

Advertisement for the Post of Junior Research Fellow (JRF)

Applications are invited from motivated, hardworking and eligible candidates for the post of Junior Research Fellow (JRF) to work in the following project at Institute of Technology, Nirma University, Ahmedabad.

1. Title of the Project: Plasma Pyrolysis of dry Municipal Solid Waste (MSW)/Refused Derived Fuel (RDF) for Syngas and Electricity Generation

Objectives of Project:

- i. To design and fabricate plasma pyrolyser.
- ii. To create facilities for dry MSW shredding, syngas cleaning, electricity generation and use of generated electricity for plasma pyrolyser.
- iii. To study the effect of various segregated feeds of dry MSW i.e. dry biomass, papers, plastics etc. on syngas quality and production rate.
- iv. To develop complete process for dry MSW and RDF plasma gasification.
- v. To study the effect of operating parameters like dry MSW/RDF feed rate, size of feed material, composition of feed, plasma reactor temperature and steam injection on the performance of pyrolyser.
- vi. To enhance the performance of plasma pyrolyser by optimizing various parameters.
- vii. To improve quality of syngas by after treatment.
- viii. To generate electricity from syngas effectively.
- ix. To carry out energy and mass balance of dry MSW/RDF plasma pyrolysis integrated system.

2. Sponsoring agency: GUJCOST, Gujarat

3. Duration of the project: 3 years

4. Project position and number: JRF, 1 number

5. Fellowship amount:

Category	Research Fellowship per month to NET/GATE candidates or M.E./M.Tech. with minimum two years of research experience	Research Fellowship per month to non NET/GATE candidates
JRF	Rs. 25,000/-+ HRA	Rs. 18,720
SRF	Rs. 28,000/-+ HRA	Rs. 21,840/-

Note: upon successful completion of 2 years as JRF, the JRF position will be recommended for SRF.

6. Eligibility criteria: M.E./M.Tech with at least 60% marks in Chemical/Mechanical Engineering (or equivalent). Candidates with GATE qualification and/or with experience in the field of Thermochemical Conversions will be preferred. The recruitment and fellowship will be as per rules of the institute and guidelines of the government

Candidates meeting the above criteria may send their detailed bio-data (personal details, educational qualifications, working/research experience if any etc.), by 20th January 2021 (last date), to the Principal Investigator via email: sanjay.patel@nirmauni.ac.in.

Short listed candidates will be called for online/offline interview.

The Junior Research Fellow (JRF) recruited under the project will be encouraged to register for Ph.D. under Faculty of Technology & Engineering, Nirma University subject to fulfilment of the requirements.