APS March Meeting 2021 – 2DCC Presentations

Note: The following 17 have acknowledged the 2DCC grant number in their abstract

Monday March 15

Session C56: Devices from 2D Materials: Function, Fabrication and Characterization - I

Abstract: C56.00012 : Electric field effect studies of ferroelectric 2D crystals of $\alpha$-In$_2$Se$_3$ and MBE grown fields of $\gamma$-InSe*
5:36 PM–5:48 PM
  Author: Justin Rodriguez (Penn State University)
  2DCC Local User – Thin Films

Tuesday March 16

Session H71: Poster Session I (2:00pm - 4:00pm)
2:00 PM, Tuesday, March 16, 2021
Abstract: H71.00324 : Ultrafast optical measurements of elastic properties of 2H-MoSe$_2$*
  Author: Brian Daly (Vassar College)
  2DCC External User – Thin Films and Bulk Crystal Growth

Session J36: Spin-Orbitronics in Semiconductor, Topological, and 2D Materials I
Abstract: J36.00009 : Spin and charge interconversion probed via spin torque ferromagnetic resonance and spin pumping in the archetypal Dirac semimetal Cd$_3$As$_2$*
5:00 PM–5:12 PM
  Author: Wilson Yanez (Penn State University)
  2DCC In-house Research – Thin Films

Session J52: Magnetic Topological Materials 2:Mn-Bi-Te
Abstract: J52.00014 : Experimental evidence of the field-induced Weyl state in Mn(Bi$_{1-x}$Sb$_x$)$_2$Te$_4$*
5:36 PM–5:48 PM  Live
  Author: Seng Huat Lee (Penn State University)
  2DCC In-house Research – Bulk Crystal Growth
Session L36: Spin-Orbitronics in Semiconductor, Topological, and 2D Materials II

Abstract: L36.00003 : Spin Nernst effect in a topological insulator Bi$_2$Se$_3$*
8:24 AM–8:36 AM  Live
Author: Rakshit Jain (Cornell University)
2DCC External User – Thin Films

Session L52: Magnetic Topological Materials 1: Mn-Bi-Te

Abstract: L52.00004 : Ferromagnetism and anomalous Hall effect in MnBi$_6$Te$_{10}$*
8:36 AM–8:48 AM  Live
Author: Yanglin Zhu (Penn State University)
2DCC In-house Research – Bulk Crystal Growth

Session M52: Magnetic Topological Materials 3: Doped Bi$_2$Te$_3$

Abstract: M52.00008 : Disentangling the magnetic proximity effect in topological insulators with Mg(Al,Fe)$_2$O$_4$/Bi$_2$Se$_3$ thin films*
1:18 PM–1:30 PM  Live
Author: Lauren Riddiford (Applied Physics, Stanford University)
2DCC External User – Thin Films

Abstract: M52.00011 : Scanning SQUID Microscopy of the Quantum Anomalous Hall Effect*
1:54 PM–2:06 PM
Author: George Ferguson (Cornell University)
2DCC External User – Thin Films

Session P36: Novel Topological and Magnetic Materials

Abstract: P36.00002 : Phononic control of magnetism in a topological insulator*
3:12 PM–3:24 PM  Live
Author: Hari Padmanabhan (Penn State University)
2DCC Local User – Bulk Crystal Growth

Session P44: Mott Physics

Abstract: P44.00005 : Emergence of Competing Stripe Phase near the Mott Transition in Ti-doped Bilayer Calcium Ruthenates*
3:48 PM–4:00 PM  Live
Author: Ashish Ganshettiwar (University of Texas at Austin)
2DCC External User – Bulk Crystal Growth
Session R36: 2D Magnets

Abstract: R36.00002 : Angle-resolved photoemission spectroscopy and spin dynamics measurements of MBE-grown ferromagnetic CrTe$_{1.0}$ thin films*
8:12 AM–8:24 AM Live
   Author: Yongxi Ou (Penn State University)
   2DCC In-house Research – Thin Films

Session R42: Superconductivity in 2D Systems

Abstract: R42.00007 : Atlas of air-stable 2D metals: gapping conditions, alloying rules, and superconductivity*
9:12 AM–9:24 AM Live
   Author: Yuanxi Wang (Penn State University)
   2DCC In-house Research – Theory and Simulation

Session S52: Magnetic Topological Materials 6: Hall

Abstract: S52.00001 : Scaling behavior of the quantum phase transition from a quantum anomalous Hall insulator to an axion insulator.*
11:30 AM–11:42 AM Live
   Author: Xinyu Wu (International Center for Quantum Materials, Peking University)
   2DCC In-house Research/External Collaboration – Thin Films

Session S44: Metal-Insulator Phase Transition II

Abstract: S44.00007 : Spectral study of the interplay among lattice, spin, and electron degrees of freedom in a strong correlated polar metal*
12:42 PM–12:54 PM Live
   Author: Huaiyu Wang (Penn State University)
   2DCC Local User – Bulk Crystal Growth

Session U71: Poster Session III (2:00pm - 4:00pm)
2:00 PM, Thursday, March 18, 2021
Abstract: U71.00098 : Shape-driven conductivity in graphene*
   Author: Benjamin Katz (Penn State University)
   2DCC In-house Research – Theory and Simulation
Session X51: Dirac and Weyl Semimetals: Materials and Modeling--Thin Films and Nanostructures

Abstract: X51.00009 : Quantum transport in Dirac semimetal Cd$_3$As$_2$ thin films*
9:36 AM–9:48 AM
Author: Run Xiao (Penn State University)
2DCC In-house Research – Thin Films

Session Y40: Disordered and Novel Low Dimensional Magnetic Materials

Abstract: Y40.00006 : Quenching of magnetic moments due to defect states hybridization in V doped WS$_2$*
12:30 PM–12:42 PM   Live
Author: Boyang Zheng (Penn State University)
2DCC In-house Research – Theory and Simulation