### FY 2020 IMR Kickstart Facility Grants Awards



Eight new research projects were awarded funding through the IMR Kickstart Facility Grant Program for a total investment of \$20,000 in support of innovative materials research in fiscal year 2020. These projects support eight principal investigators from the departments of Chemical and Biomolecular Engineering, Chemistry and Biochemistry, Integrated Systems Engineering, Mechanical and Aerospace Engineering, and Materials Science and Engineering.

### The Ohio State University

INSTITUTE FOR MATERIALS RESEARCH

### Investigating the Role of Collagen Piezoelectricity in Force-modulated Biomineralization

– Principal Investigator: Hanna Cho, Mechanical and Aerospace Engineering

### Synthesis and Characterization of High-energy Cathode Materials Prepared by Co-Precipitation Reactor

- Principal Investigator: Jung-Hyun Kim, Mechanical and Aerospace Engineering

### Exploration of ZnO/Si Heterojunctions as Biocompatible and Wavelength Tunable Lightemitting Diodes

- Principal Investigator: Jinghua Li, Materials Science and Engineering

# Microstructure Evolution and Mechanical Behavior of Laser Welded Dual-phaseDP590 steel joint

- Principal Investigator: Ali Nassiri, Integrated Systems Engineering

### Deformation Behavior of Nano-Architectured Liquid Crystal Elastomers

- Principal Investigator: Xiaoguang Wang, Chemical and Biomolecular Engineering

### Chemical Vapor Deposition Synthesis of Polymeric Organic Semiconductor

- Principal Investigator: Xiaoxue Wang, Chemical and Biomolecular Engineering

### How Morphology Affects Optical Properties of DNA-templated Silver Nanoclusters

- Principal Investigator: Yuyuan Zhang, Chemistry and Biochemistry

# Direct ink writing (DIW) of the Magnetic Shape Memory Polymer for Programmable Biomedical Robot

- Principal Investigator: Renee Zhao, Mechanical and Aerospace Engineering