

NSF Proposal Submissions

Lynnette Madsen, DMR July 2011

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Supplemental Requests

- Should be unanticipated; otherwise include in original proposal (to strengthen it, particularly the broader impacts)
- All requests to be made in Jan./Feb. (unless exceptional circumstances, e.g., time sensitivity)
 - July-Sept.: CAREER proposals sent for review
 - Sept.-Dec.: new proposals are sent for review
 - **Jan.-Feb.: supplemental requests to CER**
 - Mar.-Apr.: recommendations
 - May-Aug.: generally \$0 available
- Must be compliant or will be returned without review
- Instructions in Grant Proposal Guide (GPG)

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Characteristics of Supplements

- Currently abstract is not modified, so not reflected on website
- **International Supplements:** often funded in part by our Office of International Science and Engineering (OISE)
- **GOALI:** often funded in part by MPS' Office of Multidisciplinary Activities (OMA) to promote collaboration with industry
- CER Program: Not supported via supplemental funding:
 - REU students
- Re-budgeting to accommodate different priorities is okay, often approval is not required by NSF

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Examples from FY10 (8 in total)

- 2 ACI Fellowships (recognition award)
- 1 MIPR Army Office; Army Office supplied funds
- 1 Small supplement to work with national laboratory; Sandia co-funded
- 3 GOALI supplements including one emergency (one-year extension with extenuating circumstances)
- 1 Other emergency: equipment failure

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Submitting New & Renewal Proposals

- **Window: opens in Sept.**, submit early to allow the most time for review, an early decision, compliance issues, etc.
- Consider 4 years, unless a shorter duration makes more sense
- **Include all broader impacts upfront**, rather than planning on a supplemental request
- Equipment <\$100K may be included, it should be well justified
- New and Renewal proposals are treated the same
- Pick your best project, team, etc.
- Options: unsolicited, GOALI, FRG, RUI, GOALI/FRG

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Cover Page

COVER SHEET FOR PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION

PROGRAM ANNOUNCEMENT/SOLICITATION NO./CLOSING DATE (If not in response to a program announcement/solicitation enter NSF 09-29)				FOR NSF USE ONLY	
NSF 09-29		10/31/09		NSF PROPOSAL NUMBER	
FOR CONSIDERATION BY NSF ORGANIZATION UNIT(S) (Indicate the most specific unit known, i.e. program, division, etc.)				1006640	
DMR - CERAMICS					
DATE RECEIVED	NUMBER OF COPIES	DIVISION ASSIGNED	FUND CODE	DUNS# (Data Universal Numbering System)	FILE LOCATION
11/02/2009	4	03070000 DMR	1774	094878394	11/02/2009 8:28pm
EMPLOYER IDENTIFICATION NUMBER (EIN) OR TAXPAYER IDENTIFICATION NUMBER (TIN)	SHOW PREVIOUS AWARD NO. IF THIS IS <input type="checkbox"/> A RENEWAL <input type="checkbox"/> AN ACCOMPLISHMENT-BASED RENEWAL		IS THIS PROPOSAL BEING SUBMITTED TO ANOTHER FEDERAL AGENCY? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> IF YES, LIST ACRONYM(S)		
956006145					
NAME OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE		ADDRESS OF AWARDEE ORGANIZATION, INCLUDING 9 DIGIT ZIP CODE			
University of California-Santa Barbara		Office of Research Rm 3227 Cheadle Hall SANTA BARBARA, CA 93106-2050			
AWARDEE ORGANIZATION CODE (IF KNOWN)					
0013201000					
NAME OF PERFORMING ORGANIZATION, IF DIFFERENT FROM ABOVE		ADDRESS OF PERFORMING ORGANIZATION, IF DIFFERENT, INCLUDING 9 DIGIT ZIP CODE			
PERFORMING ORGANIZATION CODE (IF KNOWN)					
IS AWARDEE ORGANIZATION (Check All That Apply) (See GPG II.C For Definitions)		<input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> FOR-PROFIT ORGANIZATION		<input type="checkbox"/> MINORITY BUSINESS <input type="checkbox"/> WOMAN-OWNED BUSINESS	
				<input type="checkbox"/> IF THIS IS A PRELIMINARY PROPOSAL THEN CHECK HERE	
TITLE OF PROPOSED PROJECT OXIDE MOLECULAR BEAM EPITAXY OF HIGHLY-PERFECT THIN FILM PEROVSKITES					
REQUESTED AMOUNT	PROPOSED DURATION (1-60 MONTHS)	REQUESTED STARTING DATE	SHOW RELATED PRELIMINARY PROPOSAL NO. IF APPLICABLE		
\$ 390,000	36 months	05/01/10	11/2011		

