Open PhD Position in photoelectrochemical energy conversion devices

The Laboratory for Molecular Engineering of Optoelectronic Nanomaterials (http://limno.epfl.ch/) in the Institute of Chemical Sciences and Engineering at the Ecole Polytechnique Fédérale de Lausanne has an open PhD position for a highly motivated individual who is interested in applying their basic training in chemistry/chemical engineering/materials science to a project developing devices and new characterization tools for photoelectrochemical energy conversion.

Starting date: September 2016 or before.

Position: The overall goal of the research is to develop economically viable, efficient technology for direct solar-to-fuel energy conversion. The successful candidate is a highly motivated individual who will be expected to work at the forefront of the photoelectrochemical device field. The PhD thesis work will include (but is not limited to):

- Fabrication of thin-film semiconductor devices (e.g. photoelectrochemical electrodes and cells) by solution processing techniques (e.g. spin coating, doctor blading, spray etc.)
- Evaluation of optoelectronic properties device performance under operational conditions.
- Development of advanced photoelectrochemical characterization techniques.
- Interface engineering with buffer layers and/or co-catalysts

Teaching assistant duties (20%) are also a part of the PhD program. The initial appointment will be for one year and continuation is subject to a successful candidacy exam. A maximum of 4 years may be taken to finish a PhD thesis. The stipend is approximately 51’000 CHF/year.

Requirements: A Master's degree (or equivalent) in Chemistry, Chemical Engineering, or Materials Science/Engineering with excellent records is generally required. Basic notions on (photo)electrochemistry and an understanding of semiconductor device operation is an advantage. Knowledge and practical experience with semiconductor preparation and/or thin-film device fabrication is also preferred. English proficiency is required (the doctoral program is fully in English). Applicants whose first language is not English are recommended to provide results of the TOEFL and/or GRE tests, or other measure(s) of proficiency. The candidate should be enthusiastic about working in the atmosphere of a young and dynamic research team and will also be encouraged to pursue his/her project(s) independently.

Application: Interested candidates should include a curriculum vitae, copies of transcripts (list of courses taken and marks received), and a statement of motivation as attachments in an email sent to the below address. Incomplete applications cannot be considered. This position requires acceptance in the Doctoral Program of Chemistry and Chemical Engineering, for which candidates are encouraged to file an online application simultaneously at: http://phd.epfl.ch/EDCH. Candidates who will be further considered will be invited for on-site interviews (paid by EPFL, available to international applicants as well).

The school: The Ecole Polytechnique Fédérale de Lausanne is in the heart of Europe and employs students, professors and staff from over 120 nationalities. The Times Higher Education World University rankings recently rated EPFL Number 1 in their list of the top 150 universities under 50 years old (https://goo.gl/oQxtV5). More information about EPFL and the Laboratory for Molecular Engineering of Optoelectronic Nanomaterials can be found at: http://www.epfl.ch/ and http://limno.epfl.ch.

To submit applications or request further information please contact:
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