



<i>Project Title:</i>	<i>Development of micro-solar cell growth by electrodeposition</i>
<i>Project Short description</i>	<p>In this project the student will prepare micrometer-sized solar cells for concentrator solar cell application. The student will use pre-structured substrates fabricated in the INL state-of-the art clean room and will develop suitable processes for the selective deposition of CuInSe₂ using electrodeposition and subsequent post-annealing. The objective is to prepare micro-dots of CuInSe₂ to be used as micro-cells under concentrated sunlight. The student will apply techniques such as scanning electron microscopy, atomic force microscopy, Raman scattering and x-ray diffraction for characterization of the prepared samples.</p> <p>The international and multi-discipline research environment at INL allows young professionals to be exposed to very different cultures and scientific topics which is a very valuable experience at this point of their studies.</p> <p>About the hosting group (LaNaSC): The Laboratory for Nanostructured Solar Cells (LaNaSC) is directed to the development of nano- and micro-structures of chalcopyrite-type semiconductors (Cu(In,Ga)Se₂) for application in photovoltaic energy conversion. The group currently consists of the principal investigator and 4 researchers (3 post-docs and 1 PhD student) of 5 different nationalities.</p>
<i>Expected Start/end date</i>	As soon as possible
<i>Required degree and Background knowledge of students, minimum gradepoint average, etc...</i>	<p>Engineering, chemistry, physics or similar areas degree. Experience in solar cells, semiconductors, clean room processing, will be considered but it is not essential.</p>

Supervisor at INL

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