



Dr. Tobin J. Marks

*Professor, Department of Chemistry and
the Materials Research Center*

Northwestern University

Friday, November 7, 2014

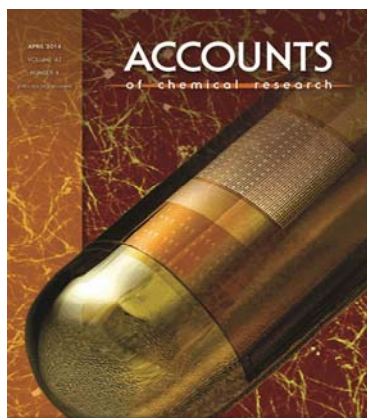
BB 3.04.18

3:00 PM

New Materials Strategies for Hybrid Electronic Circuitry

This lecture focuses on the challenging design, realization, and implementation of new materials for creating unconventional electronic circuitry. Fabrication methodologies to achieve these goals include high-throughput, large-area, high-resolution printing techniques. Materials design topics to be discussed include: 1) Rationally designed high-mobility p- and n-type organic semiconductors for printed organic CMOS, 2) Polycrystalline and amorphous oxide semiconductors for transparent and mechanically flexible electronics,

3) Self-assembled and printable high- k nanodielectrics enabling ultra-large capacitance, low leakage, high breakdown fields, minimal trapped interfacial charge, and device radiation hardness. 4) Combining these materials sets to fabricate a variety of high-performance thin-film transistor-based circuitries. 5) The relevance of these advances for unconventional photovoltaics.



Department Contact Information

Dr. Miguel Jose-Yacamán Miguel.yacamán@utsa.edu

Christella Robledo Christella.Robledo@utsa.edu

<http://physics.utsa.edu>