

# American Competitiveness in Chemistry-Fellowship (ACC-F)

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## PROGRAM SOLICITATION NSF 10-535

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### REPLACES DOCUMENT(S): NSF 08-541

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National Science Foundation

Directorate for Mathematical & Physical Sciences  
Division of Chemistry

**Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

May 06, 2010

April 04, 2011

First Monday in April, Annually Thereafter

## IMPORTANT INFORMATION AND REVISION NOTES

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A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), [NSF 11-1](#), was issued on October 1, 2010 and is effective for proposals submitted, or due, on or after January 18, 2011. Please be advised that the guidelines contained in [NSF 11-1](#) apply to proposals submitted in response to this funding opportunity. Proposers who opt to submit prior to January 18, 2011, must also follow the guidelines contained in [NSF 11-1](#).

**Cost Sharing:** The PAPPG has been revised to implement the National Science Board's recommendations regarding cost sharing. Inclusion of voluntary committed cost sharing is prohibited. In order to assess the scope of the project, all organizational resources necessary for the project must be described in the Facilities, Equipment and Other Resources section of the proposal. The description should be narrative in nature and must not include any quantifiable financial information. Mandatory cost sharing will only be required when explicitly authorized by the NSF Director. See the PAPP Guide Part I: *Grant Proposal Guide (GPG) Chapter II.C.2.g*(xi) for further information about the implementation of these recommendations.

**Data Management Plan:** The PAPPG contains a clarification of NSF's long standing data policy. All proposals must describe plans for data management and sharing of the products of research, or assert the absence of the need for such plans. FastLane will not permit submission of a proposal that is missing a Data Management Plan. The Data Management Plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate. Links to data management requirements and plans relevant to specific Directorates, Offices, Divisions, Programs, or other NSF units are available on the NSF website at: <http://www.nsf.gov/bfa/dias/policy/dmp.jsp>. See [Chapter II.C.2.j](#) of the GPG for further information about the implementation of this requirement.

### Revision Summary

Deadlines for ACC-F proposals have been established for the FY2010 and future competitions. The current solicitation will be effective until replaced.

Beginning with the FY2010 competition, the eligibility criterion has been changed. Applicants must have received their Ph.D. no later than four years from the expected start date of the fellowship. Applicants who have not received their Ph.D. may apply, as long as they expect to receive their Ph.D. by the start date of the fellowship.

## SUMMARY OF PROGRAM REQUIREMENTS

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### General Information

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#### Program Title:

American Competitiveness in Chemistry-Fellowship (ACC-F)

#### Synopsis of Program:

The American Competitiveness in Chemistry-Fellowship program is a program to support postdoctoral associates in chemistry. It seeks to (1) build ties between academic and industrial, and/or national laboratory, and/or Chemistry Division-funded center researchers (partners) and (2) involve beginning scientists in efforts to broaden participation in chemistry. Fellows will pursue research with industrial, and/or national laboratory, and/or Chemistry Division-funded center partners that will enrich their in-house research program. In addition, fellows will develop and implement their own plans for broadening participation in the chemical sciences. Successful applicants must propose a well-integrated, synergistic research plan with their chosen affiliate as well as an effective outreach plan that will broaden participation by underrepresented groups in chemistry. The research must be in a thematic area that is supported by the NSF Division of Chemistry.

The Program will support Fellows for two years of postgraduate study. The Chemistry Division envisions that Postdoctoral Fellows with successful programs who pursue careers in academia will have opportunities for

significant additional funding, either through supplements to their original ACC-F award, or through new awards from the Division.

**Cognizant Program Officer(s):**

- Charles Pibel, Program Director, Physical Chemistry, telephone: (703) 292-4971, email: [cpibel@nsf.gov](mailto:cpibel@nsf.gov)

**Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):**

- 47.049 --- Mathematical and Physical Sciences

## Award Information

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**Anticipated Type of Award:** Standard Grant or Continuing Grant

**Estimated Number of Awards:** 10

**Anticipated Funding Amount:** \$2,000,000 in FY 2010 subject to the availability of funds.

## Eligibility Information

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**Organization Limit:**

Proposals may only be submitted by the following:

- Fellowship proposals may be submitted by a US university, college, or non-profit, non-academic organization with the prospective Fellow as the Principal Investigator (PI).
- Fellowship proposals may also be submitted by individuals who are unaffiliated or who are affiliated with for-profit organizations, state or local governments or federal agencies. When applying as independent/unaffiliated individuals, Fellow applicants must register with FastLane prior to submitting their proposals and, if recommended for a Fellowship, must affiliate with a US university, college, or non-profit, non-academic organization, which administers the Fellowship award.

