

ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

Federal Agency Name: National Institute of Standards and Technology (NIST), Department of Commerce

Funding Opportunity Title: Center for Nanoscale Science and Technology Postdoctoral Researcher and Visiting Fellow Measurement Science and Engineering Program

Announcement Type: Initial

Funding Opportunity Number: 2010-CNST-01

Catalog of Federal Domestic Assistance (CFDA) Number: 11.609

Dates: All applications, paper and electronic, must be received no later than 5:00 p.m. Eastern Daylight Saving Time on Friday, April 30, 2010. Please see “Application Submission Information” for more information. Late applications will neither be reviewed nor considered.

Addresses:

- Paper submission:
Donna Lauren
Center for Nanoscale Science and Technology
National Institute of Standards and Technology
100 Bureau Drive, Stop 6200
Gaithersburg, Maryland 20899-6200
- Electronic submissions of full proposals must be submitted to: www.grants.gov

Funding Opportunity Description: The National Institute of Standards and Technology (NIST) Center for Nanoscale Science and Technology (CNST) is establishing a financial assistance program for awardees to develop and implement with the CNST a Postdoctoral Researcher and Visiting Fellow Measurement Science and Engineering Program. This program is intended to promote research, training, and practical experience in nanoscale science and technology on-site at the CNST, and to advance the CNST’s mission to support the development of nanotechnology through research on measurement and fabrication methods, standards and technology, and by operating a state-of-the-art nanofabrication facility, the NanoFab.

Total Amount to be Awarded: Up to \$15 million in Cooperative Agreements

Anticipated Amounts: NIST anticipates making 1-2 awards for a period of performance of up to 5 years at \$1,500,000 to \$3,000,000 per year per award.

Funding Instrument: Cooperative Agreement

Who Is Eligible: This program is open to U.S. institutions of higher education.

Cost Sharing Requirements: None

FULL ANNOUNCEMENT TEXT

A. Funding Opportunity Description

1. Program Objectives

The CNST's mission is to support the development of nanotechnology through research on measurement and fabrication methods, standards and technology, and by operating a state-of-the-art nanofabrication facility, the NanoFab. The primary program objectives of the Center for Nanoscale Science and Technology Postdoctoral Researcher and Visiting Fellow Measurement Science and Engineering Program are as follows:

1. To advance, through cooperative efforts with one or more universities, research consistent with the mission of NIST, and CNST specifically. See <http://www.nist.gov/cnst/> and 15 U.S.C. Sec. 271 et seq.
2. To provide training for the next generation of nanotechnologists by providing recent Ph.D. recipients postdoctoral positions ("Postdoctoral Researchers") to perform research at the CNST under the mentorship of a CNST Project Leader. The Postdoctoral Researchers must show promise as contributors to the mission of the CNST, and be selected on the basis of ability and of the relevance of the proposed work to the mission of the CNST.
3. To provide advanced training and access to the CNST's expertise and instrumentation by providing practicing scientists and engineers in the public and private sectors visiting senior research positions ("Visiting Fellows") to perform research at the CNST in collaboration with a CNST Project Leader. The Visiting Fellows must be selected on the basis of ability and on the relevance of the proposed work to the mission of the CNST.
4. To provide Postdoctoral Researchers and Visiting Fellows under this program with professional development opportunities, including travel to relevant workshops and conferences.
5. To encourage U.S. industrial, university, and government scientists to participate in research at the CNST, either in collaboration with the CNST research program or by using the NanoFab, by providing support for travel and local expenses for participants traveling beyond a normal commuting distance to the CNST in Gaithersburg, Maryland.

The CNST intends this financial assistance program to address all of these objectives through one or more Cooperative Agreements. An eligible applicant is not prohibited from including any collaborating subrecipients in its application.

The CNST supports nanotechnology development from discovery to production through two complementary components: an agile, multidisciplinary research program and a state of the art NanoFab facility. The Research Program is creating the next generation of nanoscale measurement instruments, which are made available through collaboration with CNST scientists.

