

# Advanced Materials Center of Excellence

## Webinar

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National Institute of Standards and Technology

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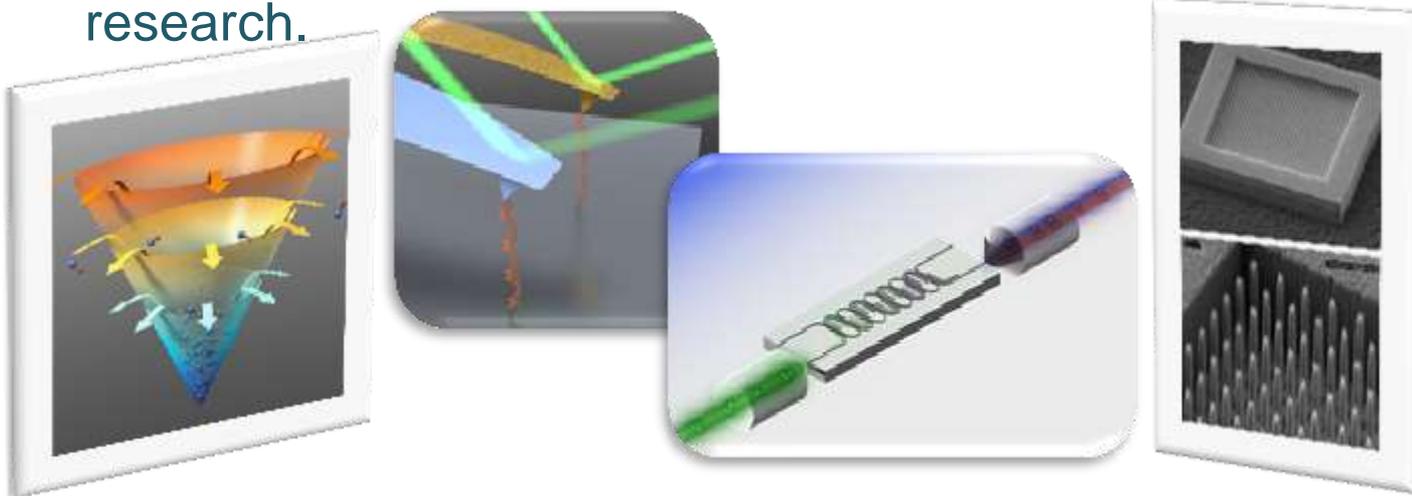
# Overview

- NIST Centers of Excellence Program
- Materials Genome Initiative
- Advanced Materials Center of Excellence
- Overview Federal Funding Opportunity
- Q & A's

# NIST Centers of Excellence Program

The NIST Centers of Excellence will:

- Enable collaborations between NIST and Leading Research Institutes in areas of emerging technology important for NIST.
- Provide new opportunities for training of students and postdocs in measurement science.
- Enhance technical innovation through early alignment of measurement science with emerging and innovative new fields of research.



# NIST Centers of Excellence Program

Program targeted at \$20M

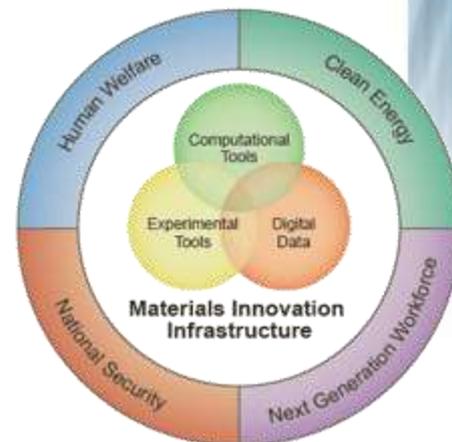
FY2013 NIST plans on awarding one Center focused on Advanced Materials

Depending on FY2014 Funding NIST expects to announce competitions for additional Centers of Excellence

NIST has not yet identified the research areas for future Centers of Excellence. We expect that the topics will be announced at the same time as the Federal Funding Opportunities.

# Materials Genome Initiative

- Announced by the White House in 2011
- Agencies include NIST, DOE, DOD, NSF
- Develop a “materials innovation infrastructure” that includes:
  - Computational tools
  - Experimental tools
  - Digital data
  - Collaborative networks



# Materials Genome Initiative

## NIST Role

- Establish essential materials data and model exchange protocols
- Ensure the quality of materials data and models
- Establish new methods, metrologies, and capabilities
- Integrate these activities and disseminate findings

# Goals of Advanced Materials CoE

1. Foster the development of integrated computational, modeling and other data-driven tools needed to achieve the accelerated development of advanced materials as envisioned in the administration's Materials Genome Initiative, including;
  - the development of new modeling, simulation and other computational tools for materials design,
  - the development of advanced information management systems needed to support the creation and integration of tools for data-driven scientific discovery and engineering of materials,
  - the establishment of standards, infrastructure, and reference databases needed to enable reliable computational-driven materials discovery and optimization, and

