భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Opening of Junior Research Fellow (JRF) position at IIT Hyderabad

Sustainable Metallurgy & Industrial TecHnologies (SMITH) Laboratory, Dept. of Materials Science & Metallurgical Engineering (MSME), IIT Hyderabad

invites applications for the position of Junior Research Fellow under an Industry-funded project on the

Characterization & Valorization of Silica & Lime Sludge of the Aluminum Fluoride Industry

Essential Qualifications:

First class in *B.E.,/B.Tech., in Metallurgy/Materials Science/Materials Engineering/Chemical/Environmental Engg with or without GATE score*

(or)

First class in *M.E.,/M.Tech.,/M.S., in Metallurgy/Materials Science/Materials Engineering/Chemical/Environmental* Engg.

Desirable Qualifications: 1. Hands-on training in high-temperature experimentation; 2. Sound knowledge in thermodynamics & kinetic analysis of metallurgical processes & materials characterization using various techniques; 3. Hands-on training on XRD, SEM-EDS, TG-DTA/DSC, FTIR, XRF, and OES ; 3. Hands-on training on FactSage/ThermoCalc software; 4. Gate score is preferable.

Fellowship and allowances: Rs. 30,000-37,000/- monthly + HRA. Stipend will be fixed based on the qualification. Accommodation inside the IITH campus is subject to availability at the time of joining. This position is initially for one year and can be extended to subsequent years based on satisfactory performance and fund availability.

If you meet the above criteria, please click Link to apply for the position

Application deadline : 7th August 2025
Tentative interview date : August 3rd week
Tentative date for joining : 1st Sep, 2025

A successful candidate may be eligible to do a PhD in the same research area at IITH

If any queries about the position, please contact ashokk@msme.iith.ac.in

See the next page for project details...

About the Project

The application of silica gel waste generated from the aluminium fluoride industry is limited because of ~10 wt.% of F ions. The present project aims to enhance the purity of silica to explore the scope for high end applications in sectors such as semiconductor, metal production, chemical, construction, etc. The project involves high temperature experimentation (melting, glass making, etc), and extensive materials characterization using various techniques such as TGA/DSC, XRD, SEM-EDS, spectrometers, TEM, etc. In addition to experimental and characterization work, a rigorous theoretical (thermodynamics & kinetics modeling) approach is needed to design the extraction and recovery processes using various tools.