The NanoFab is a shared-use facility operated on a cost-reimbursement basis that is accessible through a simple application process. It provides researchers from industry, government and academia rapid access to a comprehensive suite of world-class tools and processes for nanofabrication.

CNST research addresses broad areas of interest, including post-complementary metal oxide semiconductor electronics; nanofabrication and nanomanufacturing; energy transport, storage, and conversion; and bionanotechnology. Specific areas of interest include atomic-scale characterization and manipulation; scanning and transmission electron microscopy; focused ion beams; laser-atom manipulation; nanophotonic; nanoplasmonics; optical micro- and nanoelectromechanical systems (MEMS and NEMS); nanomagnetic imaging and dynamics; nanolithography; nanofabrication process development; directed self-assembly; nanoscale properties of soft matter; nanoscale stochastic processes; nanoscale control theory; nanoscale electronic and ionic transport; light-matter interaction, charge and energy transfer processes, catalytic activity, and interfacial structure in energy-related devices (including photovoltaics, thermoelectric, photoanodes, fuel cells, batteries, supercapacitors, and field emitters); nanobiosensors; nanofluidics; nanomedicine; and theory, modeling, and simulation of nanostructures.

Additional information about the CNST can be found at: www.nist.gov/cnst.

A recipient of a CNST Postdoctoral Researcher and Visiting Fellow Measurement Science and Engineering Program award will work jointly with the CNST to publicize CNST nanoscale measurement science interests, including those listed above. A recipient will identify candidates for Postdoctoral Researcher and Visiting Fellow positions, and the CNST and the recipient will collaborate in selecting candidates for particular CNST research projects based on cooperatively developed criteria. In cases where strong mutual research interests exist between the CNST and the recipient's faculty, a candidate may work jointly with both a CNST Project Leader and a recipient's faculty member. The recipient will provide all stipends, benefits, administrative support, and other expenses associated with the Postdoctoral Researchers and Visiting Fellows using the funds from the Cooperative Agreement.

Candidates for Postdoctoral Researcher and Visiting Fellow positions through this Program should be able to make significant contributions to CNST nanoscale measurement science and engineering programs of mutual interest, collaborating with CNST scientists and engineers at the CNST, commensurate with the level of training and experience of the type of position. For example, Visiting Fellows are expected to perform at the level of an independent researcher; the collaboration is not expected to involve more than minimal guidance from the CNST. In contrast, collaborations with Postdoctoral Researchers may involve more substantial guidance. The successful candidates for Postdoctoral Researcher and Visiting Fellow positions must demonstrate excellence in the areas of nanoscale science and engineering relevant to their proposed work, and commensurate with the proposed position.

The CNST expects applicants to this solicitation to possess the necessary background competencies in nanoscale science and technology to ensure that the research, education, training, and outreach aspects of this Program can be appropriately fulfilled. A successful applicant is also expected to possess organizational capability related to science and technology programs and management, including the ability to effectively and efficiently employ and manage researchers residing within a normal commuting distance to the CNST in Gaithersburg, Maryland.

2. Program Authorization: Authority: 15 U.S.C. § 272(b) and (c), 15 U.S.C. § 278g-1(a), (b), 15 U.S.C. §7501(b)

B. Award Information

The funding instrument used in this program will be a Cooperative Agreement.

Proposals will be considered for Cooperative Agreements with durations of up to five years, funded in one year increments, subject to the availability of funds, satisfactory progress, and the continuing relevance to the objectives of the NIST Center for Nanoscale Science and Technology. The anticipated level of funding is up to \$3,000,000 per year and one or more awards may be approved. Between one and three awards are likely. Projects are expected to start by September 20, 2010.

NIST will determine whether to fund one award for the full amount; to divide available funds into multiple awards of any size, and negotiate scopes of work and budgets as appropriate; or not to select any proposal for funding, upon completing the selection process described below.

