

2017 OSU Materials Research Seed Grant Program

Key Dates

- Request for Proposals Issued: Friday, September 30, 2016
- Seed Grant Program Panel Discussion: Wednesday, November 9, 2016 (4:15 – 5:15 PM, room 4138 Physics Research Building)
- Letters of Intent Due: Monday, December 5, 2016 at 5:00 PM
- Proto-IRG and Multidisciplinary Team Building Grants Funding Tier Proposal Team Mandatory Presentations: January 18, 25, February 1, 2017 (4:15 – 5:15 PM, room 4138 Physics Research Building)
- Proposals Due (all Funding Tiers): Monday, March 20, 2017 at 5:00 PM
- Awards Announced (anticipated): July 2017
- Funded Projects Start Date (anticipated): September 1, 2017



THE OHIO STATE UNIVERSITY
INSTITUTE FOR MATERIALS RESEARCH





OSU Materials Research Seed Grant Program

2017 Request for Proposals

We are pleased to announce the **2017 OSU Materials Research Seed Grant Program Request for Proposals (RFP)**, which is open to The Ohio State University (OSU) materials community. This enhanced seed program leverages resources and best practices of the Center for Emergent Materials (CEM), the Center for Exploration of Novel Complex Materials (ENCOMM), and the Institute for Materials Research (IMR). The result is a unified RFP with Funding Tiers designed to achieve the greatest impact for seeding excellence in materials research of varying scopes, and with the goal of generating new directions that extend beyond the boundaries of existing research programs.

The three Funding Tiers of the 2017 OSU Materials Research Seed Grant Program are:

- 1. Proto-IRG Grants** provide funds up to \$100,000/year per award in direct costs, require one Principal Investigator (PI) and two Co-Principal Investigators (Co-PIs), and may have unfunded collaborators with the goal of forming new Interdisciplinary Research Groups (IRGs) that could be incorporated into the CEM renewal proposal in 2018.
- 2. Multidisciplinary Team Building Grants** provide funds up to \$60,000/year per award in direct costs, and require one PI and one Co-PI, and may have unfunded collaborators, with the goal of forming multidisciplinary materials research teams that can compete effectively for federal block-funding opportunities, such as the NSF MRSEC program.
- 3. Exploratory Materials Research Grants** provide funds up to \$40,000/year per award in direct costs, and require one PI, and may have Co-PIs and/or unfunded collaborators, with the goal of enabling nascent and innovative materials research to emerge to the point of being competitive for external funding.

The following pages describe the two tiers of seed funding opportunities and provide details on how to apply. Please visit imr.osu.edu, encomm.osu.edu or cem.osu.edu for additional information and updates related to this year's seed grant RFP.

Description of the Three Funding Tiers

1. Proto-IRG Grants

These grants seek to stimulate interdisciplinary research that broadens the scope of the CEM – a National Science Foundation (NSF) Materials Research Science and Engineering Center (MRSEC) at OSU. The goal is to develop full-scale IRGs for the CEM renewal in 2018. Technical overlap of the proposed research with the current CEM IRGs is not required. However, synergy with the mission of the CEM is preferred (for example through shared facilities, techniques, theory/modeling, materials, etc.). Information about the CEM and current IRGs can be found at: <http://cem.osu.edu>.

These grants will support materials research by small interdisciplinary groups of one PI and two Co-PIs per team. Each Proto-IRG team is expected to form the core membership of a future IRG; additional collaborators may be included. Proposed research projects should be broad and interdisciplinary while maintaining a focus on a central theme to meet the requirements of a full IRG.

Although not required for Proto-IRGs, a strong synergy between experimental and theoretical components is essential for full IRGs. Proposers are encouraged to review the most recent RFP from the NSF for further information on what is expected of a full IRG, in particular the specification of the “the whole is greater than the sum of the parts” at:

<https://www.nsf.gov/pubs/2016/nsf16545/nsf16545.htm>. .

Awards will be up to \$100,000 in direct costs per grant per year. The initial funding period is one year, but a successful Proto-IRGs may apply for renewal in the next year’s open competition of the OSU Materials Research Seed Grant Program. Funded Proto-IRGs are expected to participate actively in further team building and CEM activities. Tentative start date is September 1, 2017

Ultimately, the CEM will hold an internal competition to select full IRGs that will comprise the center proposed to the MRSEC program. This selection process will begin autumn 2018 and will be open to all OSU regular faculty independent of participation in the Proto-IRGs.

