



BITS Pilani

Pilani | Dubai | Goa | Hyderabad | Mumbai
Research & Innovation

TWO PhD Positions

1. “Development of novel materials and approaches for Green H₂ generation”

2. ‘Development and integration of solar PV - Electrochemical energy device based hybrid system using efficient power converters’

BITS Pilani, in collaboration with University at Buffalo |

Deadline: 26 Apr 2024

Date: 16 Apr, 2024

Applications are invited for **TWO** PhD positions on the following projects in collaboration with University at Buffalo (North Campus) USA.

Position 1: Development of novel materials and approaches for Green H₂ generation under the supervision of Prof. Surojit Pande (Chemistry, BITS Pilani, Pilani campus), Kiran Vankayala (Chemistry, BITS Pilani, K K Birla Goa campus) and Prof. Mrinmoyee Basu (Chemistry, BITS Pilani, Pilani Campus)

Position 2: Development and integration of solar PV - Electrochemical energy device based hybrid system using efficient power converters under the supervision of Prof. Ankur Bhattacharjee (EEE, BITS Pilani, Hyderabad campus) and Prof. Naveen Shrivastava (Mechanical Engineering, BITS Pilani, Dubai campus)

Collaborators from University of Buffalo: Prof Mark T. Swihart, (SUNY Distinguished Professor, SUNY Empire Innovation Professor, Department of Chemical and Biological Engineering, School of Engineering and Applied Sciences); Prof. Wanyi Nie (Department of Physics) and Prof. Ian Sellers (Department of Electrical Engineering)

Scope of work	Essential Qualification	Desirable Qualification
<p>For position 1:</p> <ul style="list-style-type: none"> Synthesis of nanomaterials and their physicochemical and photo/electrochemical characterization. Use of sophisticated characterization & analytical tools <p>For position 2:</p> <ul style="list-style-type: none"> Design and development of an efficient electrical interfacing system with controller unit for solar PV-Electrochemical Energy conversion & storage device integration. Green-Hydrogen production and its utilization in Energy conversion & storage applications 	<p>For position 1: M.Sc Degree in Chemistry/Materials Science/Physics, M. Tech Nanotechnology/renewable energy or equivalent degree graduates from reputed University/Institute with First class or equivalent grade.</p> <p>For position 2: B.E./B. Tech. in Electrical/ Mechanical Engineering and M.E./M.Tech. in Renewable Energy/ Energy/ Power Electronics/ Control Systems/ Mechatronics and any other related area.</p> <p>Age not exceeding 30 years as of the date of the interview. Age relaxation is allowed up to 5 years for SC/ST/PH/OBC/WOMEN candidates.</p>	<ul style="list-style-type: none"> GATE or UGC/CSIR-NET Knowledge on material science, electrochemistry, spectroscopy, magnetism. Experience in materials synthesis, electrochemistry, and expertise in analytical techniques such as GC will be an advantage. <p>For position 2:</p> <ul style="list-style-type: none"> GATE / CSIR NET Basic understanding of solar photovoltaic and Fuel cell technology, Power Electronic converter circuits, controllers. Prior experience in Simulation, PCB design

Fellowship: ₹34,000/37,000/42,000 per month

Duration: As per BITS Pilani norms (<http://www.bitsadmission.com/phmain.aspx>)

Benefits:

- Research training in the cutting-edge areas such as Nanomaterials, Electrochemistry, renewable energy, photovoltaics and power electronics with exposure to state-of-the art research facilities.
 - Hostel or Married scholar accommodation can be provided subject to availability and as per the institute's rules and regulations.
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Application process: Please apply with **CV and Cover letter** (showing alignment and justification with the roles/responsibilities/requirements) via email to Prof. Surojit Pande (spande@pilani.bits-pilani.ac.in) for position 1 and to Prof. Ankur Bhattacharjee (a.bhattacharjee@hyderabad.bits-pilani.ac.in) for position 2 by **27 Apr 2024.**

Selection Process: Shortlisted candidates will be informed of the interview which will be conducted through online mode. Mere possession of minimum qualification does not guarantee an invitation to the interview. Candidates will be shortlisted based on their merit and as per the requirements of the project. Please note that only qualified and suitable candidates will be called for an interview