C. Eligibility Information

1. Eligible Applicants: The CNST Financial Assistance Program is open to U.S. institutions of higher education.

2. Cost Sharing or Matching Requirement: None

D. Application Submission Information

1. Application Package

The forms listed in 2.a. through 2.e. below are available as part of the Grants.gov application package and can be completed through the download application process. Requests for paper copies of the application package can be made to Christopher Hunton at 301-975-5718 or christopher.hunton@nist.gov.

2. Content and Form of Application Submission

Complete applications/proposals must include the following forms and documents:

- a. SF-424, Application for Federal Assistance
- b. SF-424A, Budget Information Non-Construction
- c. SF-424B, Assurances Non-Construction
- d. CD-511, Certification Regarding Lobbying
- e. SF-LLL, Disclosure of Lobbying Activities (IF APPLICABLE)

Applications must include a Proposal Narrative and a Budget Narrative. Applications that are submitted without a Proposal Narrative and/or a Budget Narrative will be rejected. There is no set format for the Proposal Narrative and the Budget Narrative; however, they must be word-processed documents written by the applicant. The Proposal Narrative should be responsive to the program objectives and description, and describe in depth the scope of the proposal, its goals, the methods and/or equipment to be used, its schedule, the personnel working on the project and their qualifications, and the institutional capabilities of the applicant. The Budget Narrative should detail the funds requested, their purposes, and the timetable for using the funds.

The Proposal Narrative is limited to 25 pages. There is no page limit for the budget narrative.

The applicant is responsible for ensuring that the application is complete and that it conforms to the requirements of this notice.

Each paper applicant must submit one signed original and two paper copies of the complete application. Facsimile, electronic mail, and other forms of electronic application submissions will not be accepted.

Proposals may be structured in any way that the applicant believes will best present the proposed project.

The applicant should address the following issues:

- a. **Qualifications:** Proposals should include a description of the institution's qualifications for conducting the proposed project. Applicant institutions must ensure the availability of Postdoctoral Researchers and Visiting Fellows for on-site research in Gaithersburg, Maryland.
- b. **Recruiting Plan:** Proposals should include an explanation of the methods and criteria that will be used to identify, recruit, and assess a diverse set of candidates for Postdoctoral Researcher and Visiting Fellow positions.
- c. **Objectives:** Proposals should include a description of expected project outcomes and benefits to the participating Postdoctoral Researchers and Visiting Fellows and organizations expressed in measurable terms.
- d. **Evaluation:** Proposals should include plans for measuring success or determining the degree to which the project objectives were met.

- e. Other: Applicants may provide additional information, which is not required to conform to a prescribed format.
- f. Proposal Budget: Applicants should use the SF-424A to complete the budget submission. In addition to the SF-424A, applicants must provide a detailed budget narrative to explain fully and justify all proposed project funding including each level of Postdoctoral Researcher and Visiting Fellow position and other resources, along with the travel support program (Objective 5, above).

Each proposal should include necessary costs to provide oversight of the program. All successful applicants will be required to have a Program Coordinator. Responsibilities of the successful applicant's Program Coordinator include the following: serving as a single point of contact for the Postdoctoral Researcher and Visiting Fellow applicants and participants, and for the CNST scientists and engineers; assisting Postdoctoral Researchers and Visiting Fellows and CNST Project Leaders in implementing the program and resolving any difficulties that may arise; and serving as the signatory on all agreements between NIST, the Administering Organization, and each Postdoctoral Researcher or Visiting Fellow.

3. Submission Dates and Times

All applications must be received no later than 5:00 p.m. Eastern Daylight Savings Time on Friday, April 30, 2010.

Important: All applicants, both electronic and paper, should be aware that adequate time must be factored into applicant schedules for delivery of the application. Electronic applicants are advised that volume on Grants.gov may be extremely heavy, and if Grants.gov is unable to accept applications electronically in a timely fashion, applicants are encouraged to exercise their option to submit applications in paper format.

