

# **CALL FOR JOINT PROJECT PROPOSALS DST-NSF Program of Cooperation**

## **MATERIALS WORLD NETWORK - 2009**

### **Program Title**

**Materials World Network: Cooperative Activity in Materials Research between US Investigators and their Counterparts Abroad (MWN)**

### **Introduction**

Continued progress in materials research is increasingly dependent upon collaborative efforts among several different disciplines, as well as closer coordination among funding agencies and effective partnerships involving universities, industry and national laboratories. In addition, because of the growing interdependence of the world's economies, partnerships are important not only at the national level but from an international point of view as well. The National Science Foundation is working jointly with counterpart national and multinational funding organizations worldwide to enhance opportunities for collaborative activities in materials research between US investigators and their colleagues abroad. This solicitation describes an activity to foster opportunities for such collaborations. It includes joint activities between NSF and funding organizations in Europe, Africa, Asia and other regions.

Based on the deliberations that took place in the Indo-US Materials Research Workshops on Collaboration and Networking held at NCL, Pune during December 19-21, 2004, the Department of Science and Technology (DST), Government of India has joined hands with NSF of USA in their Materials World Net activity during 2005.

### **Objectives**

- To foster opportunities for cooperation in Materials Research between Investigators from India and USA.
- To provide opportunity to Indian students including PhD students and post-doctoral researchers to participate in research education experience and more for integrating research in international environment.

**Duration of the projects:**

The duration for the project is 2 to 3 years.

**Eligibility Information and due date:**

Proposals from Indian institutions/scientists, engineers addressing collaborations between researchers from India & the US are invited for participating in this program. Joint project proposals may be submitted by Indian researchers to DST in response to this **call for proposal up to November 11, 2009**. The proposals must have clear relevance to fundamental materials phenomena, synthesis, characterization, properties and/or processing. Further, there should be a minimum of two collaborators from India. Grants will cover expenses on the visits for Graduate/Postdoc researchers associated with the project in addition to Project Investigators (PIs), hospitality to US researchers and small expenses on contingency, minor equipment etc.

Similar proposals are to be submitted by US researchers simultaneously to NSF to the Division of Materials Research up to 11<sup>th</sup> November, 2009. Further details on this are available at **[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf09600](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf09600)**

## **GENERAL INFORMATION**

### **1. General Requirement**

In all the above cases, the joint research proposal must establish a need for collaboration and mutuality of benefits.

### **2. WHO CAN SUBMIT A PROPOSAL**

Scientists and engineers from universities, their affiliated colleges, deemed universities, autonomous research institutions and industrial R&D units can submit a proposal.

### **3. WHEN TO SUBMIT A PROPOSAL**

Ten copies of the proposal in the prescribed format can be submitted as per the schedule given above.

### **4. QUALITY OF PROJECT PROPOSALS**

Proposals submitted must have clear relevance to fundamental materials and condensed materials research including nanomaterials. Further, the projects proposals may include research students and junior researchers. Proposals could be submitted by either an individual PI or a small group of PIs (2-3).

### **5. COMPONENTS OF GRANT**

Costs related to international travel to the USA and associated domestic travel within India for Indian investigator(s), local hospitality for the visiting USA investigator(s), a small amount for consumable or contingencies and institutional overheads at the prevailing rates are permissible. While computing travel cost please cover entire travel from the participating Indian institution to the participating USA institution by entitled class. Air travel is to be performed using Indian flag carrier to the extent possible. If the participating Indian institution has a guest house of acceptable standards, the visiting USA participant should be accommodated in the guest house and guest house charges debited to the project. Otherwise accommodation should be arranged in a clean and neat, up to a three star hotel. An appropriate provision should be made in the project budget at the time of submission. In addition to free accommodation, the visiting USA participant will also receive Rs.500 per day for other expenses. This expense should be reflected in the project budget. The expenses related to visa, medical insurance cover for the Indian participant during his/her visit to USA under an ongoing project can be met from the project budget provided suitable provision as a separate budget item is made at the time of submission.

Joint research project is expected to draw upon strengths of both the collaborators using facilities and expertise available in both the places. Therefore this mode is normally not available for long-term visits. Normal duration of an exchange visit is expected to be about four weeks. Visits for longer duration could be proposed for junior researchers.

## 6. COMPONENTS NOT ALLOWED OUT OF GRANT

The international collaboration under this programme is expected to complement the ongoing national efforts. Requirements related to manpower, permanent equipment and substantial component of consumable grant is expected to be available from corresponding domestic programme. Thus, DST normally will not provide funds for manpower, permanent equipment, maintenance of equipment, books and periodicals, page charges etc. under this programme. In the same spirit, major requirements for consumable should primarily be derived from the domestic programme and only incremental component required due to international collaboration should be budgeted in the collaboration proposal.

