DIEGO SOLIS IBARRA

Assistant Professor of Materials Chemistry - Inorganic Chemistry

UNAM (Mexico)

Thursday, April 30th

10:30 AM – 11:30 AM

Steele 006

” From Limitations to Opportunities: Chemical Design of 2D Perovskites for Stable Photovoltaics and Optoelectronics “

Abstract: Three-dimensional (3D) lead halide perovskites have recently emerged as one of the most promising families of photovoltaic and optoelectronic materials. Generally, 3D lead-halide perovskites have shown superb photophysical properties and amenable syntheses, leading to their widespread use in photovoltaic and many different optoelectronic applications. However, the toxicity of lead and the lack of stability of these materials towards light and moisture remain the main obstacles to big-scale implementation.

This talk will discuss our group efforts to address these issues through chemical design. In particular, we will explore new families of hybrid and inorganic two-dimensional (2D) perovskites with remarkable stability and promising properties for photovoltaics and optoelectronics.

Bio: Diego received his bachelor’s (with honors, ‘08) and Ph.D. (‘12) from UNAM. During this time, he spent a semester as an exchange student at UC Santa Barbara and one year as a research intern at MIT. He then moved to Stanford University as a postdoctoral researcher.

In 2015 he returned to UNAM as an assistant professor at the Instituto de Investigaciones en Materiales, where he is now a Full Professor and serves as the director of the Institute. Diego is a member of a few advisory boards, including ACS’ Chemistry of Materials, and was selected as one of ACS’ Chemical and Engineering News Talented 12 (class of 2021).

The Solis-Ibarra group works at the intersection of chemistry, physics, and materials science, employing a diverse range of techniques in organic and inorganic chemical synthesis to craft materials tailored for emerging applications such as photovoltaics and optoelectronics.