**PI Limit:**

The PI on an American Competitiveness in Chemistry-Fellowship must be the prospective Fellow. No co-PIs are allowed.

At the time of the award, a Fellow must hold a doctorate in the chemical sciences and must be a US citizen or permanent resident.

For a Postdoctoral Fellowship, the individual must have received his or her doctorate within four years from the start date of the fellowship. PIs who have not yet received their PhD are eligible to apply, but must have received their Ph.D. by the start date of the fellowship.

Exceptions to this time-related restriction can be made for extenuating personal circumstances, such as a career interruption due to family responsibilities, but must be approved by a cognizant program officer prior to submission of the proposal.

**Limit on Number of Proposals per Organization:**

None Specified

**Limit on Number of Proposals per PI:** 1

**A. Proposal Preparation Instructions**

- **Letters of Intent:** Not Applicable
- **Preliminary Proposal Submission:** Not Applicable
- **Full Proposals:**
  - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg).
  - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=grantsgovguide](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide))

**B. Budgetary Information**

- **Cost Sharing Requirements:** Inclusion of voluntary committed cost sharing is prohibited.
- **Indirect Cost (F&A) Limitations:** In lieu of indirect costs, an institutional allowance of \$10,000 per year should be requested in the proposal budget.
- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full text of this solicitation for further information.

**C. Due Dates**

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

May 06, 2010

April 04, 2011

First Monday in April, Annually Thereafter

## Proposal Review Information Criteria

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**Merit Review Criteria:** National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

## Award Administration Information

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**Award Conditions:** Additional award conditions apply. Please see the full text of this solicitation for further information.

**Reporting Requirements:** Standard NSF reporting requirements apply.

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## I. INTRODUCTION

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The impact of technology is accelerating, making the perceived size of the world smaller and smaller. Industries can draw upon human talent anywhere in the world to support their enterprises. As the physical importation into the United States of scientific talent from abroad becomes increasingly competitive, the importance of developing home-grown talent increases. These pressures are predicted to have a profound effect on the American economy and the scientific leadership position of the United States in the world. Concern about continued American competitiveness has led the Federal government to take measures to address the underlying issues. This includes a passage of the America COMPETES Act.

The Chemistry Division has co-organized a number of workshops that deal with these same issues, including one focused on American competitiveness in the chemical sciences and related industries. Entitled "Sustaining America's Competitive Edge: Enhancing Innovation and Competitiveness through Investments in Fundamental Research," the workshop report is available at: <http://enhancinginnovation.wustl.edu/>. Other Chemistry Division workshops have highlighted the need to improve the representation of women and underrepresented minorities in the chemical sciences, with an emphasis on academia: "Building Strong Academic Chemistry Departments Through Gender Equity" and "Excellence Empowered by a Diverse Workforce: Achieving Racial and Ethnic Equity in Chemistry." The report for the former is available at: <http://www.chem.harvard.edu/groups/friend/GenderEquityWorkshop/>.

Some excerpts from these reports are illustrative of the pressures described above.

"Because of its central position bridging physics, materials, and life sciences, chemistry plays a crucial role in a broad range of technologies... As emerging nations' technologists climb the learning curve, our global economic position is becoming ever more competitive. Yet, in times of increasing needs for scientists and engineers, the workforce pipelines within the United States are woefully inadequate. According to the National Science Board Companion to Science and Engineering Indicators in 2006, there is a troubling decline in the number of U. S. citizens who are training to become scientists and engineers, whereas the number of jobs requiring science and engineering training continues to grow." <http://enhancinginnovation.wustl.edu/>