Applications must be received on time, as the review process is expected to begin shortly after the deadline.

4. Executive Order 12372 (Intergovernmental Review of Federal Programs)

Applications under this program are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

5. Funding Restrictions: None

6. Other Submission Requirements

Applications that are sent via surface mail should be sent to:

Donna Lauren
Center for Nanoscale Science and Technology
National Institute of Standards and Technology

100 Bureau Drive, Stop 6200
Gaithersburg, Maryland 20899-6200

Paper submissions require an original and two (2) copies.

Applications may be submitted electronically via <http://www.grants.gov>. Any revisions to the submission requirements, including revisions for any reason to the due date for applications, will be announced through an amendment to the Federal Funding Opportunity notice in Grants.gov and in the Federal Register when applicable. Applicants can sign up for Grants.gov FFO amendments, while applicants without access to the Internet can contact the program and have any changes mailed to them.

Instructions for Applying Electronically for the NIST Announcement:

The following forms are available as part of the Grants.gov application kit and can be completed through the download application process.

- SF-424, Application for Federal Assistance
- SF-424A, Budget Information – Nonconstruction Programs
- SF-424B, Assurances – Nonconstruction Programs
- CD-511, Certification Regarding Lobbying
- SF-LLL, Disclosure of Lobbying Activities (if applicable)

The list of certifications and assurances referenced in item number 21 of the SF-424 is contained in the SF-424B. Please attach the Proposal Narrative document and the Budget Narrative document by clicking on the “Add Attachments” rectangle in field 15 of the SF-424 form.

In order for an application to be considered complete, it must meet all the application documentation requirements stated in this Federal Funding Opportunity notice.

If you choose to apply via Grants.gov, all requirements of the application described above must be also be included. Applicants should carefully follow specific Grants.gov instructions to ensure the attachments will be accepted by the Grants.gov system. Applicants may choose to scan or create the necessary documents and then attach them to the application in www.grants.gov. A receipt from Grants.gov indicating a proposal is received does not provide information about whether attachments have been received. For further information or questions regarding applying electronically for the announcement, please contact Christopher Hunton at 301-975-5718, e-mail address Christopher.Hunton@nist.gov.

Applicants are strongly encouraged to start early and not to wait until the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov.

The Grants.gov registration process must be completed before a new registrant can apply electronically. If all goes well, the registration process takes from 3 to 5 business days. If problems are encountered, the registration process can take up to 2 weeks or more. Applicants

must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number and must be registered with the Federal Central Contractor Registry and with a Credential Provider, as explained on the Grants.gov web site. After registering, it may take several days or longer from the initial log-on before a new Grants.gov system user can submit an application. Only authorized individual(s) will be able to submit the application, and the system may need time to process a submitted application. Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received, and (b) call Grants.gov directly at 800-518-4726 for immediate assistance. Assistance from the Grants.gov Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Standard Time the day after Federal holidays. For assistance using the Grants.gov, you may also contact support@grants.gov.

Please refer to important information in the “Submission Dates and Times” above to help ensure your application is received on time.

E. Application/Proposal Review Information

1. Evaluation Criteria

The applications will be evaluated and scored on the basis of the following evaluation criteria:

1. Technical merit of the proposal: Assesses whether the proposal accurately addresses the program goals and objectives. (40 pts)
2. Overall qualifications of the applicant: Assesses whether the applicant possesses the necessary experience, training, facilities, and administrative resources to accomplish the project. (40 pts)
3. Quality of the plan for providing support for travel and local expenses for students and scientists to participate in research at the CNST. (10 pts)
4. Project costs: The proposal budget is evaluated to determine if it is realistic and commensurate with the project needs and time-frame. (10 pts)

2. Selection Factors

The Selecting Official shall recommend award based upon the rank order and recommendations of the reviewers and upon one or more of the following factors:

- a. Availability of Federal funds;
- b. Balance/distribution of funds to ensure research opportunities for all types of Postdoctoral Researchers and Visiting Fellows and CNST scientific research areas described in the Program Description section of this Notice; and
- c. Applicant's prior award performance.

