**Date: 25.07.2025**

**Advertisement for the Post of Research Associate-I**

**Department of Chemical Engineering**

Applications are invited for the position of research associate-I in a research project funded by theDST, GoI.

**Project title:** Development of Membraneless Flow Water Electrolyser to Produce Green Hydrogen by Surface Water Electrolysis

**Number of posts:** 01

**Duration:** Initially for a period of one year, with the possibility of extension for an additional year

**Salary:** As per DST norms: Rs. 58,000 (p.m.) for 1st year + HRA (20%)

**Qualification:**

The candidate must hold a Ph.D. with expertise in one of the following areas: Electrochemical Engineering, Electrochemistry, and Computational Fluid Dynamics with applications in Chemical Engineering. Candidates who have submitted their doctoral thesis and are awaiting defense can also apply. Or having three years of research, teaching, design and development experience after M.E./M.Tech. with at least one research paper in SCI journal. (as per DST norms)

**Application Procedure:**

Interested candidates are requested to send the following details in a single PDF file to mahesh@iiserb.ac.in by August 08, 2025.

1. Detailed CV
2. Contact details of minimum two referees

**Project description:**

Pure water is typically used to prepare aqueous electrolytes for water electrolysis. However, large-scale hydrogen production using water electrolysis requires a substantial quantity of high-quality water, which increases process costs due to the need for water treatment. Moreover, such demand places additional stress on drinking water resources, particularly in water scarce regions such as arid zones of India. To address these challenges, utilizing untreated natural water sources, such as seawater and surface water, for electrolysis offers an economical alternative. Unfortunately, conventional membrane-based electrolysers are not suitable for operation with impure water electrolytes. In this context, this project aims to develop a membraneless flow water electrolyser that leverages flow dynamics to avoid the crossover of H2 and O2 gases generated at the cathode and anode, respectively. Our goal is to design a scalable electrochemical device suitable for practical deployment rather than limiting the work to a laboratory scale prototype.

**Note:** Shortlisted candidates will be informed of the interview/presentation details. We will also try to notify all non-shortlisted candidates.

**Contact Details**

Dr. Mahesh Ijjada

Department of Chemical Engineering

IISER Bhopal, Bhopal 462066, M.P., India

Email: mahesh@iserb.ac.in