# ACS-GHS June 2024 Seminar
# Dr. Raúl Hernández Sánchez

**Wednesday, June 12, 2024**
6:30 - 7:30 pm
via Zoom

Register to receive the meeting link at https://acsghs.wildapricot.org/event-5673580

**Non-Covalent Interactions as Design Principle for Novel Materials**

Macrocyclic arene compounds have played a fundamental role in the development of supramolecular chemistry. Research on these systems have laid the foundations to explore and establish non-covalent interactions, e.g., hydrogen bonding, π···π stacking, C–H···π interactions. My research group has taken the basic principles of macrocyclic arenes to design architectures enforcing metal–metal interactions towards the activation of small molecules, scaffolds capable of tubularly contorting aromatic systems, and frameworks able to bind anionic species for environmental remediation, all while retaining the intrinsic non-covalent interaction properties of these systems. In this seminar, I will abound in our progress in each of these areas constantly crossing the boundaries between organic-inorganic synthesis and materials chemistry.

**Biography:** Raúl joined the Chemistry faculty at Rice in the summer of 2022 and is the Norman Hackerman Welch Young Investigator Junior Chair. Prior to joining Rice, Raúl was an Assistant Professor from 2018 to 2022 in the Department of Chemistry at the University of Pittsburgh. He was born in Chihuahua, México. During his undergraduate years Raúl worked intermittently with Prof. Sossina Haile (Caltech, summers of 2007-09, and spring of 2008), Prof. Beate Klösgen (Southern University of Denmark, spring of 2009), and with Prof. Jesús Angel Valencia (ITESM Campus Monterrey, undergraduate thesis, B.Sc. in Chemistry 2010). He then moved to Cambridge, Massachusetts to pursue a Ph.D. in Chemistry at Harvard from 2010 to 2015 under the mentorship of Prof. Ted Betley. Later, he started a Columbia Nano Initiative Postdoctoral Fellowship with Prof. Colin Nuckolls (Columbia University). At Rice University, his group's research interests lie at the interface between synthetic organic and inorganic chemistry to create novel functional materials and catalysts capable of activating small molecules at polynuclear reaction sites, the creation of novel contorted aromatics, and the design of anion receptors for the removal of toxic chemicals from our environment.

*Dr. Raúl Hernández Sánchez was recognized as one of C&EN's Talented 12 - Class of 2023*