"Vigorous and imaginative efforts are needed to attract more U. S. citizens to science, engineering, and mathematics. Women and members of minority groups are underutilized human resources of great importance. The talented people drawn to science and technology must be team players, innovators, problem-solvers, doers, and comfortable bridging different areas of research... Academicians and industry leaders should carefully review the graduate education enterprise and consider innovations in the education experience to optimize the prospects for success in today's highly competitive world of science- and technology-based industry... Policymakers should support a cooperative system of training for academic and industrial researchers across the physical and chemical sciences, allowing researchers from industry to spend time working in a university setting, and vice versa." <http://www.chem.harvard.edu/groups/friend/GenderEquityWorkshop/>

With this community input in mind, the goal of the American Competitiveness in Chemistry-Fellowship program is to support the training of beginning, independent chemical scientists who are proficient at research that straddles the academic-industrial-national laboratory interfaces and at developing untapped pools of scientific talent that exist in this country.

## II. PROGRAM DESCRIPTION

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The American Competitiveness in Chemistry-Fellowship program is a program to support postdoctoral students in chemistry for two years of study. It seeks to (1) build ties between academic and industrial, and/or national laboratory, and/or NSF Chemistry Division-funded center researchers (affiliates) and (2) involve beginning scientists in efforts to broaden participation in chemistry. Fellows will pursue research with industrial, and/or national laboratory, and/or NSF Chemistry Division-funded center partners that will enrich their own research program. In addition, fellows will develop and implement their own plans for broadening participation in the chemical sciences. Successful applicants must propose a well-integrated, synergistic research plan with their chosen affiliate as well as an effective outreach plan that will broaden participation by underrepresented groups in chemistry. The research must be in a thematic area that is supported by the NSF Division of Chemistry.

## III. AWARD INFORMATION

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The NSF Division of Chemistry expects to award 10 Fellowships under this program solicitation. Anticipated funding is \$2,000,000 in FY 2010 subject to the availability of funds. The grantee institution will receive a \$200,000 award for two years for the costs described below. The Fellowship stipend is \$75,000 for a 12-month period, including fringe benefits. Fellows are allowed an additional \$15,000 per year for research expenses. The grantee institution receives \$10,000 per year in lieu of indirect costs. All awards will be for a maximum of 2 years. The anticipated award date is September 1, following the submission of proposals.

## IV. ELIGIBILITY INFORMATION

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### Organization Limit:

Proposals may only be submitted by the following:

- Fellowship proposals may be submitted by a US university, college, or non-profit, non-academic organization with the prospective Fellow as the Principal Investigator (PI).
- Fellowship proposals may also be submitted by individuals who are unaffiliated or who are affiliated with for-profit organizations, state or local governments or federal agencies. When applying as independent/unaffiliated individuals, Fellow applicants must register with FastLane prior to submitting their proposals and, if recommended for a Fellowship, must affiliate with a US university, college, or non-profit, non-academic organization, which administers the Fellowship award.

### PI Limit:

The PI on an American Competitiveness in Chemistry-Fellowship must be the prospective Fellow. No co-PIs are allowed.

At the time of the award, a Fellow must hold a doctorate in the chemical sciences and must be a US citizen or permanent resident.

For a Postdoctoral Fellowship, the individual must have received his or her doctorate within four years from the start date of the fellowship. PIs who have not yet received their PhD are eligible to apply, but must have received their Ph.D. by the start date of the fellowship.

Exceptions to this time-related restriction can be made for extenuating personal circumstances, such as a career interruption due to family responsibilities, but must be approved by a cognizant program officer prior to submission of the proposal.

### Limit on Number of Proposals per Organization:

None Specified

### Limit on Number of Proposals per PI: 1

### Additional Eligibility Info:

The postdoctoral applicant must be the PI on the proposal. Any deviation must be authorized in advance by the cognizant program officer.

The three eligibility requirements for the American Competitiveness in Chemistry-Fellowship Program -- citizenship, degree requirements, and field of study -- are described below. Applicants are advised to read the entire program solicitation carefully to be sure that the requirements are interpreted properly.

Eligibility will be determined only by review of a complete, submitted application, including the two required letters of collaboration.

#### Citizenship

Applicants must be United States citizens or nationals, or permanent resident aliens of the United States.

The term "national" designates a native resident of a commonwealth or territory of the United States, such as American Samoa, Guam, Puerto Rico, U.S. Virgin Islands, or the Northern Mariana Islands. It does not refer to a citizen of another country who has applied for U.S. citizenship.

