

Northwestern MRSEC-IRG2 Workshop
**New Opportunities in Oxides and
Chalcogenides**

Oct. 6, 2014
Ryan Hall, Room 4003



8:00 – Continental Breakfast buffet

8:20 – Bob Chang – IRG2 Leader, Mark Hersam – MRSEC Director,
Matthew Grayson – IRG2 Co-Leader, Northwestern University

Welcome address

8:30 – David Paine, Brown University

A new approach to high performance amorphous indium zinc oxide devices

9:10 – Darrell Schlom, Cornell University

**Thin-Film Alchemy: Using Strain to Dimensionality to Unleash the Hidden
Properties of Crystalline Oxides**

9:50 – Julia Medvedeva, Missouri University of Science and Technology

**Long-range structural correlations in amorphous ternary In-based oxides from
ab-initio molecular dynamics**

10:30 – Coffee break & posters

11:00 – Tony Facchetti, Polyera

Solution-processed metal oxide transistors and circuits

11:40 – Chang-Beom Eom, University of Wisconsin, Madison

Multifunctional Oxide Heterostructures by Design

12:20 – Lunch & discussion & posters

2:00 – Mercuri Kanatzidis, Northwestern University

**Crystalline and amorphous chalcogenides: structural complexity,
interconversions, optical and phase change properties**

2:40 – Jeffrey Elam, Argonne Nat'l Labs

**Atomic layer deposition of metal sulfide thin films for applications in
photovoltaics and energy storage**

3:20 – Coffee break & posters

3:50 – Miguel Yacaman, U. Texas, San Antonio

**Deep hydrodesulphurization of naftas: A new challenge for chalcogenides
catalysts**

4:30 - Janet Tate, Oregon State University

High absorbance chalcogenides for PV applications

5:10 - End of session

6:30 – Dinner for guests at Davis Street Fishmarket, 501 Davis St, Evanston