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Cover Page

CHECK APPROPRIATE BOX(ES) IF THIS PROPOSAL INCLUDES ANY OF THE ITEMS LISTED BELOW <input type="checkbox"/> BEGINNING INVESTIGATOR (GPG I.G.2) <input type="checkbox"/> DISCLOSURE OF LOBBYING ACTIVITIES (GPG II.C.1.e) <input type="checkbox"/> PROPRIETARY & PRIVILEGED INFORMATION (GPG I.D, II.C.1.d) <input type="checkbox"/> HISTORIC PLACES (GPG II.C.2.j) <input type="checkbox"/> EAGER* (GPG II.D.2) <input type="checkbox"/> RAPID** (GPG II.D.1) <input type="checkbox"/> VERTEBRATE ANIMALS (GPG II.D.6) IACUC App. Date _____ PHS Animal Welfare Assurance Number _____		<input type="checkbox"/> HUMAN SUBJECTS (GPG II.D.7) Human Subjects Assurance Number _____ Exemption Subsection _____ or IRB App. Date _____ <input type="checkbox"/> INTERNATIONAL COOPERATIVE ACTIVITIES: COUNTRY/COUNTRIES INVOLVED (GPG II.C.2.j) <input type="checkbox"/> HIGH RESOLUTION GRAPHICS/OTHER GRAPHICS WHERE EXACT COLOR REPRESENTATION IS REQUIRED FOR PROPER INTERPRETATION (GPG I.C.1)		
PIVD DEPARTMENT Materials	PIVD POSTAL ADDRESS Santa Barbara, CA 931065050 United States			
PIVD FAX NUMBER 805-893-8486				
NAMES (TYPED) PIVD NAME	High Degree	Yr of Degree	Telephone Number	Electronic Mail Address

Regulations give grantee institutions responsibility for setting up "Institutional Review Boards" (IRBs) to review research protocols & designs to ensure protection of rights of human subjects. The fundamental principle is that people should not (in most cases) be involved in research without their informed consent, & that subjects should not incur increased risk of harm from their research involvement, beyond the normal risks inherent in everyday life.

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Compliance

- Automatic check
- Grant Proposal Guide (GPG) very restrictive about changes to proposals after a deadline.

COMMON ISSUES:

- Failure to address both merit review criteria separately in Project Summary
- Omitting *Results from Prior NSF Support* (within 5 years) for PI **and** any co-PIs in prescribed format;
- Omission of journal article titles from References Cited;
- Incomplete information in Current & Pending Support;

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Compliance (cont'd)

- Incomplete Biographical Sketches (i.e., failure to include the list collaborators within 4 years, co-editors within 2 years, graduate advisors, postdoctoral sponsors, postdoctoral scholars within 5 years, and all prior graduate students)
- Each proposal that requests funding to support postdoctoral research must include a mentoring plan (not exceeding one page) in Supplementary Documentation section. The mentoring plan will be evaluated during the merit review process, under the Broader Impacts criterion.
- Data Management Plans needed in 2011+

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Reviewer Suggestions

- Suggest 3 to 5 reviewer names with each proposal
- From ceramics, glasses & inorganic carbon-based materials communities
- **At arms length**: no former students, supervisors or post-doctoral fellows; no recent collaborators (from the past 4 years); no relatives, etc
- Provide full names, e-mail addresses (to facilitate electronic review), affiliation, & their key areas of expertise
- Industrial and international reviewers and those from underrepresented groups are particularly welcome.
- Used to establish a broader database for reviewers in CER

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Reason to Suggest Reviewers

- I use suggested reviewer list arrival order to determine order to send proposals out for review;
- funds are spent continuously,
- so this is one of the advantages of
 - (a) submitting early
 - (b) with a reviewer list
- Not as critical if I am using panels, but you get to influence my panelist selections

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Where to submit

RELATED PROGRAMS

[Materials World Network: Cooperative Activity in Materials Research between US Investigators and their Counterparts Abroad](#)
[CHE-DMR-DMS Solar Energy Initiative](#)
[Analytical & Surface Chemistry](#)
[Small Business Technology Transfer Program - FY 2011](#)
[Research Experiences for Teachers \(RET\) in Engineering \(Program Description\)](#)
[Interdisciplinary Research \(IDR\)](#)
[Energy for Sustainability](#)
[Emerging Frontiers in Research and Innovation - Office Information](#)
[Materials Processing and Manufacturing](#)
[NanoManufacturing](#)
[Materials and Surface Engineering](#)
[Mechanics of Materials](#)
[Nano and Bio Mechanics](#)

