

# Center for Emergent Materials

## Call for IRG Proposals to Participate in MRSEC Renewal

The Center for Emergent Materials, an NSF MRSEC (CEM), is requesting proposals for Interdisciplinary Research Groups (IRGs) to participate in the MRSEC renewal process. The CEM has just completed four years of its second six-year term as a National Science Foundation (NSF) funded Material Research Science and Engineering Center (MRSEC), and is in the process of preparing a proposal for a third six-year cycle of funding.

The CEM's current IRGs will not be continued: all of the IRGs that will participate in the renewal proposal will be selected based on the results of this competition. Technical overlap of proposed research with the current CEM IRGs is not required, however synergy with the mission of the CEM can be advantageous (for example through shared facilities, techniques, theory/modeling, materials, etc.). Information about the CEM and current IRGs can be found at [cem.osu.edu](http://cem.osu.edu). Successful proposals will be part of the CEM white paper, due to NSF in late June 2019.

CEM is soliciting proposals from collaborative teams to form these new IRGs (full-scale IRGs will have 6-10 faculty members). Proposals will be reviewed according to the same criteria used to select NSF MRSECs. The MRSEC program seeks compelling collaborations assembled for the express purpose of performing the proposed cutting-edge research, which must be of a scale and complexity that requires a center environment. The MRSEC program is funded by the Division of Materials Research (DMR), and the research program must fall within their purview; insight into the range of topics can be gained at [MRSEC.org](http://MRSEC.org). For further information on expectations for a full IRG, such as the requirement for deep and convincing transdisciplinary collaborations, proposers are urged to read the NSF RFP (see [nsf.gov/pubs/2019/nsf19517/nsf19517.pdf](http://nsf.gov/pubs/2019/nsf19517/nsf19517.pdf)) Fostering the participation of members of underrepresented groups in materials research is imperative for a MRSEC. A competitive IRG will also be founded on strong synergy between experimental and theoretical components.

### Proposed IRG Poster Session: Friday, November 9, 2018

Teams planning to submit proposals are highly encouraged to participate in a poster session on Friday, November 9, from 3:00-5:00 PM in Room 4138 of the Physics Research Building. This opportunity will allow potential IRG teams to receive feedback on their proposed research, meet with current CEM faculty, and network across the materials-related disciplines on OSU's campus. All participants will be required to print their own posters and set them up in Room 4138 prior to 3:00 PM on November 9. Set up will begin at 2:45 PM. Additionally, participants are required to send an electronic version of their poster to [Alison Scott](mailto:Alison.Scott@osu.edu), CEM Program Coordinator, by 5:00 pm on Thursday, November 8. Detailed demographic information for all IRG participants should also be sent to Ms. Scott in a separate document. See the CEM website for poster and demographic table templates.

## Letter of Intent (LOI) submission: due date December 10, 2018

LOI should include proposal title; names, titles, and affiliations of IRG leaders and all group members; contact information for the IRG leaders only (mailing address, email and phone numbers); and proposal abstract (200 words maximum).

## Proposal Submission: due date January 15, 2019

Use a minimum 11-point font size, 13.5-point line spacing and 1" margins. Proposals longer than the stated page limits and/or omitting information requested below will not be reviewed.

Eligibility: IRG members should hold faculty-level appointments, and IRG leaders must be from OSU. No more than two IRG members should be from external institutions.

### IRG Proposal Preparation Instructions

Submit your proposal as an email attachment in one file in PDF format by 5:00 PM on Tuesday, January 15, 2019 to Alison Scott (scott.1452@osu.edu). Any proposal that does not meet the deadline will not be considered.

Cover Page (1 page maximum) including: proposal title; names, titles, and affiliations of IRG leaders and all group members; contact information for the IRG leaders only (mailing address, email and phone numbers); and proposal abstract (200 words maximum).

### Project Description (3 pages maximum) including:

**Intellectual Merit and Broader Impacts of the research.** The proposal should clearly make the case that the materials research is of a scope and complexity that would not be feasible under traditional funding of individual research projects. Discuss the relationship of the proposed research to the state-of-the-art in the field including a brief survey of competing research groups and how the proposed IRG will establish a distinct leadership status.

**Expertise of the team and synergy among team members.** Proposed research should be of a scope and complexity that requires the scale and transdisciplinarity provided by a center-level team. Discuss how the proposed team will foster increased participation in materials research and education of members of underrepresented groups in science and engineering (e.g. women, underrepresented minorities, and persons with disabilities) at all academic levels. Discuss the role of theory and modeling in accomplishing the proposed research.

**Management plan.** Proposal should detail how the project will be administered to enable interactive effort by the group's participants; integrating their complementary backgrounds, skills, and knowledge to achieve the goals of the proposed research. In particular, methods of communication and mechanisms for making decisions regarding resource allocation, team makeup, and strategic directions should be discussed. Additionally, strategies for creating a culture supportive of CEM's Education and Human

Resources Development (EHRD) initiatives, examples of which can be found on [CEM's website](#), should be mentioned here.

References Cited (no page limit)

Curriculum Vitae (2 pages, consistent with NSF guidelines) for all IRG members

Recommended reviewers: We recommend that proposers suggest reviewers external to OSU who would be able to knowledgeably critique their proposal.

Technical Contact: P. Chris Hammel, [hammel@mps.ohio-state.edu](mailto:hammel@mps.ohio-state.edu)