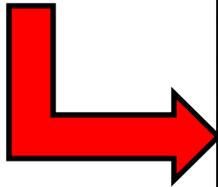
# Goals of Advanced Materials CoE

2. Foster the discovery of revolutionary new materials by academic and industry researchers by leveraging and amplifying access to the world-class, often unique facilities and expertise for materials characterization at NIST including:

- X-ray and neutron scattering and diffraction tools tailored for the analysis of soft materials, lightweight alloys, and advanced electronics,
- Soft x-ray synchrotron tools for nanoscale-resolved mapping of materials composition and structure
- Advanced microscopy facilities that provide hyperspectral analysis of materials structure and properties
- Expertise and facilities in nanomechanical testing and nanomaterials analysis
- Combinatorial materials library production and high-throughput testing

# Grants.gov

Information for successful application submission on the Grants.gov system is detailed in the “For Applicants” section found in red on the left side of the www.grants.gov home page. The All About Grants, Applicant FAQs, and Submit Application FAQs sections found under the Applicant Resources option are particularly important



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**What's New at Grants.gov**

- PDF Application Packages downloaded after 3/5/13 are compatible with Adobe Reader XI.
- Verify if your Adobe Reader Version is Compatible with Grants.gov
- New Opportunities This Week
- Grants.gov Webcast on Grant Fraud is now available online
- OMB Memoranda for the Use of Grants.gov by the Federal Agencies
- FERS Role-Based Training Webinar for FFATA Sub-Award Reporting
- Review the Security Build Updates and Their Impact on You

# Advanced Materials CoE FFO Overview

- Funding: \$5 million per year for five years, with possibility for an additional five year award
- No pre-application is required
- Cost sharing is not required

# Timing

- Application is due no later than 11:59 p.m. Eastern Time, Monday, August 12, 2013 via the Grants.gov website.
  - To avoid any potential processing backlogs due to last minute Grants.gov registrations, applicants are highly encouraged to begin their Grants.gov registration process early.
- Anticipated Announcement and Award Dates.
  - Review and selection is expected to be completed in September 2013.
  - Award processing and the earliest anticipated start date for the award made under this FFO is expected to be November 1, 2013.

# Eligibility

- Accredited institutions of higher education and non-profit organizations located in the United States and its territories.
- May partner with others, but an organization may only be the lead organization on one proposal.
  - In a team or consortium, eligible subawardees are U.S. non-profit organizations, accredited institutions of higher education, commercial organizations, and state, tribal, and local governments. Federal agencies may participate in projects but may not receive NIST funding.
- FFRDC, energy lab contractors, or other special situations should consult their GC to determine eligibility.

# Goals of the 2013 COE in Advanced Materials

Long-term, the Center will:

- accelerate materials discovery and development;
- transition new breakthroughs in advanced materials to industry;
- provide training opportunities for scientists and engineers in materials metrology; and
- demonstrate use of the tools and resources developed by the Materials Genome Initiative that will serve as a foundation for strengthening domestic industry.

# What we want to see in a Successful Proposal

## Proposers will need to address:

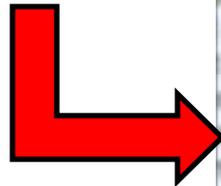
- Expertise and strong technical research agenda in Advanced Materials development, modeling, and simulation
- Clearly articulated plan to engage industry in providing research direction and dissemination of measurement science to industry
- Demonstrate use of the tools and resources developed by the Materials Genome Initiative that will serve as a foundation for strengthening domestic industry.
- Provide training opportunities for scientists and engineers in materials metrology and collaboration model for integrating NIST research and staff into technical focus areas.

# Collaborations

- May propose staff exchanges, sabbatical programs, activities involving jointly advised students, and other research collaboration activities without proposing any specific NIST collaborators.
- If a specific NIST employee is identified, include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved, if known.
- Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the proposal prior to the merit review.
- Any collaboration with an identified NIST employee that is approved by appropriate NIST management will not make an application more or less favorable in the competitive process. .

# Frequently Asked Questions

[www.nist.gov/coe/advmat](http://www.nist.gov/coe/advmat)



Check back frequently! Updated on a regular basis with questions received. Answers are shared with everyone in order to ensure fairness.

\* **NEW!** The FAQ site contains a subscription feature. Simply enter an email address in the dialogue box on the FAQ page.

A screenshot of the NIST website. The page title is "Advanced Materials COE". The navigation menu includes "Publications", "Subject Areas", "Products/Services", "NIST Organization", "News", "Programs &amp; Projects", "User Facilities", and "Work with NIST". The main content area has a sidebar with "Frequently Asked Questions (FAQ)" circled in red. The main content area includes a "Webinar for interested parties" section, a "NIST Announces Plan to Create Center of Excellence for Advanced Materials Research" section, and an "Overview" section. The footer contains "The National Institute of Standards and Technology (NIST) is an agency of the U.S. Department of Commerce" and a "Sign Up for NIST E-mail alerts" form.