#### Field of Study and Degree Requirements

The applicant must propose research that is in an area supported by the NSF Chemistry Division. It is recommended that applicants search NSF's Awards Abstract Database to determine whether her/his research area is currently supported in the Chemistry Division, and discuss their research project with the appropriate program officer in the NSF Chemistry Division.

Partners are limited to federally funded research and development centers, such as national labs, NSF Chemistry Division-funded centers, and U.S.-located industrial laboratories. NSF Chemistry Division-funded centers affiliated

with the applicant's institution do not qualify as a partner. Research in collaboration with the partner will be non-proprietary and publishable in the peer-reviewed literature. Extension of the collaboration beyond what can be supported directly by the ACC-F Program may be a suitable topic for the GOALI Program (NSF 09-516). Successful industrial-academic collaborations that result from a Fellow's research are encouraged to submit GOALI proposals to the appropriate program in the NSF Chemistry Division.

The applicant's postdoctoral advisor need not have current NSF support for her/his own research.

For a Postdoctoral Fellowship, the individual must have received his or her doctorate within four years from the start date of the fellowship. PIs who have not yet received their PhD are eligible to apply, but must have received their Ph.D. by the start date of the fellowship.

#### Letters of Collaboration

Industrial /National Laboratory/NSF Chemistry Division-funded Center Partner: This letter will outline the nature of the partner organization's support for the applicant's research plan. **This is not simply a letter of recommendation.**

Chemistry Postdoctoral Advisor: The postdoctoral advisor must confirm support for the applicant's plan for research at the partner organization as well as the applicant's plan for broadening participation. The postdoctoral advisor must include a description of the mentoring activities that will be provided for the applicant, such as career counseling, training in preparing grant applications, guidance on ways to improve teaching skills, and training in research ethics. **This is not simply a letter of recommendation.**

## V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

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### A. Proposal Preparation Instructions

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**Full Proposal Preparation Instructions:** Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov). Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: ([http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=grantsgovguide](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov).

**Supplemental Application Materials are described below:**

- Letter of Collaboration from partner organization, limited to 1 page: This letter will outline the nature of the collaboration between the partner institution and the PI. Some of the questions to be addressed could include: What kind of support will be provided? Will there be access to specialized instrumentation? Will the PI have access to unique materials or expertise?, etc. **This is not simply a letter of recommendation.**
- Letter from chemistry postdoctoral advisor, limited to 1 page: The postdoctoral advisor must confirm support the applicant's plan for research at the advisor's institution and at the partner organization. In addition, the advisor must confirm support for the applicant's plan for broadening participation. The postdoctoral advisor must include a description of the mentoring activities that will be provided for the applicant, such as career counseling, training in preparing grant applications, guidance on ways to improve teaching skills, and training in research ethics. **This is not simply a letter of recommendation.**

### B. Budgetary Information

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**Cost Sharing:** Inclusion of voluntary committed cost sharing is prohibited

**Indirect Cost (F&A) Limitations:** In lieu of indirect costs, an institutional allowance of \$10,000 per year should be requested in the proposal budget.

**Other Budgetary Limitations:** NSF awards \$100,000 per year to the grantee institution for each Fellow.

The American Competitiveness in Chemistry-Fellowship stipend currently is \$75,000, including fringe benefits, for a 12-month period.

Fellows are allowed an additional \$15,000 per year for research expenses, such as materials & supplies, publication costs, computer services, and travel.

The grantee institution receives \$10,000 per year in lieu of indirect costs.

Amounts subject to availability of funds.

### C. Due Dates

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**Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

May 06, 2010

April 04, 2011

First Monday in April, Annually Thereafter

## D. FastLane/Grants.gov Requirements

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- **For Proposals Submitted Via FastLane:**

Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail [fastlane@nsf.gov](mailto:fastlane@nsf.gov). The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

**Submission of Electronically Signed Cover Sheets.** The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: <https://www.fastlane.nsf.gov/fastlane.jsp>.

