Opening: Postdoctoral Associate in Silicon Module Degradation

The DEfECT lab at Arizona State University has an opening for an outstanding Postdoctoral Associate in silicon solar cell research. Within the framework of several projects the position focuses on developing the fundamental physical understanding that governs the kinetics of silicon module degradation. We seek to understand how different stressors affect the kinetics of water and sodium incorporation, their correlation to the various degradation pathways and ultimately the impact they have on module performance.

The successful applicant is expected to lead the effort in module design, fabrication, and advanced characterization. He or she will be responsible for the design and implementation of characterization techniques to track and evaluate the diffusion of alkali and transition metals through the various layers that make the module stack. Previous experience with Potential Induced Degradation (PID) and advanced characterization techniques, e.g. Secondary Ion Mass Spectroscopy, X-ray topography and diffraction are highly desirable.

The postdoctoral associate will have a leadership role in these projects and as such will be responsible for communicating with partner institutes, leading meetings, writing quarterly reports (in addition to scientific manuscripts), and ensuring that the projects meet their milestones. Technology commercialization and intellectual property creation is a central focus of the group, and the postdoc will have the opportunity to participate in intellectual property creation and/or technology transfer. All candidates must have the ability to conduct self-directed research, mentor graduate students, and work collaboratively with academic team members in related fields. Candidates should be creative and productive, as evidenced by unique scholarly or other technical contributions to research projects.

Qualifications:
All applicants must have a PhD in physics, chemistry or a relevant engineering discipline. The candidate should have a solid background in silicon solar cells and/or module characterization. Experience with statistical analysis and Python coding is a plus. We are looking for a self-motivated, committed and innovative researcher to join a fast-paced group that strives to redefine materials’ design. Excellent writing and presentation skills are a must.

The position is expected to start in Spring 2018. He or she will be offered a competitive salary and the opportunity to travel regularly to conferences. The appointment is for two years with the possibility of a 2-year extension pending satisfactory performance and the continued availability of funds.

Interested applicants should submit a cover letter and a complete CV including three references to Prof. Mariana Bertoni (bertoni@asu.edu).