# Evaluation Criteria

- Rationality (0 – 20 points)
- Experience (Qualifications), Resource Availability, and Industry Impact (0 to 30 points)
- Technical Merit of Contribution (0 to 40 points)
- Success Metrics (0 – 10 points)

# Evaluation Criteria

- Rationality (0 – 20 points)
  - The clarity of the applicant's approach to effectively address scientific and technical challenges relevant to the objectives of the Advanced Materials Center of Excellence.

# Evaluation Criteria

- Experience (Qualifications), Resource Availability, and Industry Impact (0 to 30 points)
  - The extent to which the applicant has access to the necessary facilities and overall support to accomplish project objectives. Factors considered as a whole and not given particular weights within the category include:
    - (1) the degree to which requested resources are appropriate for the proposed project's scope;
    - (2) the quality of organizational resources proposed to be used on the project;
    - (3) the rationality and potential effectiveness of any planned subawards and/or contracts;
    - (4) demonstrated commitment to encouraging and assisting underrepresented participants in the proposed project.
    - (5) plans for staff exchange of extended duration, for example of more than sixty (60) days, between NIST and the applicant, including the type and number of personnel;
    - (6) the rationality and effectiveness of a plan to manage intellectual property (IP) generated during the award period, taking into consideration the information provided in paragraph VI.d. of this FFO.

# Evaluation Criteria

- Technical Merit of Contribution (0 to 40 points)
  - The technical merit of the proposed work and the value it would contribute to breakthroughs in advanced materials. Factors considered as a whole and not given particular weights include:
    - (1) creativity and originality of the proposed approach,
    - (2) plausibility of the technical approach,
    - (3) scope of work, including the number and type of materials and the nature of proposed disciplinary approaches,
    - (4) the magnitude and reach of potential technical outcomes,
    - (5) linkage between the technical outcomes and industry needs as described in the proposal, and
    - (6) degree of integration with NIST programs (consistent with paragraph VI.2.c of this FFO) and capabilities in the areas of advanced materials (see Section I. of this FFO).

# Evaluation Criteria

- Success Metrics (0 – 10 points)
  - The clarity and quality of proposed metrics and mechanisms for evaluating the effectiveness of outputs from the Advanced Materials Center of Excellence, including links to U.S. industry and the potential for commercialization.

# Review and Selection Process

- Initial Administrative Review
- Full Review of Eligible, Complete, and Responsive Applications
  - Each application will be reviewed by at least three (3) independent reviewers using the evaluation criteria
  - Scores will be determined on an individual basis
  - All applications will be provided to the Evaluation Panel
- Evaluation Panel
  - Consist of NIST staff and/or other federal agency employees
  - Provide adjectival rankings of proposals for selecting official

# Evaluation Criteria

- Evaluation Panel will prepare and provide a final adjectival ranking taking into consideration the following
  - results of the reviewers' evaluations;
  - the extent to which the proposed scope of the research (materials, computational methods, personnel, or equipment) is complementary to the research programs and research goals in these areas at NIST as described at [www.nist.gov/mgi](http://www.nist.gov/mgi);
  - relevance of an application to the program as described in Section I of this FFO.
- Adjectival Rankings
  - Fundable, Outstanding
  - Fundable, Very Good
  - Fundable
  - Unfundable

# Evaluation Criteria

- Selection Official
  - Associate Director for Laboratory Programs (or designee)
  - Select an application to recommend to the Grants Office based on one or more of the following selection factors:
    - the results of the reviewers' evaluations; the Evaluation Panel evaluation; the availability of funds;
    - the extent to which the proposed scope of the research (materials, computational methods, personnel, or equipment) is complementary to the research programs and research goals in these areas at NIST as described at [www.nist.gov/mgi](http://www.nist.gov/mgi);
    - the relevance to the program as described in Section I. of this FFO; and
    - whether the project duplicates other projects funded by the Department of Commerce or other Federal agencies

# Points of Contact

Subject Area	Point of Contact
Programmatic and technical questions	Jason Averill Phone: 301-975-2661 Fax: 301-216-0529 E-mail: <a href="mailto:jason.averill@nist.gov">jason.averill@nist.gov</a>
Electronic proposal submission through Grants.gov	Christopher Hunton Phone: 301-975-5718 Fax: 301-840-5976 E-mail: <a href="mailto:christopher.hunton@nist.gov">christopher.hunton@nist.gov</a>
Grant rules and regulations	Scott McNichol Phone: 301-975-5603 Fax: 301-840-5976 E-mail: <a href="mailto:scott.mcnichol@nist.gov">scott.mcnichol@nist.gov</a>

# Questions

Thank you for your interest in the  
NIST Advanced Materials Center of Excellence.

We will now take questions from the webinar attendees.