

Request for NSF MRSEC Interdisciplinary Research Group Topics

Dear UNM Researchers,

The Faculty Research Development Office (FRDO) is requesting suggestions for topic areas for Interdisciplinary Research Groups (IRGs) for an [NSF 25-532](#) Materials Research Science and Engineering Center (MRSEC) proposal from UNM. FRDO is coordinating this process since UNM is only allowed 1 submission.

The MRSEC program provides sustained support for materials research and education of the highest quality while addressing fundamental problems in science and engineering. Centers support materials research infrastructure in the United States, promote active collaboration between universities and other sectors, including industry and international organizations, and contribute to the development of a national network of university-based centers in materials research, education, and facilities. NSF funds MRSECs at a rate of \$3-4.5M per year for 6 years. Required pre-proposals are due to NSF **June 23, 2025**; full proposals are due **November 24**, by invitation.

A MRSEC proposal must contain a minimum of 2 and a maximum of 3 IRGs. Each IRG typically involves 6-12 faculty members addressing a major topic or area in which sustained support for the interactive effort by the several participants of complementary backgrounds, skills, and knowledge is critical to progress. The IRGs in a Center may be thematically related, or they may address different aspects of materials research typically supported by the NSF Division of Materials Research (DMR), which include: Biomaterials, Ceramics, Condensed Matter Physics, Condensed Matter and Materials Theory, Electronic and Photonic Materials, Metals and Metallic Nanostructures, Polymers, and Solid State and Materials Chemistry. For a detailed description of the research supported by DMR, visit: <https://www.nsf.gov/materials>. The following areas are of particular interest for this round of funding:

- Advancing Materials for Semiconductors and Microelectronics
- Materials for Biotechnology
- Materials for Biomanufacturing
- Architected Materials Across Scales
- Materials Far-From-Equilibrium
- Structural Materials under Extreme Conditions
- Alternative Approaches to Development and Processing of Clean, Sustainable Materials

Purely/primarily theoretical IRGs or IRGs incorporating autonomous experimentation must clearly communicate the fundamental materials research questions being addressed and demonstrate intellectual merit that is competitive with more traditional IRGs. Finally, proposals comprising partnerships and participants that expand the disciplinary makeup of [the MRSEC portfolio](#) beyond

its current composition are strongly encouraged. IRG teams are urged to go beyond traditional collaborative partnerships to pursue topical areas and research questions that require essentially new exploratory environments to be addressed successfully.

As an institution, UNM is allowed to submit 1 MRSEC proposal. At this time, we are *not* looking for PIs interested in leading the entire submission. Instead, we are requesting suggestions for potential IRG topics and research teams. **If you have a research topic that you think would make a good Interdisciplinary Research Group, please submit a one-page statement of interest through UNM's InfoReady Review portal by February 17 at NOON.** Your statement of interest should:

1. Describe your proposed interdisciplinary research area;
2. Explain which DMR field(s) it falls under and, if applicable, which priority focus area(s) (see lists above);
3. List potential members of your research team and describe how their complementary expertise is critical to progress in this field;
4. If applicable, describe the way your proposed topic expands the disciplinary makeup of [the MRSEC portfolio](#).
5. If applicable, outline how your topical areas and research questions require essentially new exploratory environments to be addressed successfully.

In late February, we will be in touch with anyone who submits a SOI with next steps. These will depend on the number of SOIs we receive. We have tentatively scheduled a meeting for March 5th from 9am-noon should we need to find ways to integrate the proposed topics into two or three IRGs.

Please email limited@unm.edu with any questions.