RELATED URLS

[Time Window for submitting unsolicited proposals to DMR Programs](#)
[NSF Alert Service](#)
[Science Nation Highlight: co-funded with BMAT \(Antlers, Shells and Beaks at UCSD\)](#)
[ACerS listing of funding opportunities in ceramics](#)
[Nanoceramics \(Nanoscale Science and Engineering\)](#)
[NSF-AFOSR Joint Workshop on Future Ultra-High Temperature Materials, January 13-14, 2004](#)
[First Industrial Workshop in Ceramics: Data Storage Technology, Arlington, VA, January 22-23, 2004](#)
[Aerospace, Chemical and Material Sciences \(AFOSR\)](#)
[Bio-ceramics \(NIH\)](#)
[Composite Materials, Cellular Materials, etc. \(ONR\)](#)
[Fibers \(DARPA\)](#)
[Fuel Cells - Hydrogen Program \(DOE\)](#)
[Fuel Cells - SECA \(DOE\)](#)
[High Temperature and Aerospace Materials \(AFOSR\)](#)
[High Temperature Ceramics \(NASA\)](#)
[Petroleum or Alternate Energy Research \(Petroleum Research Fund\)](#)

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Local intranet



Materials World Network (MWN)

- Cooperative Activity in Materials Research between US Investigators & their Counterparts Abroad, Solicitation
- Full Proposal Deadline Date: **Fall?, 2011**
- An investigator may serve as **PI or Co-PI** in either (a) a proposal submitted in response to MWN or, (b) an unsolicited proposal submitted to DMR within FY2011 submission window, **but not both**. Limitation does not apply to networks of investigators & their associated activities

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Descriptive Resources

- <http://www.nsf.gov/mps/dmr/bios/lmadsen.jsp>
 - "Transforming Universities and Colleges in the United States with Federal Government Support"
 - "NSF recognizes 3 Asst. Profs. with 2009 CAREER Awards in Ceramics"
 - "Advances in Ceramics through Government-Supported Research"
 - "The Next Generation: Education & Broadening Participation in Science & Engineering"
 - "Ceramic Collaborations around the World"
 - "Basic Ceramics Research and the NSF"
 - "Grand Challenges for Ceramics & Related Areas and the Critical Enablers"
 - "A Guide to NSF Success"

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Science Careers

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Science Careers

AAAS NEWS SCIENCE JOURNALS CAREERS BLOGS & COMMUNITIES MULTIMEDIA COLLECTIONS

Science Careers from the journal Science

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Issues & Perspectives Career Advice The Job Market Career Profiles Life & Career Diversity Issues C

Science Home > Science Careers > Career Magazine > Previous Issues > 2007 > 2007-07-27 > Madsen

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Grant Writing for Tight Times

Career Advice

A Guide to NSF Success

By Lynnette D. Madsen
July 27, 2007

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This article provides suggestions and ideas about how to make your next National Science Foundation (NSF) proposal more competitive.

NSF provides proposal information in a variety of ways: Dear Colleague Letters, Program Descriptions, Announcements, and Solicitations. The best way to keep in touch with grant opportunities is by subscribing to one or more of the

"A strong application always demonstrates an appreciation of the background of the field, with appropriate references to the results of others."

Common Mistakes

- Not addressing broader impacts; it comes across as an afterthought
- Not integrating education with the research
- Too many ideas; a lack of focus (young investigators)
- Renewals: failure to publish in quality journals, failure to establish themselves as leader in field and make an impact
- Ideas not described in detail. Not being specific – what will YOU do?
- Mistakes in English/grammar, figures, references, etc.
- Failure to appreciate background of field (references, originality)



Common Mistakes (continued)

- Already well-funded at the NSF for similar activities, not applying to the most appropriate program
- Large grants: inappropriate budget request, forgetting under-represented groups (URG's)
- Instrumentation: not enough users planned – what is the impact, justifying a replacement, justification for top-of-the-line
- Incremental rather than cutting edge – what new insight is expected? Why is it important?
- Few ideas (<20%) are 'bad', but in some cases it is difficult to tell

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Interactions with NSF

- Have a history of innovative & brilliant science and/or significant contribution/s in a broad sense
- Convey enthusiasm and knowledge
- Be a great reviewer / panelist
 - *Volunteer (send me an e-mail to express your interest)*
 - *Respond to requests*
 - *Provide detailed, timely and thoughtful comments on both criteria and any additional criteria for the specific solicitation/announcement*
- Questions: the www, your university's Sponsored Research Office (SRO), your colleagues, and PDs

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CAREER Resources

- A Ph.D. Is Not Enough: A Guide to Survival in Science
by Peter J. Feibelman; 1993
- Becoming Leaders: A Handbook for Women in Science, Engineering and Technology
by F. Mary Williams & Carolyn J. Emerson; 2008
http://catalog.asme.org/books/PrintBook/Becoming_Leaders_Practical.cfm
- The Black Academic's Guide to Winning Tenure - Without Losing Your Soul
by Kerry Ann Rockquemore & Tracey Laszloffy; 2008
http://www.rienner.com/title/The_Black_Academic_s_Guide_to_Winning_Tenure_Without_Losing_Your_Soul

