



Advt. No.: IITJMU/R&C/Advt/2021/42

Dated: 02/03/2022

### Advertisement for the Position of JRF

Applications are invited from the interested candidates for the post of **Junior Research Fellow (JRF)** to work on the project titled “**Natural Zeolite based efficient N<sub>2</sub>, CO<sub>2</sub> adsorption for cost-effective oxygen concentrator**” sanctioned by Science and Engineering Research Board (SERB), India.

No. of Positions	Position	Area of Specialization	Duration	Consolidated Salary per Month	Number of Positions
1	Junior Research Fellow	Knowledge and understanding of nanomaterial synthesis and characterization	01 year	Rs. 31000/- (Per month plus HRA as per GoI norms)	01

#### \*Minimum Qualification:

- Essential Qualification:
  - M. Tech in Chemical Engineering/ Material Engineering or equivalent with at least 75% marks in aggregate from a recognized technical institute/university as a full-time program.
  - Preference may be given to the candidate having appropriate knowledge of experimentation and scientific writing.
- Desired Qualification:
  1. Theoretical or experimental knowledge of zeolite/nanocomposites synthesis, characterization and oxygen concentrators along
- Upper age limit: 30 years

#### Brief Objective of Project:

The main objective of this proposal is to demonstrate an oxygen concentrator device with natural zeolites like clinoptilolite inherent with pressure/vacuum swing adsorption (PVSA)

technology capable of selectivity of nitrogen and  $\text{CO}_2$  from air and efficient adsorption of  $\text{O}_2$ .

This whole setup will comprise of all the indispensable components to provide pure  $\text{O}_2$ .

The following specific objectives will be addressed through this proposal:

- I. *A portable concentrator prototype design with ~90 vol % enriched oxygen stream in a continuous adsorption and desorption cycle (cycle time ~90 s).*
- II. *Flow rate and absorption efficiency validation with optimized process parameters using natural zeolites as an alternative absorbent.*

### **Job Description:**

The selected candidate is expected to work on the synthesis, characterization and optimization of oxygen concentrator unit

### **Application Process:**

Duly filled application form along with the requested details, scanned copies of certificates, other supporting documents, should be uploaded through the online portal (<https://apply.iitjammu.ac.in/#/home>) latest by March 15<sup>th</sup>, 2022. Please apply through the [contract/project staff/JRF/SRF] tab on the referred application portal. Candidates who are already employed should produce a relieving certificate from their employers if selected. The interview will be conducted for all shortlisted candidates.

### **Attention:**

1. The applicant will be responsible for the authenticity of the information, other documents, and photographs submitted.
2. Merely possessing the prescribed qualification does not ensure that the candidate would be called for an Interview. The candidates may be shortlisted based on merit and need for the project.
3. Shortlisted candidates will be informed by e-mail about the interview. So, the candidate must provide valid e-mail IDs, phone number information in their applications.
4. Shortlisted candidates must present themselves for the interview on the interview date with an updated CV and original and attested photocopies of mark sheets/certificates in support of their academic qualifications. Only shortlisted candidates will be called for the interview. The time of the interview will be informed to the shortlisted candidates by e-mail. The interview will be held by using the online platform.
5. Candidates who are already employed should produce a relieving certificate from their employers if selected.

6. The last date for receiving the duly filled in application is 15<sup>th</sup> March, 2022, through an online portal.
7. The date of interview will be informed to the shortlisted candidates through email.
8. The selected JRF may get an opportunity to peruse PhD at IIT Jammu as per institute norms.

**Address for Correspondence:**

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