Nanotechnology**(2019) 18, 494-501.
7. R Vishnoi, K Sharma, **S Yadav**, R Singhal "Investigation of sequential thermal annealing effect on Cu-C70 nanocomposite thin film" **Thin Solid Films** (2019) 680, 75-80.
8. Ashish Kumar, ArathyVarghese, **ShriniwasYadav**, MahanthPrasad, Vijay Janyani and R. P. Yadav "Influence of Temperature on Graphene/ZnOHeterojunction Schottky Diode Characteristics" **Journal ofNanoscience and Nanotechnology**Vol. 21, 1–6, 2021.

BOOK CHAPTERS

1. Inderpreet Kaur, **Shriniwas Yadav**, Sukhbir Singh, Vanish Kumar, Sweta Arora, DeepikaBhatnagar "Nano Electronics: A New Era of Devices." *Solid State Phenomena*. Vol. 222. 2015.
2. Shweta Arora, Vanish Kumar, **Shriniwas Yadav**, Sukhbir Singh, DeepikaBhatnagar, Inderpreet Kaur "Carbon Nanotubes as Drug Delivery Vehicles." *Solid State Phenomena*. Vol. 222. 2015.
3. Kanwar, Geetika, Pankaj B. Agarwal, and **Shriniwas Yadav**. "Comparative Study of SWNTs Dispersion in Organic Solvent and Surfactant Along with Observation of Multilayer Graphene." **Physics of Semiconductor Devices**. Springer International Publishing, 2014. 603-606.

INTERNATIONAL CONFERENCES

1. **Shriniwas Yadav** and Inderpreet Kaur. "Effect of annealing over optoelectronic properties of graphene based transparent electrodes." Contributory papers presented in 2nd International Conference on Emerging Technologies: Micro to Nano 2015. Vol. 1724. No. 1. **AIP Publishing**, 2016.
2. **Shriniwas Yadav**, Sukhbir Singh, Vanish Kumar, Inderpreet Kaur, "Fabrication of graphene thin film over oxidized silicon wafers", oral presentation in 2ndinternational conference on Nanotechnology, **ICNT-2015**.

3. **Shriniwas Yadav**, Vanish Kumar, Siddharth Kaushik, A. K. Paul, Inderpreet Kaur, “Carbon Nano Tube- Gold Nanoparticle Conjugate For Biosensing Applications”, poster presentation in international conference, **ICIACS-2013**, organized by Panjab University, Chandigarh during Oct. 30- Nov. 1, 2013.
4. **Shriniwas Yadav**, Vanish Kumar, Sukhbir Singh, Siddharth Kaushik, Inderpreet Kaur, “Covalent coupling of quantum dots to graphene for biosensing application”, paper presentation in international conference, **ICNANO-2013**, organized by Ansal University, Gurgaon during July 25-26, 2013.
5. Vanish Kumar, Ashish Nirban, **Shriniwas Yadav**, Shweta Arora, Inderpreet Kaur, “Graphene and siRNA conjugation for gene silencing application”, paper presentation in international conference, **ICNANO-2013**, organized by Ansal University, Gurgaon during July 25-26, 2013.
6. **Shriniwas Yadav**, Suresh Kumar, Pankaj B. Agarwal, Inderpreet Kaur, “Functionalization and positioning based sensing on graphene”, poster presentation in international conference, **ETMN-2013**, organized by BITS Pilani Goa campus, Goa during Feb. 22-23, 2013.
7. Pankaj B. Agarwal, Geetika Kanwar, **Shriniwas Yadav**, “Positioning of Carbon nanotubes between microelectrodes for CNT-FET fabrication”, paper presentation in international conference, **ETMN-2013**, organized by BITS Pilani Goa campus, Goa during Feb. 22-23, 2013.
8. Vanish Kumar, Aditi Chopra, **Shriniwas Yadav**, Shweta Arora, Inderpreet Kaur, “Bioconjugation of Graphene”, poster presentation in international conference, **ICIACS- 2013**, organized by Panjab University, Chandigarh during Oct. 30- Nov. 1, 2013.
9. **Shriniwas Yadav**, attended the **COMSOL Conference 2013** held in Bangalore on Oct. 17-18, 2013.

NATIONAL CONFERENCES

1. **Shriniwas Yadav**, Pramod K, Sharma, Pankaj B. Agarwal, “Nano gap electrode formation using dip pen nanolithography (DPN) on Si substrate”, paper presentation in national conference, **MEMSNT-2012**, organized by Marudhar Engineering College, Bikaner during April 14-15, 2012.
2. **Shriniwas Yadav**, Inderpreet Kaur, “Potential applications future aspects of nanotech. in environment”, paper presentation in national conference, **PECBH-2013**.

AREA OF INTEREST

- Electron Microscopy (HRTEM), Scanning Probe Microscopy (AFM, STM, MFM), Spectroscopy (X-Ray, Mass, RAMAN), X-Ray diffractometer (XRD), Electrochemical analysis.
- Lab development, Procurement, Installations.
- Carbon Nanotubes and Graphene based transparent and flexible electrodes, supercapacitors, biosensors and Solar cells.
- Thin film fabrication, Nano Electronic Devices.
- Clean room fabrication processes and lithography techniques.