Contact Information

Contact Prof. P. Chris Hammel (hammel.7@osu.edu, 614-247-6928) with any questions.

2. Multidisciplinary Team Building Grants

The aim of these grants is to enable and to invigorate new interdisciplinary collaborations with high potential to have broad impact and win substantial federal block funding. These grants require one Principal Investigator and one Co-PI. Additional unfunded collaborators may be included. The goal is to form multidisciplinary materials research teams of 2 to 4 faculty members each.

Awards will be up to \$60,000 in direct costs per grant per year. The initial funding period is one year, but successful Multidisciplinary Teams may apply for a maximum of one additional year renewal in the next year’s open competition of the OSU Materials Research Seed Grant Program. Tentative start date is September 1, 2017.

Contact Information

Contact Profs. Steven A. Ringel (ringel.5@osu.edu, 614-292-6904), Ezekiel Johnston-Halperin (johnston-halperin.1@osu.edu, 614-247-4074) or Chris Hammel (hammel.7@osu.edu, 614-688-8824) with any questions.

3. Exploratory Materials Research Grants

The aim of these grants is to stimulate nascent and innovative materials-allied research to the point where a highly competitive external proposal can be developed. These grants require one Principal Investigator. Additional Co-PI(s) and/or unfunded collaborators may be included. These grants complement the Multidisciplinary Team Building grants.

Awards will be up to \$40,000 in direct costs per grant per year. The initial funding period is one year, but successful PIs may apply for a maximum of one additional year renewal in the next year's open competition of the OSU Materials Research Seed Grant Program. Tentative start date is September 1, 2017.

Contact Information

Contact Profs. Steven A. Ringel (ringel.5@osu.edu, 614-292-6904), Ezekiel Johnston-Halperin (johnston-halperin.1@osu.edu, 614-247-4074) or Chris Hammel (hammel.7@osu.edu, 614-688-8824) with any questions.

How to Apply

Eligibility

An applicant may serve as Principal Investigator on only **one** proposal in response to this RFP (all Funding Tiers). The PI must hold a faculty-level appointment at OSU. **All proposed research must be clearly distinct from ongoing externally or internally funded research.**

Letters of Intent

Applicants planning to submit a proposal in response to this RFP (all Funding Tiers) must first submit a brief Letter of Intent as **one file in PDF format** via email to OSU_MRSGP@osu.edu. **by 5:00 PM on Monday, December 5, 2016.** The Letter of Intent should include: names, titles, and departmental affiliations of PI, Co-PIs (if applicable) and collaborators (if known); contact information for the PI only (mailing address, email, phone and fax numbers); identification of the Funding Tier; tentative project title; short description of the proposed research (100 words maximum); and the names and contact information (including email address) for at least 3 suggested external reviewers. For letters of intent to the Proto-IRG and Multidisciplinary Team Building Grant funding tiers, the letter of intent must also include the team's date preference of a mandatory presentation (see next section for more details): **January 18, 25 and February 1, 2017. Any Letter of Intent that does not provide this information or does not meet the deadline will not be considered.**

Presentations and Discussion

The Proto-IRG and Multidisciplinary Team Building Grant proposals are required to make an informal presentation on their proposed research. The presentations (up to 30 minutes) will be hosted by ENCOMM in special Materials Seed Grant Planning Meetings during the winter quarter of 2017 (January 18, 25, February 1, 2017) and a panel discussion on "best practices" will be held November 9, 2016 for interested applicants. Teams that have presented their proposed research at an ENCOMM meeting within the 12 months prior to the proposal deadline are deemed to have met this requirement.

While these presentations are required, their content will not be part of the formal review criteria. The purpose of these presentations is to provide a forum for forming and enhancing interdisciplinary collaborative connections amongst OSU materials researchers in an informal setting, and to provide an opportunity to strengthen the proposals.

