

PostDoc
California Institute of Technology

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Posted Nov. 1, 2024, set to expire Mar. 3, 2025

Job Title	PostDoc
Department	Applied Physics and Materials Science http://www.bellanplasmagroup.caltech.edu/
Institution	California Institute of Technology Pasadena, California
Date Posted	Nov. 1, 2024
Application Deadline	open until filled
Position Start Date	estimated January 2025
Job Categories	Post-Doc
Academic Field(s)	Physics - Atomic/Molecular/Optical/Plasma
Apply By Email	pbellan@caltech.edu
Job Description	

This position is to participate in a NASA-supported project to study the differences between heterogeneous and homogeneous nucleation of ice. These differences are relevant to astrophysical studies of ice dust that occur in situations such as protoplanetary disks and interstellar space. The activities will involve work at Caltech on a project supervised by Prof. Paul Bellan and also collaborating on a project at JPL supervised by Dr. Murthy Gudipati. The Caltech project uses a dusty plasma with cooled electrodes where water vapor is injected and ice grains form as a consequence of homogeneous nucleation. The JPL project has a cryogenic linear ion trap where ice grains form about a non-ice nucleus so the nucleation is heterogeneous. The Caltech experiment is operating and the cryogenic linear ion trap is under construction.

Desired competence:

- Experience: diagnostics of low temperature, weakly ionized plasmas
- Knowledge: optics, imaging, plasma physics, numerical techniques for data analysis, electronics,

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- vacuum techniques, cryogenics, experiment design
- General: Excellent oral and written communication skills

EEO/AA Policy

Caltech is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin, disability status, protected veteran status, or any other characteristic protected by law.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact Professor Paul Bellan
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California Institute of Technology
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