



OFFICE OF INDUSTRIAL CONSULTANCY AND SPONSORED RESEARCH
INDIAN INSTITUTE OF TECHNOLOGY MADRAS CHENNAI – 600 036

Advertisement No.: 200/2023

Dated:06/11/2023

Applications are invited for the temporary post of Project Officer/Project scientist – Low Temperature Plasma Multiphysics Simulation for Microwave Plasma Chemical Vapor Deposition (MPCVD) Group, India Center for Lab Grown Diamond (InCent – LGD), IIT Madras.

Co. PI: Prof. M. S. Ramachandra Rao, Department of Physics, IIT Madras

Duration: Initially for one year, later extendable based on performance period

No. of. Vacancy: 02

S. No	Post	Qualification and Experience	Pay Range
1	Project Officer/Senior Project officer/Project scientist/Senior Project Scientist	<p>Essential Qualifications:</p> <p>Candidate with PhD or master's with 4+ years in Plasma Physics or Chemical/ Aerospace/ Mechanical/ Electronics or Electrical Engineering</p> <p>Desirable Qualifications:</p> <p>Hands-on experience in Computational Plasma Physics, numerical methods and code development or numerical simulation tools (COMSOL, ANSYS, etc.,)</p> <p>Hands-On experimental knowledge of plasma characterization technique will be an added advantage.</p>	Consolidated pay ₹ 1,00,000 (minimum) per month all inclusive; actual salary will be commensurate with qualifications, experience, and expertise

Job Description:

- Project Officer/Senior Project officer/Project scientist/Senior Project Scientist will be responsible for conducting detailed low temperature plasma multiphysics simulations, with a strong emphasis on;
 - Electromagnetic wave interaction with Plasma.
 - Kinetic or Fluid model approach of defining plasma.
 - Chemical gas phase reactions, and heat transfer.
- The applicant will develop a numerical model of a plasma reactor for the chemical vapor deposition (CVD) of diamond.
- Validation and verification of the code / numerical model with experimental results.

Key Responsibilities:

- Conduct multiphysics simulations to model low-temperature plasma in the MPCVD chamber.
- Investigate chemical gas phase reactions involved in diamond film growth.
- Collaborate with cross-functional teams to optimize process parameters.
- Analyze simulation results and provide actionable insights to enhance diamond film growth.
- Improvement in the microwave plasma chamber design related to plasma physics, heat transfer, and fluid dynamics.

Preferred Experience:

- Strong knowledge of Multiphysics simulation numerical code or any commercially available software (e.g., COMSOL, ANSYS, etc.) will be preferable.
- Strong knowledge of Electromagnetics/Microwave and Vacuum Chamber
- Capable of handling various Plasma characterization tools

The last date for submission of an online application is 15.11.2023.

General Instructions to the candidates

1. The position is on a contract basis.
2. The completion of the contract period will not confer any right for further extension, regularization, or permanency at the Institute.
3. Candidates should apply online only on the website <https://icandsr.iitm.ac.in/recruitment/> - **(Please check the advertisement number Advt. 200/2023 displayed and apply for the relevant position).**
4. Separate application has to be filled for each post.
5. The system will accept a single application only with the registered login ID (email) for an advertisement, hence the candidate is requested to select the multiple positions (In case, he/she wishes to apply for more than one position) before the submission of application.
6. The application cannot be edited or reverted once it is submitted.
7. Candidates should not attempt to apply twice for the same post. If multiple applications are received from a candidate for the same position, his/her candidature is liable to be rejected.
8. Candidates should follow the prescribed procedure for the submission of an online application.
9. Candidates are advised to fill in their correct and active e-mail addresses in the online application, as all correspondence will be made by the Institute through e-mail only.
10. The candidates applying for any post should ensure that they fulfil all the eligibility conditions for the post. Their admission to any stage of the selection process will be purely provisional, subject to confirmation that they satisfy the prescribed eligibility conditions. The mere issue of a registration certificate/call letter to the candidate will not imply that their candidature has been found eligible.