Proposal Submission

All proposals are due by **5:00 PM on Monday, March 20, 2017.** Submit your proposal as an email attachment in **one file in PDF format** to OSU_MRSGP@osu.edu. **Any proposal that does not meet the deadline will not be considered.**

Proposal Preparation Instructions (all Funding Tiers)

1. Cover Page (1 page maximum) including: identification of the Funding Tier; proposal title; names, titles, and departmental affiliations of PI, Co-PIs (if applicable) and collaborators (if any); contact information for the PI only (mailing address, email, phone and fax numbers); date and title of team building presentation (Multidisciplinary Team Building and Proto-IRG tiers only); proposal abstract (200 words maximum)
2. Project Description (4 pages maximum) including:
 - a. Objectives of the proposed research project
 - b. Description and scope of research
 - c. Work plan and methodology
 - d. Expected outcomes
 - e. Research facilities that may be used to conduct the research
 - f. Expertise of the team and synergy among team members to enable research of a scope and complexity requiring the advantages of scale and inter-/multi-disciplinarily provided by a team (required only of Proto-IRG and Multidisciplinary Team Building proposals)
 - g. A coherent management plan detailing how the project will be executed as a team effort (required only of Proto-IRG and Multidisciplinary Team Building proposals)
 - h. A list of targeted federal block-funding opportunity(ies) with deadline(s) (if known), and a description of how the team will be able to compete effectively for those opportunity(ies) if the proposed research objectives are met (required only of Multidisciplinary Team Building proposals)
 - i. A list of targeted external funding agency(ies), with deadline(s) (if known), and a description and how meeting the objectives of the proposed research would translate into external proposal development (required only of Exploratory Materials Research proposals)
 - j. Plan for expansion to a full IRG with integrated experimental and theoretical components (required only of Proto-IRG proposals)
3. References Cited (no page limit)
4. Budget Information (1 page maximum): Provide a detailed budget for the proposed project and a brief explanation of the proposed budget items.
5. Curriculum Vitae (2 pages maximum each) for PI and all co-PIs (if applicable)
6. Current & Pending Support (no page limit) for PI and all co-PIs (if applicable)
7. Performance on Prior Internal Awards: For those Principal Investigators who have previously received **any** research funding through the OSU Materials Research Seed Grant Program - Exploratory Materials Research Grants, Multidisciplinary Team Building Grants, or Proto-IRG Grants) - we require a synopsis of every funded project(s) including details on all outcomes. The application must include a brief paragraph explaining the outcomes

of each project and full citations for all publications, presentations, and externally funded projects related to your activities on that project. This information should be included as part of the application as an addendum, and is **not** included in the page limit.

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

Budget Restrictions

These seed grants are intended to support primarily student and postdoctoral researcher salaries and benefits; tuition; materials and supplies; and equipment user fees. The following expenses are **NOT** allowed (all Funding Tiers): faculty salaries and benefits; computers and equipment purchases; and food and entertainment.

Terms and Conditions

All selected proposals are subject to terms and conditions, including reporting requirements, that will be specified when the awards are made.

- All publications that result from seed funding must appropriately acknowledge OSU MRS GP support and the Center for Emergent Materials, an NSF MRSEC, when appropriate.
- Investigators are required to submit reports consisting of one page of text and one “highlight” slide in April for inclusion in annual reports. The exact deadline and requirements will be communicated to PI’s of the awarded seed grants.
- F&A distribution for CEM funded awards is assigned per CEM’s cost share agreement and cannot be changed
- All purchases, travel, and HR appointments will be conducted in the home departments of the investigators.
- Funds cannot be transferred from this project to another chartfield.

Review Process

Each proposal (all Funding Tiers) will be reviewed by external and OSU reviewers. At the time of award notification, PI(s) will receive an anonymous copy of the reviews.

Review Criteria (all Funding Tiers)

- Intellectual merit of proposed research activity, including originality, novelty, and potential for contribution to science, technology and education
- Potential for the proposed research to be funded through existing federal funding mechanisms
- Potential to seed transformative advances involving materials-allied research
- Clearly distinct from ongoing externally or internally funded research including OSU Materials Seed Grant Program funding
- Potential to positively impact Investigators’ career trajectory

Additional Review Criteria (Proto-IRG)

- Potential to evolve into a full IRG
- Potential to leverage existing CEM capabilities and synergy with CEM activities
- Presentation at ENCOMM meeting

Additional Review Criteria (Multidisciplinary Team Building)

- Evidence of team synergy
- Potential for winning federal block funding
- Presentation at ENCOMM meeting

Additional Review Criterion (Exploratory Materials Research)

- Plan for external proposal development