

Postdoctoral Position Announcement at the University of Illinois at Urbana-Champaign
Faculty Adviser: Prof. David Ruzic
Director, Center for Plasma Material Interactions
Department of Nuclear, Plasma and Radiological Engineering

The Center for Plasma Material interactions (CPMI) at the University of Illinois at Urbana Champaign is looking to fill in a position at the post-doctoral research associate level, who will work on research areas relevant to plasma material interactions for several applications. The Center for Plasma-Material Interactions currently has 12 graduate students, and over 20 undergraduate researchers. The primary emphasis is experimental and computational study of plasma relating to the manufacturing of semiconductor devices (plasma-based lithography, plasma etching, PVD sputtering, PECVD thin-films) and the edge-region of future fusion energy devices (lithium walls, lithium technology, edge localized modes, mixed material sputtering at elevated temperature). In particular we are looking for expertise in the field of **atmospheric pressure plasmas for material modification/coatings**. The hired post-doc is expected to closely work with Prof. David Ruzic in managing research activities in the lab and conduct experiments while assisting students with research.

Primary responsibilities include, but are not limited to:

- Work with Prof. David Ruzic in managing research activities
- Advice and assist students with research
- Conduct original research on CPMI projects
- Work with industrial research partners and collaborations on projects
- Identify and grow new research directions
- Monitor proposal solicitations and write grant proposals
- Meeting deadlines, milestones and write reports for funding agencies
- Report results in peer-reviewed publications and conferences

The postdoctoral researcher's development at CPMI will also be enhanced through a program of structured mentoring activities. The goal of this program is to provide the skills, knowledge and experience to prepare the successful candidate to excel in his/her career path. To accomplish this goal, the mentoring plan includes career planning assistance, and opportunities to learn a number of career skills such as writing grant proposals, teaching students, writing articles for publication and communication skills.

The successful candidate for this position is expected to have earned a Ph.D. in plasma engineering, nuclear engineering, electrical engineering, mechanical engineering, material science, physics, or a related area before the date of joining. Research experiences in any or all of the following fields are a plus: • Atmospheric Pressure Plasmas • Microwave Plasma Discharges • Microwave Systems Design/Modelling • Plasma Surface Modification • Plasma Diagnostics (QCM, ESA, OES, Laser based diagnostics) • Plasma Modeling • Plasma Processing Applications • Plasma Synthesis of Materials • Material Characterization Tools (SEM, TEM, AFM, Profilometer, Ellipsometer, XPS, AES, TOFSIMS etc.)

The post-doctoral research associate will have an opportunity to be involved in all of the above areas and will help grow the group within these and related areas. To apply for this position please send cover letter, CV/resume, and contact information for 3 references to Dr. Sabrina Hammouti, sabrinah@illinois.edu

Salary: \$48,000 (or competitive and commensurate with experience)

Start date: May 2017 or near that time

Expected duration of the position: 1-2 years

More information about the Center for Plasma Material Interactions can be obtained from <http://cpmi.illinois.edu> and for University of Illinois information, please visit <http://illinois.edu>.

The University of Illinois conducts criminal background checks on all job candidates upon acceptance of a contingent offer. Illinois is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, sexual orientation, gender identity, age, status as a protected veteran, or status as a qualified individual with a disability. Illinois welcomes individuals with diverse backgrounds, experiences, and ideas who embrace and value diversity and inclusivity. (www.inclusiveillinois.illinois.edu).