11. After successful online submission of the application, a printout of the application form must be obtained and submitted when called for a test. It will be required at the time of document verification/test/interview. A hard copy of the application is NOT to be sent to the Institute.
12. Candidates must be citizens of India. Persons who have migrated from Pakistan with the intention of permanently settling in India or subjects of Nepal are also eligible, but in their case, a certificate of eligibility from the Government of India will be necessary for appointment. Such candidates should apply to the Government of India in the Ministry of Home Affairs for the necessary certificate and furnish satisfactory proof of having so applied.
13. The prescribed qualifications are minimum, and unless specified, they are required for consideration for the post, even if a higher qualification has been acquired and the mere fact that a candidate possesses the same will not entitle them to be called for an interview.
14. Relevant experience gained after the minimum qualifying degree will only be considered. Minimum requirements of qualifications and experience can be relaxed regarding exceptionally outstanding candidates.
15. The experience required is relax able at the discretion of the Institute in the case of candidates belonging to the Scheduled Caste / Scheduled Tribe if, at any stage of selection, the competent authority is of the opinion that a sufficient number of candidates from these communities possessing the requisite experience are not likely to be available to fill up the vacancy reserved for them.
16. The Institute reserves the right to restrict the number of candidates for written/skill test/interviews to a reasonable limit on the basis of qualifications, level, and relevance of experience higher than the minimum prescribed in the advertisement and other academic achievements. The Institute also reserves the right to reject any or all the applications without assigning any reasons therefore.
17. Calling a candidate for a test/interview merely indicates that it is felt that they with others may be suitable for the post and conveys no assurance whatsoever that they will be recommended or selected or their conditions specified in the application will be accepted.
18. Candidates will be short-listed for Tests/Interview based on their online applications information. They must ensure that such information is true. If at any subsequent stage or at the time of the Test/Interview any information given by them or any claim made by them in their online applications is found to be false, their candidature will be liable to be rejected.
19. The Institute shall verify the antecedents or documents submitted by a candidate at any time at the time of appointment or during the tenure of the service. If it is detected that the documents submitted by the candidates are fake or the candidate has clandestine antecedents/background and has suppressed the said information, then his services shall be liable to be terminated.

20. In case of any inadvertent mistake in the selection process, which may be detected at any stage even after the issue of the appointment letter, the Institute reserves the right to modify/ withdraw/ cancel any communication made to the candidates.
21. Applicants working on any **of the projects at IIT Madras** must apply through the proper channel; otherwise, they will be required to produce No-Objection Certificate at the time of document verification/Test/Interview. Candidates without NOC will not be permitted to appear for Tests/Interviews.
22. Candidates may send testimonials from persons intimately acquainted with their work and character. If the applicant is in employment, they should submit testimonials from the most recent employer or immediate superior as a referee.
23. The Institute has a right to decide the mode of screening and testing the applicant for shortlisting and selection. The Institute solely reserves the right not to fill any advertised position without assigning any reason.
24. Only shortlisted applicants will be contacted.
25. No correspondence whatsoever will be entertained from candidates regarding conduct and result of test/interview and reasons for not being called for interview. Canvassing in any form will be a disqualification.
26. The crucial date for determining the eligibility criteria for all candidates in every respect shall be the prescribed closing date for the submission of the online application.
27. The Institute strives to have a workforce that reflects gender balance, and women candidates are encouraged to apply.
28. Any corrigendum/clarifications on this advertisement, if necessary, shall be uploaded on the website, and no separate communication will be sent for this purpose.
29. If there is any issue with submitting the application, please e-mail: recruitment@imail.iitm.ac.in / icsrrecruitment@iitm.ac.in or **Contact: 044- 2257 9796** on all working days from **9.00 AM to 05.30 PM (Monday to Friday – except National Holidays)**. (Please note that only technical issues will be accepted –No interim correspondence regarding the selection process will be considered).
30. **Instructions to apply online:-**Eligible applicants would require to register and apply online through <https://icandsr.iitm.ac.in/recruitment/> and submit the application.

Sd/-

Senior Manager –HR

Office of IC&SR IIT Madras