ARO - ARL MATERIALS WORKSHOP

Wednesday, March 6

Notre Dame Conference Center at McKenna Hall

8:00 – 8:15 a.m.	**Light Refreshments, Meet and Greet**
8:15 – 8:30 a.m.	**Welcome & Introduction:** Richard Billo Associate Vice President for Research; Professor, Computer Science and Engineering
8:30 – 8:50 a.m.	**Notre Dame Research Overview:** Robert Bernhard Vice President for Research; Professor, Aerospace and Mechanical Engineering
8:50 – 9:30 a.m.	**ARO Overview:** Stephen Lee & Michael Bakas
9:30 – 10:10 a.m.	**ARL Overview:** Mark Tschopp, Fredrik Fatemi, Adam Rawlett, Jennifer Ciezak-Jenkins
10:10 - 10:20 a.m.	**Break (Followed by Three Concurrent Sessions)**

10:20 a.m. - 12:00 p.m. ELECTRONIC & QUANTUM MATERIALS

Moderator: Alan Seabaugh - Frank M. Freimann Professor, Electrical Engineering

Semiconductor-Based Quantum Network
Chris Hinkle - Bettex Collegiate Chair and Associate Professor, Electrical Engineering
Anthony Hoffman - Associate Professor, Electrical Engineering

Ordinary Materials with Extraordinary Properties
Suman Datta - Stinson Professor of Nanotechnology, Electrical Engineering

Tunable Topological Materials
Badih Asaaf - Freimann Assistant Professor, Experimental Condensed Matter, Physics

Nanocrystal Superlattices and Superfluorescence
Masaru Kuno - Professor, Chemistry & Biochemistry

10:20 a.m. - 12:00 p.m. POLYMER SCIENCE

Moderator: Subhash L. Shinde - Associate Director, ND Energy

Developing Functional Monomers with Self-Accelerating Reactions to Synthesize Polymers with New Structures and Function
Haifeng Gao - Associate Professor, Chemistry & Biochemistry

Design of Materials
Nicholas Zabaras - Viola D. Hank Professor of Computational Science and Engineering, Aerospace and Mechanical Engineering

Hierarchically Functional Polymers for Membrane Separations and Beyond
Ruilan Guo - Associate Professor, Chemical and Biomolecular Engineering

Polymer-2D material Composite Films with Fiber-Like Mechanical Properties
Tengfei Luo - Associate Professor, Aerospace and Mechanical Engineering

10:20 a.m. - 12:00 p.m. HIGH ENERGY DENSITY MATERIALS

Moderator: Edward Maginn - Dorini Family Professor of Energy Studies; Chair, Chemical and Biomolecular Engineering

Using Molecular Simulations to Understand Energetic Materials: Hypergolic Ionic Liquids and Solid Propellant Aging
Edward Maginn

Solid Flame: Fundamentals and Applications
Alexander Mukasyan - Research Professor, Chemical and Biomolecular

Data-Driven Modeling of Energetic Materials
Karel Matouš - College of Engineering of Collegiate Associate Professor of Computational Mechanics, Aerospace and Mechanical Engineering

ND: Lowering SWAP-C of Mid-Infrared Spectroscopic Imaging of Energetic Materials
Scott Howard - Associate Professor, Electrical Engineering
David Burgoff - Assistant Professor, Electrical Engineering