



University School of Basic & Applied Sciences
Guru Gobind Singh Indraprastha University
Dwarka, Sector – 16 C, New Delhi – 110078



Advertisement No.: GGSIPU/USBAS/DST-SERB/2024/Nov/01

Date: 18th November, 2024

JRF Recruitment in DST- SERB (SURE) Sponsored Project (Reference No. : SUR/2022/003252)


Applications are invited from eligible candidates to work as a Junior Research Fellow (JRF) in a Department of Science and Technology (DST) sponsored project at USBAS, GGSIPU, New Delhi. The details are as follows:

Project Title	Disorder-induced enhancement of thermoelectric properties of a random array of SnSe quantum dots
Number of Positions	01
Duration of project	24 Months
Principal Investigator (PI)	Prof. S. Neeleshwar
Co-PI	Dr. Anjana Bagga, Associate Professor
Project Objectives	<ul style="list-style-type: none">• To make low-cost quantum dots based thermoelectric as a scalable technology: To synthesize disordered array of SnSe quantum dots using refluxing, reduction, colloidal injection, microwave, and hydrothermal techniques. These disordered quantum dots will be consolidated into pellet by hot-press/spark plasma sintering.• To make the theoretical study of the effect of disorder on the thermoelectric properties. The disorder effects are present due to the size distribution around an average size of an array of quantum dots and also due to different amount of doping of the various quantum dots. The disorder is also present due to the defects, trap states and surface states.• To find theoretically the optimized values of size and doping for obtaining maximized thermoelectric power factor, zT and efficiency of such a disorder system of quantum dots. So as to implement it experimentally.
Fellowship	INR 31,000/- per month for first two years

Essential Qualifications	<ul style="list-style-type: none"> • Post Graduate Degree, M.Sc. in Physics/Applied Physics/Materials Science/Engineering Physics, M.Tech. in Engineering Physics/ Nano-Science & Technology with minimum 55% marks or any equivalent. • Preference will be given to candidates, who have qualified National Eligibility Tests like CSIR-UGC NET or GATE, or any other national-level examinations. • Additionally, student should have knowledge in one of the programming languages such as C++, MATLAB, FORTRAN, etc. • The student should have knowledge in experimental synthesis of nanomaterials.
Google form to apply online	<p style="text-align: center;">https://forms.gle/NPXcZuggx79dyVtc7</p> <p style="text-align: center;">Last date: 4th December 2024</p>

Notes:

1. Candidates are requested to submit their application form by online mode only.
2. Short-listed candidates will be called for the interview. No TA/DA will be paid for attending the interview.
3. Candidates are required to produce all certificates/testimonials in original at the time of interview.
4. The tentative interview date will be 5th December to 10th December 2024.



(Dr. S. Neeleshwar)
 PI, Professor USBAS
 Email: Sn@ipu.ac.in

Copy to:

- Incharge, UITS with a request to upload on university website.