Therefore, the highest scoring proposals may not necessarily be selected for an award. If an award is made to an applicant that deviates from the scores of the reviewers, the Selecting Official will justify the selection in writing based on selection factors described above.

3. Review and Selection Process

Initial Screening of all Applications: All timely submitted applications received in response to this announcement will be reviewed to determine whether they are complete and responsive to the scope of the stated objectives of the Program. Incomplete or non-responsive applications will not be reviewed for technical merit. NIST will retain one copy of each incomplete or non-responsive application for three years for record keeping purposes. The remaining copies will be destroyed.

Each complete and responsive application will be reviewed by at least three independent, objective NIST employees, who are knowledgeable in the subject matter of this announcement and the program objectives, and who are able to conduct a review based on the Evaluation Criteria for the Program as described in this notice. The reviewers will reach a consensus score resulting in a rank order of applications and make recommendations for funding to the Selecting Official. In making final selections, the Selecting Official (Deputy Director, CNST) will select funding recipients based upon the rank order of the proposals and the selection factors. The final award of Cooperative Agreements will be made by the NIST Grants Officer in Gaithersburg, Maryland, based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants are determined to be responsible. Unsatisfactory performance on any previous Federal award may result in an application not being considered for funding. Applicants may be asked to modify objectives, work plans, or budgets, and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

4. Anticipated Announcement and Award Date

NIST plans to make awards by September 20, 2010.

F. Award Administration Information

1. Award Notices: Successful finalists will receive a cooperative agreement award document from the Grant Officer. The document will be mailed via surface mail in triplicate. The recipient should have an authorized official at the organization sign and return two copies to the address listed in the award document. The award document will also include the standard terms and conditions, general terms and conditions (if any), and special award conditions (if any) that are applicable.

2. Administrative and National Policy Requirements

The Department of Commerce Pre-Award Notification Requirements for Grants and

Cooperative Agreements: The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements, which are contained in the Federal Register Notice of February 11, 2008 (73 Fed. Reg. 7696), are applicable to this notice. On the form SF-424 items 8.b. and 8.c., the applicant's 9-digit Employer/Taxpayer Identification Number (EIN/TIN) and 9-digit Dun and Bradstreet Data Universal Numbering System (DUNS) number must be consistent with the information on the Central Contractor Registration (CCR) (www.ccr.gov) and Automated Standard Application for Payment System (ASAP). For complex organizations with multiple EIN/TIN and DUNS numbers, the EIN/TIN and DUNS numbers MUST be the numbers for the applying organization. Organizations that provide incorrect/inconsistent EIN/TIN and DUNS numbers may experience significant delays in receiving funds if their proposal is selected for funding. Please confirm that the EIN/TIN and DUNS number are consistent with the information on the CCR and ASAP.

Collaborations with NIST Employees: Collaboration with NIST is presumed in the Center for Nanoscale Science and Technology Postdoctoral Researcher and Visiting Fellow Measurement Science and Engineering Program. If any applicant proposes any activities involving specific NIST employees, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved. 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.

Use of NIST Intellectual Property: If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described at 35 U.S.C. §§200-212, 37 C.F.R. part 401, 15 C.F.R. §14.36, and in Section B.21 of the Department of Commerce Pre-Award Notification Requirements, 73 Fed. Reg. 7696 (Feb. 11, 2008). Questions about these requirements may be directed to the Chief Counsel for NIST, 301-975-2803.