- **For Proposals Submitted Via Grants.gov:**

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. The Grants.gov's Grant Community User Guide is a comprehensive reference document that provides technical information about Grants.gov. Proposers can download the User Guide as a Microsoft Word document or as a PDF document. The Grants.gov User Guide is available at: <http://www.grants.gov/CustomerSupport>. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: [support@grants.gov](mailto:support@grants.gov). The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

**Submitting the Proposal:** Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

## VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

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Proposals received by NSF are assigned to the appropriate NSF program where they will be reviewed if they meet NSF proposal preparation requirements. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal.

### A. NSF Merit Review Criteria

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All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgments.

**What is the intellectual merit of the proposed activity?**

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

**What are the broader impacts of the proposed activity?**

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>.

NSF staff also will give careful consideration to the following in making funding decisions:

**Integration of Research and Education**

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

### **Integrating Diversity into NSF Programs, Projects, and Activities**

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

#### **Additional Review Criteria:**

- Partnership: How will the collaboration with the partner enrich the research of the applicant? Are there additional methods/techniques/infrastructure/materials available to the applicant through the collaboration that would not otherwise be available? Will the collaboration contribute positively to the postgraduate educational experience of the applicant? Will the collaboration help build lasting ties between the applicant's institution and the partner?
- Broadening Participation Plan: Is the plan reasonable for the time commitment that the applicant proposes? Is the plan expected to have lasting, meaningful results? Will the activities be self-sustaining? How will the applicant determine the success of her/his broadening participation plan?

## **B. Review and Selection Process**

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Proposals submitted in response to this program solicitation will be reviewed by Panel Review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

## **VII. AWARD ADMINISTRATION INFORMATION**

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### **A. Notification of the Award**

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Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

### **B. Award Conditions**

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An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (GC-1); \* or Research Terms and Conditions \* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

\*These documents may be accessed electronically on NSF's Website at [http://www.nsf.gov/awards/managing/award\\_conditions.jsp?org=NSF](http://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF). Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov).

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the *NSF Award & Administration Guide (AAG)* Chapter II, available electronically on the NSF Website at [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=aag](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag).

**Special Award Conditions:** American Competitiveness in Chemistry-Fellowship applicants will be notified if they will be offered a Fellowship. The applicant must accept the Fellowship (via email to the cognizant program officer) or withdraw their application within 30 days of notification. Fellowships must begin in September following the submission of the proposal.

Unaffiliated applicants must affiliate with a host organization in order to receive the Fellowship. A Fellows Award will not be finalized until a host organization provides to NSF a revised cover sheet and budget for the proposed activity signed by an authorized organizational representative. Guidance regarding this process will be provided by the NSF Program Officer.

Fellowships are made to the organization on behalf of the Fellow. If the Fellow chooses to affiliate with another organization during the Fellowship and receives approval from the NSF Program Officer, the current awardee organization must allow the fellowship to be transferred.

## C. Reporting Requirements

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For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational) publications; and, other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

## VIII. AGENCY CONTACTS

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General inquiries regarding this program should be made to:

- Charles Pibel, Program Director, Physical Chemistry, telephone: (703) 292-4971, email: [cpibel@nsf.gov](mailto:cpibel@nsf.gov)

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: [fastlane@nsf.gov](mailto:fastlane@nsf.gov).
- Paul G. Spyropoulos, telephone: (703) 292-4968, email: [pspyropo@nsf.gov](mailto:pspyropo@nsf.gov)

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: [support@grants.gov](mailto:support@grants.gov).

## IX. OTHER INFORMATION

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The NSF Website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this Website by potential proposers is strongly encouraged. In addition, National Science Foundation Update is a free e-mail subscription service designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Regional Grants Conferences. Subscribers are informed through e-mail when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the [NSF web site](#).

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at <http://www.grants.gov>.

Related Programs:

Discovery Corps Fellowships ([NSF 07-516](#))

Grant Opportunities for Academic Liaison with Industry (GOALI) ([NSF 07-522](#))

## ABOUT THE NATIONAL SCIENCE FOUNDATION

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The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 40,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

*Facilitation Awards for Scientists and Engineers with Disabilities* provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at <http://www.nsf.gov>

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
- **For General Information** (NSF Information Center): (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**  
Send an e-mail to: [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov)  
or telephone: (703) 292-7827
- **To Locate NSF Employees:** (703) 292-5111

## PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton  
Reports Clearance Officer  
Division of Administrative Services  
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