THE UNIVERSITY OF NEW MEXICO

To: Distribution List

From: Faculty Research Development Office (FRDO)
Office of the Vice President for Research

Subject: Limited Competition: NSF Materials Innovation Platform (NSF 19-526)

Date: March 12, 2019

UNM Researchers,

The Office of the Vice President for Research is requesting pre-proposals for the NSF Materials Innovation Platform (MIP) funding opportunity. The MIP program is a mid-scale infrastructure program in the Division of Materials Research designed to accelerate advances in materials research. MIPs respond to the increasing complexity of materials research that requires close collaboration of interdisciplinary and transdisciplinary teams and access to cutting edge tools. The first MIP competition in 2015 focused on developing new bulk and thinfilm crystalline hard materials. **This second MIP competition focuses on the convergence of materials research with biological sciences for developing new materials**. This appears to be a duplicate of the same solicitation (NSF 19-526) that was due to the NSF on February 4, 2019. It is probably being re-solicitated as a result of the recent government shutdown. Please make sure to read the solicitation (https://www.nsf.gov/pubs/2019/nsf19526/nsf19526.pdf) carefully if you are interested in submitting a proposal.

Materials Innovation Platforms (MIP) supports transdisciplinary research and education, cutting-edge tools, and knowledge sharing in key enabling areas of national priority. This competition focuses on the convergence of materials research with biological sciences for developing new materials. New ways of synthesis/processing complex materials with novel functionalities are of high priority. Scalable and sustainable synthesis/processing approaches are also of high interest. MIPs are expected to make full use of opportunities provided by engaging the emerging field of data science. Awards totaling $15,000,000 to $25,000,000 over a five-year period are anticipated.

Full proposals are due to NSF on April 26, 2019.

Only one (1) proposal is permitted per organization as lead institution, and an individual may participate in only one proposal as PI, co-PI, or Senior Personnel. Because the final submission to NSF will include a 35-page project description, the pre-proposal for the internal competition is longer than usual.

Please submit your 7-page pre-proposal addressing the review criteria below (plus budget overview, references and NSF formatted CVs; all documents in a SINGLE PDF file, 11 point font) by NOON on Friday, April 5, 2019 to limited@unm.edu with the subject line: NSF MIP - your last name. No late submissions will be considered.
MIP Pre-proposal required elements (7 page total, not including budget, CVs and references)

I. Team
List name, organization/department affiliation, role in project. Clearly demonstrate team has necessary breadth of expertise in synthesis/processing, characterization, theory/modelling/simulation, tool development, data, user facility operation, training and outreach. 2-page NSF-formatted biosketches required for all Co-PIs.

II. Vision, Goals, and Rationale

Provide a vision for the proposed entire Platform. Explain how the proposed MIP a) addresses a grand challenge or challenges of fundamental research, b) provides new experimental and computational tools as well as technique development, c) fosters new modalities of research through knowledge sharing, d) provides education/training of next-generation instrument developers and users, and e) advances relevant NSF Big Ideas and national priorities.

III. Platform/Knowledge Sharing

Describe goals and proposed mechanisms for knowledge sharing, the anticipated results, and the expected outcome and impacts. Include mechanisms for knowledge sharing within the in-house research team, among external users, and for the whole community of practitioners that the proposed MIP represents.

IV. Scientific Program

Describe the scope and targeted scientific outcome of the MIP and specific in-house research activities, and demonstrate the "closed loop" nature of the research activities.

V. Tools

Describe and justify the need for the experimental and computational capabilities needed for both the in-house research and user program of the proposed MIP. Discuss how the MIP engages and leverages existing infrastructure and instruments.

VI. User Facility Operation

Describe the proposed user access modes by users for in-house research, the user proposal selection process, staffing, instrument time/resource allocation and user fee structure. Note: MIPs may not charge academic users in the US for time with experts, technicians or use of the instruments acquired through MIP funding.

VII. Education/Training

Briefly describe education and training activities for users, graduate and undergraduate students, and postdocs that integrate strategically with the research goals.

VIII. Diversity Strategic Plan

Describe the MIP's strategic plan of broadening participation at all levels, the metrics that will be used to measure progress, and the desired outcome for the 5-year award period.

IX. Collaboration with industry, national labs, and others

Describe plans for partnerships with non-academic organizations.

X. Management Plan

Describe the governance structure of the proposed MIP. Provide a description of the resources that the organization(s) will provide to the MIP. If more than one organization is involved in the MIP, describe the mechanism that will be employed to prevent the negative impact of distance on collaboration and user service.

Budget Overview

Complete estimated five-year totals for each element in the table.

Activity	**Five Year Total**
Instrument acquisition and development	
User facility operation	
In-house research	
Education/training	
Platform/Knowledge sharing	
Collaboration with industry, etc.	
Administration	
Other (please specify)	
TOTAL	