

T_CSUH Special Seminar

Texas Center for Superconductivity at the University of Houston

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Host: Prof. Ognjen Miljanic

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Room 102, University of Houston Science Center
12:00 noon – 1:00 p.m.

Metal-Organic Non-Trivial Structures: Chemistry and Function

ABSTRACT

Ever since (1867) Kelvin postulated atoms to be knots, knotted systems have stimulated the imagination of scientists from various fields, mathematicians and natural scientists alike. Recently, the study of knots and entanglements (topology) has burgeoned, spurred by the desire of researchers to create new structures and to understand the functional roles that molecular knots and links play in materials and biological systems. Despite considerable advances in the field of molecular topology, there are still many challenges in the application of molecular links and knots, especially in the context of materials science and medicine.

The goal of our research program in this area extends beyond the basic preparation of topologically non-trivial metal-organic structures to a better understanding of their chemical and physical properties, with the aim of (i) employing them in real applications (materials and medicine), and (ii) incorporating their unique features within adaptive materials.

BIO

Ali Trabolsi was born and raised in Lebanon. He received his BSc degree in chemistry from the Lebanese University in Beirut. In 2002, Ali moved to Strasbourg, France, where he obtained his master degree (2003) in analytical chemistry and his PhD (2006) under the supervision of Dr. Anne-Marie Albrecht-Gary. Ali then joined the group of Professor Fraser Stoddart at UCLA as a postdoctoral scholar where he spent one year before making the move with the Stoddart group to the Midwest, at Northwestern University, Evanston, IL. At the end of 2009, Ali joined KAUST in Saudi Arabia as a research scientist in the advanced membrane and porous materials center where he stayed two years. August 2011, Ali started his independent career as an Assistant Professor at New York University Abu Dhabi. At NYUAD, Ali's research interests are in designing Supramolecular Multifunctional systems (Molecular switches, delivery systems) that can have applications in different fields. The Trabolsi group is also interested in advancing the understanding of nontrivial structures. Ali has co-authored more than 50 papers to date.

