

an Diego

# INSTITUTE FOR MATERIALS DISCOVERY AND DESIGN

## CHARACTERIZE ADVANCED MATERIALS HUMANITY NEEDS

### ENERGY MATERIALS

High-endurance solar cell, fuel cell and battery materials and devices.

Biofuels, solar fuels, and sustainable energy conversion materials.

Membranes, electrocatalysts and photocatalysts.

### ELECTRONIC MATERIALS

Quantum materials for quantum sensing, communication and computation.

Materials for 5G/6G communications and 3D integration.

Lasers and next-generation optical and display materials.

### BIO-INSPIRED MATERIALS

Therapeutic nanoparticles, small molecules, and proteins.

Bio-inspired and bio-based materials.

3D-printed medical implants; and biomedical devices.

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**Chemistry and Biochemistry**

Mike Burkart  
Neal Devaraj  
Joshua Figueroa  
Andrew Kummel  
Francesco Paesani  
Michael Sailor  
Alina Schimpf  
Akif Tezcan

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**Computer Science and Engineering**

Qi (Rose) Yu

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**Electrical and Computer Engineering**

Eric Fullerton  
Yu-hwa Lo

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**Mechanical and Aerospace Engineering**

Prabhakar Bandaru  
Javier Garay  
Olivia Graeve  
Marc Meyers  
Lisa Poulidakos

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**Molecular Biology**

Rachel Dutton  
James Golden  
Susan Golden  
Stephen Mayfield

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**NanoEngineering**

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