

INSTITUTE FOR MATERIALS DISCOVERY AND DESIGN

**WE DISCOVER
DESIGN AND
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.

“The first big win for the Institute is the \$18 million NSF grant funding a Materials Research Science and Engineering Center (MRSEC) at UC San Diego. This MRSEC capitalizes on three specific strengths at UC San Diego—our leadership in materials science, our leadership in the life sciences and our position as a national resource in high performance computing.”

— Michael Sailor, Ph.D,
 Director, Institute for Materials Discovery and Design
 Director, Materials Research Science and Engineering Center



Chemistry and Biochemistry

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 Andrew Kummel
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 Michael Sailor
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Electrical and Computer Engineering

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NanoEngineering

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 Nicole Steinmetz
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 Alex Frano
 Ivan Schuller
 Oleg Shpyrko

Structural Engineering

Hyunsun Kim

BENEFITS OF PARTNERSHIP

- Industry-faculty-student research teams
- Recruit our top students
- Collaborate one-on-one with faculty
- Embed a visiting Industry Fellow in our labs
- Research Reviews
- Fast-track research agreements
- Access to commercialization engine with lab-to-market focus

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