



## OSU Materials Research Seed Grant Program (2012-13)

We are pleased to announce the **2012-13 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 Electronic & Magnetic Nanoscale Composite Multifunctional Materials (ENCOMM), and the Institute for Materials Research (IMR). The result is a unified RFP with three Funding Tiers designed to achieve the greatest impact for seeding excellence in materials research of varying scopes.

The three Funding Tiers are:

1. **Proto-IRG Grants**, which provide funds up to \$100,000/year per award in direct costs, and 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 2013.
2. **Multidisciplinary Team Building Grants**, which 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.
3. **Exploratory Materials Research Grants**, which 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 materials research to emerge to the point of being competitive for external funding.

The following pages describe the three tiers of seed funding opportunities and provide details on how to apply. Please visit [imr.osu.edu](http://imr.osu.edu) or [cem.osu.edu](http://cem.osu.edu) or [encomm.osu.edu](http://encomm.osu.edu) for additional information and updates.

### Description of the Three Funding Tiers

#### **1. Proto-IRG Grants**

The aim of these grants is to stimulate interdisciplinary research that broadens the scope of the CEM — a National Science Foundation (NSF) Materials Science and Engineering Center (MRSEC) at OSU. The ultimate goal of these grants is to help develop full-scale IRGs at the time of CEM renewal in 2013. Technical overlap of the proposed research with the current CEM IRGs is not required. However, some form of 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 1 PI and 2 Co-PIs per team. Each Proto-IRG team is expected to form the core membership of a future full IRG (typically 6-10 faculty level investigators in each full-scale IRG). Additional unfunded 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 whole is greater than the sum of the parts” at: <http://www.nsf.gov/pubs/2010/nsf10568/nsf10568.htm>. This question will be addressed further in a panel discussion on what makes a successful IRG hosted by the CEM in early January 2012. (Note that the NSF has morphed MRSECs into Centers of Excellence for Materials Research and Innovation (CEMRIs) in the latest RFP.)

Ultimately, the CEM will hold an internal competition to select several full IRGs that will form the renewal proposal of the CEM. This competition is projected for early 2013 and will be open to all OSU regular faculty independent of participation in the Proto-IRGs.

Awards will be up to \$100,000 in direct costs per grant per year. The initial funding period is one year, but 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, 2012.

### **Contact Information**

Contact Prof. P. Chris Hammel ([hammel@mps.ohio-state.edu](mailto:hammel@mps.ohio-state.edu), 614-247-6928) with any questions.

## **2. Multidisciplinary Team Building Grants**

The aim of these grants is to enable and to invigorate interdisciplinary collaborations with high potential to have broad impact and win substantial federal block funding. These grants require one PI 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, 2012.

### **Contact Information**

Contact Profs. Steven A. Ringel ([ringel@ece.osu.edu](mailto:ringel@ece.osu.edu), 614-688-3924) or Ezekiel Johnston-Halperin ([ejh@mps.ohio-state.edu](mailto:ejh@mps.ohio-state.edu), 614-247-4074) with any questions.

### **3. Exploratory Materials Research Grants**

The aim of these grants is to stimulate nascent materials-allied research to the point where a highly competitive external proposal can be developed. These grants require one PI. Additional Co-PI(s) and/or unfunded collaborators may be included. These grants complement the Multidisciplinary Team Building and the Proto-IRG 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, 2012.

#### **Contact Information**

Contact Profs. Steven A. Ringel ([ringel@ece.osu.edu](mailto:ringel@ece.osu.edu), 614-688-3924) or Ezekiel Johnston-Halperin ([ejh@mps.ohio-state.edu](mailto:ejh@mps.ohio-state.edu), 614-247-4074) with any questions.

### **How to Apply?**

#### **Eligibility**

An applicant may serve as PI or Co-PI 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 an email attachment in **one file in PDF format** by **2:00 PM on Monday, March 19, 2012** via email to Layla Manganaro, IMR Program Manager, at [manganaro.4@osu.edu](mailto:manganaro.4@osu.edu). 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. **Any Letter of Intent that does not provide this information or does not meet the deadline will not be considered.**

#### **Presentations and Discussion**

Both Multidisciplinary Team Building Grants and Proto-IRG proposals are required to make an informal presentation on their proposed collaborative. The presentations (up to 30 minutes) will be hosted by ENCOMM in special Materials Seed Grant Team Planning Meetings during the winter quarter of 2012 ([encomm.osu.edu](http://encomm.osu.edu), contact Prof. Johnston-Halperin for scheduling assistance), and a panel discussion on "best practices" will be held in early January 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**

Submit your proposal as an email attachment in **one file in PDF format** by **2:00 PM on Monday, April 16, 2012** to Layla Manganaro, IMR Program Manager, at [manganaro.4@osu.edu](mailto:manganaro.4@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-disciplinarity 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 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)

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.

### **Review Process**

Each proposal (all Funding Tiers) will be reviewed by external and OSU reviewers. In the case of Proto-IRG proposals only, a few proposals will be selected for further consideration. Each selected Proto-IRG team will be invited to give an oral presentation to a CEM review panel for further evaluation. Details of the oral presentation will be provided later.

### **Review Criteria (all Funding Tiers)**

- Intellectual merit of proposed research activity, including originality, novelty, and potential for contribution to science, technology and education
- Potential to seed transformative advances involving materials-allied research
- Overlap with existing OSU Materials Seed Grant Program funding

### **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