Any use of NIST-owned intellectual property by a proposer is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this notice, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

Research Projects Involving Human Subjects, Human Tissue, Data or Recordings

Involving Human Subjects: Any proposal that includes research involving human subjects, human tissue, data or recordings involving human subjects must meet the requirements of the Common Rule for the Protection of Human Subjects (Common Rule), codified for the Department of Commerce at 15 C.F.R. Part 27. In addition, any proposal that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Presidential statements of policy on these topics. NIST will accept the submission of human subjects protocols that have been approved by Institutional Review Boards (IRBs) possessing a current registration filed with DHHS and to be performed by institutions possessing a current, valid Federal-wide Assurance (FWA) from DHHS. NIST will not issue a single project assurance (SPA) for any IRB reviewing any human subjects protocol proposed to NIST.

President Obama has issued Executive Order No. 13,505 (74 FR. 10667, March 9, 2009), revoking previous Executive Orders and Presidential statements regarding the use of human embryonic stem cells in research. On July 30, 2009, President Obama issued a memorandum directing that agencies that support and conduct stem cell research adopt the “National Institutes of Health Guidelines for Human Stem Cell Research” (NIH Guidelines), which became effective on July 7, 2009, “to the fullest extent practicable in light of legal authorities and obligations.” On September 21, 2009, the Department of Commerce submitted to the Office of Management and Budget a statement of compliance with the NIH Guidelines. In accordance with the President’s memorandum, the NIH Guidelines, and the Department of Commerce statement of compliance, NIST will support and conduct research using only human embryonic stem cell lines that have been approved by NIH in accordance with the NIH Guidelines and will review such research in accordance with the Common Rule, as appropriate. NIST will not support or conduct any type of research that the NIH Guidelines prohibit NIH from funding. NIST will follow any additional policies or guidance issued by the current Administration on this topic.

Research Projects Involving Vertebrate Animals: Any proposal that includes research involving vertebrate animals must be in compliance with the National Research Council's “Guide for the Care and Use of Laboratory Animals” which can be obtained from National Academy Press, 2101 Constitution Avenue, NW., Washington, DC 20055. In addition, such proposals must meet the requirements of the Animal Welfare Act (7 U.S.C. §2131 et seq.), 9 C.F.R. Parts 1, 2, and 3, and if appropriate, 21 C.F.R. Part 58. These regulations do not apply to proposed

research using pre-existing images of animals or to research plans that do not include live animals that are being cared for, euthanized, or used by the project participants to accomplish research goals, teaching, or testing. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks.

Limitation of Liability: Funding for the programs listed in this notice is contingent upon the availability of Fiscal Year 2010 appropriations. Publication of this announcement does not oblige NIST or the Department of Commerce to award any specific project or to obligate any available funds.

Collaborations making use of Federal Facilities: All applications should include a description of any work proposed to be performed using Federal Facilities.

If an applicant proposes use of NIST facilities, the statement of work should include a statement of this intention and a description of the facilities. Any use of NIST facilities 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 availability of the facilities and approval of the proposed usage. Any unapproved facility use will be stricken from the proposal prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the NIST Technology Services web site, <http://ts.nist.gov/>.

Reporting: Successful finalists will be required to submit, on a semi-annual basis, for the periods ending March 31 and September 30 of each year, a technical progress report and a SF-269, Financial Status Report. From time to time, and in accordance with the Uniform Administrative Requirements and other terms and conditions governing the award, the recipient may need to submit property and patent reports.

G. Agency Contact

Program questions should be addressed to Donna Lauren, Center for Nanoscale Science and Technology, National Institute of Standards and Technology, 100 Bureau Drive, Stop 6200, Gaithersburg, Maryland 20899-6200. Tel (301) 975-3729, E-Mail: donna.lauren@nist.gov.

Grants Administration questions should be directed to Judy Murphy, Grants and Agreements Management Division, National Institute of Standards and Technology, 100 Bureau Drive, Stop 1650, Gaithersburg, Maryland 20899-6200. Tel (301) 975-5603, E-Mail: judy.murphy@nist.gov.