March 14th 2024

AY23-24 MMRI UM Faculty Proposal Team Awards

Michigan Materials Research Institute (MMRI) is pleased to announce the AY23-24 cohort of 8 internally funded faculty teams listed below. The awards are based on a call for proposals issued in Fall 2023 that was open to MMRI Faculty Affiliates.

The objective of the MMRI internal funding program is to build collaborative teams of faculty across disciplines and units to pursue externally sponsored multi-investigator grants and centers of research excellence in emerging topical areas involving engineered materials.

Over 50 MMRI faculty affiliates from 15 departments in 4 colleges responded to the call as funded investigators in a total 19 proposal teams. Each proposal was peer-reviewed by at least 2 UM faculty members. Based on peer-reviews, 11 teams were selected as finalists for oral presentation and Q&A with MMRI Directors. All proposal teams received constructive feedback from the review for future submissions.

Eight (8) proposal teams were selected for MMRI internal awards involving 18 faculty from 13 departments spread across 5 colleges on the UM-Ann Arbor campus. The 2-year awards range from $60K (including $10K cost share) for incubator projects of two-faculty teams, and $100K (including $20K cost share) for teams of three or more faculty. Several proposals also included unfunded faculty collaborators in the team.

MMRI plans to continue this internal funding program with proposal call released annually in the Fall term, and an information session prior to release of the call.

We thank the MMRI faculty affiliates who served as peer-reviews and helped us make this program a success. The large number of high-quality submissions reflect the world-class faculty at UM in the broad area of engineered materials research.

MMRI Faculty affiliates are encouraged to attend the upcoming MMRI Summit (May 30th-31st) where these projects will be highlighted, along with invited talks by other MMRI faculty, as well as industry partners; the Summit will also include a student/postdoc poster session.

There is no registration fee but pre-registration is required: **2024 MMRI Annual Summit Registration**

- Amit Misra, Director, MMRI and $(MC)^2$ & Max Shtein, Associate Director, MMRI.

2024 Funded Cohort - Proposal Titles	Investigators receiving MMRI funds
EMERGE: Eutectic Materials Design through Rational Generative Engineering	**Venkat Viswanathan** (Aerospace Engineering) **Tim Cernak** (Medicinal Chemistry-Pharmacy; Chemistry-LS&A) **Vikram Gavini** (Mechanical Engineering)
Early-Stage Evolution of Implanted Helium in Laser-Processed Metastable Grain Boundaries in Alloys - Integrated Time and Space Resolved Experimental and Computational Study	**Yue Fan** (Mechanical Engineering) **Kevin Field** (Nuclear Engineering & Radiological Sciences) **Yang Zhang** (Nuclear Engineering & Radiological Sciences).
Mycelium Bonding to Fibers for Stronger, Stiffer, and Integrated Biomaterials	**Evgueni T. Filipov** (Civil & Environmental Engineering) **Glenn Wilcox** (Architecture and Urban Planning).
Control of Lung Cancer by Magnesium Alloy Implants	**Claudia Loebel** (Materials Science & Engineering); **Kiran Lagisetty** (Surgery, Medical School).
Generative AI for Materials and 3D Printing (3DP) Co-Design: Towards a Center for Additive Manufacturing and Material Advancements in Construction (CAMMAC)	**Mania Aghaei Meibodi** (Architecture and Urban Planning); **Kira Barton** (Robotics Engineering).
Organoid Digital Twins for Personalized Drug Responses	**Geeta Mehta** (Materials Science & Engineering); **Analisa Difeo** (Pathology, Medical School).
Integrating intermetallic cobalt phthalocyanine (CoPc)-PtZn electrocatalysts with colloidal graphene quantum dots towards highly selective CO_2 upgrading into methanol	**Joshua Jack** (Civil & Environmental Engineering); **Albert Liu** (Chemical Engineering).
Hybrid photonic integration: Enabling nonlinear molecular crystals on chip	**Chris Giebink** (Electrical Engineering & Computer Science); **Di Liang** (Electrical Engineering & Computer Science).