



2018 APS/CNM Users Meeting Addenda and Errata

Mon., May 7 Speed Science Slam S3: *withdrawn* Andre Al Haddad (Argonne National Laboratory)

APS Plenary: *speaker abstract added*

New Opportunities for Materials Science with Coherent X-ray Diffraction Imaging

Stephan Hruszkewycz

Argonne National Laboratory, 9700 S. Cass Ave., Argonne, IL 60439

Recent progress in 3D coherent x-ray diffraction imaging methods can enable high resolution structural imaging of nano-structured crystalline materials. In this talk, I discuss developments in Bragg coherent diffraction imaging (BCDI) that aim to broaden the envelope of materials science problems that can be addressed with the technique. Two specific topics will be discussed: 1) BCDI at high x-ray energies that provide dramatic penetrating ability, and 2) BCDI under in-situ conditions that compromise sample stability. Both approaches will be discussed in the context of materials science problems that can be addressed at next-generation synchrotron storage rings including the APS-U.

Tue., May 8 Workshop 3: *speaker abstract added*

Hybrid Superconductor/Semiconductor Systems for Topological Quantum Computing with Majorana Zero Modes

Michael Manfra

Purdue University, 610 Purdue Mall, West Lafayette, IN 4790

Quantum computation requires initialization, manipulation, and readout of information that is stored in quantum-mechanical two-level systems – the qubits. A principal challenge to all quantum technologies is loss of information due to decoherence. In this talk, I will describe our efforts to build semiconductor and semiconductor-superconductor hybrid systems that may form the basis for future quantum technologies that are robust against decoherence. We focus on hybrid high-spin-orbit-coupling (SOC) semiconductor-superconductor interfaces that are believed to support Majorana zero modes that may be topologically protected against decoherence. The interplay of material properties, physics of device operation, and qubit function will be discussed.

Workshop 5: *speaker change* Stephen Streiffer will give the opening remarks

Poster Session: *updated abstracts*

A-8 Sequential Phase Transformation of PCN-250 and its Impact on Methane Storage (Qi Wang)
see at <https://bit.ly/2JSOIJ7>

C-1 Triplet-Triplet Annihilation Based Photon Upconversion Using All-organic Polycyclic Aromatic Donor and Acceptor Chromophores (A. Jean-Luc Ayitou) see at <https://bit.ly/2rrtJG3>

Wed., May 9 Workshop 1: *new speaker at 9:30 am slot*

High-pressure Spectroscopy at the APS-U POLAR Beamline

Gilberto Fabbris (Argonne National Laboratory)

Thu., May 10 Workshop 5: *talk title added*

Advances in Extraterrestrial Microparticle Handling Techniques in Preparation for Hayabusa2 and OSIRIS-REx Return Samples

Christopher Snead (NASA)