## 7. MECHANISM OF IMPLEMENTATION AND MONITORING

Proposals, in prescribed format, complete in all respect and submitted through proper channel by the due date will undergo peer review process on the Indian as well as NSF sides. Proposals found suitable by both the sides will be considered for funding. The peer review process normally takes about six months. Proposals selected for support should allow additional one month for financial scrutiny and approvals. To avoid processing delays, simultaneous submission to DST and NSF by respective investigators is strongly recommended. The outcome of DST supported proposals will be monitored through review of Annual Progress Reports and Final Report.

## 8. Contact Points

### ***India:***

Dr B.K. Jain,  
Scientist "G" and Head ( Americas and  
Russia Program),  
International Cooperation Division,  
Department of Science & Technology,  
Technology Bhawan,  
New Mehrauli Road,  
New Delhi - 110 016

Phone No.: 011-26961583 / 26590613

Telefax No. :011-26961583

E-mail: [jainbk@nic.in](mailto:jainbk@nic.in)

[bhushankjain@yahoo.com](mailto:bhushankjain@yahoo.com)

Web: [www.stic-dst.org](http://www.stic-dst.org)

[www.dst.gov.in](http://www.dst.gov.in)

### ***USA:***

**Dr. Daniele Finotello,**  
Program Director, Office of Special Programs  
Division of Materials Research National  
Science Foundation,  
National Science Foundation,  
4201 Wilson Boulevard, Arlington, VA  
22230.

Tel: 703-292-4939

Fax: 703-292-9036

Email: [dfinotel@nsf.gov](mailto:dfinotel@nsf.gov)

Web:

[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf08590](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf08590)

## **9. INSTRUCTIONS FOR PROPOSAL PREPARATION**

**9.1** Proposals must be securely stapled or bound and have 2.5 cm margins on all the four sides. The type size must be clear and legible. Pages must be of standard size; A-4 size (210 mm x 297 mm) is preferred.

**9.2** Headings for the sections of the proposal are given below. There are page limits to some sections which are given in the brackets. The information should be given under each section and not in the form of annexes. Entire proposal is to be paginated giving consecutive numbers to pages.

- Cover Sheet (format attached)
- Project summary (one page )
- Table of contents (one page )
- Project description including results from previous DST support (15 pages, results from previous DST support not to exceed five pages )
  - References cited
  - Biographical sketch (2 pages per investigator )
- Budget, cumulative and annual, under appropriate budget heads along with justification (3 pages)
  - Ongoing and pending research proposals by the investigators (format attached )
  - List of facilities, equipment and other resources available for the project

**9.3** Project description should contain a clear statement of work to be done and should include sub-sections on introduction, objectives, plan of work, experimental methods, specific activities to be undertaken by the Indian and USA collaborator(s), significance of expected outcome and its relation to present state of knowledge in the field. Project description should clearly bring out the need for collaboration and expected tangible gains for the two sides. Collaborations in which contribution of the US collaborator is limited to providing access to specialized facilities will enjoy low priority under this programme.

**9.4** Biographical sketches are to be limited to two pages per senior investigator. The following information must be provided :

- Name, Date of birth, Name of the institution, whether belong to SC/ST, MSc. Onward academic and professional career (with years and names of universities/institutions).
- List of up to 5 publications most closely related to the proposed project and 5 other significant
- Publications, including those accepted for publication.
- Patents, copyrights or software systems developed may be substituted for publication.

**9.5** Along with 10 copies of complete proposal document one copy each of the following documents is required :

- Endorsement from the head of the institution (Format attached)
- A letter from the US collaborator indicating that-

- a) The proposal is prepared jointly;
- b) He/she agrees with the technical contents of the proposal; and
- c) He/she undertakes to submit counterpart proposal to NSF.

- List of suggested reviewers from India.
- In case of the proposals involving Recombinant DNA work, a certificate from the Institutional Biosafety Committee
- In case of the proposals involving research with human subjects, a certificate from the Institutional Ethical Committee.

Ten copies of the proposal with other required documents are to be mailed to:

Dr. B.K. Jain, Adviser &  
Head ( Americas and Russia) ,  
International Cooperation Division,  
Department of Science & Technology,  
Technology Bhawan,  
New Mehrauli Road,  
New Delhi - 110 016

- ***THE PROPOSALS NOT CONFORMING TO THE GUIDELINES AND INSTRUCTIONS AS ABOVE ARE LIABLE TO BE REJECTED IN INITIAL SCREENING.***

**COVER SHEET**

**PROGRAMME OF COOPERATION IN SCIENCE & TECHNOLOGY  
BETWEEN INDIA AND USA**

**PROFORMA FOR SUBMISSION OF JOINT PROJECTS PROPOSALS**

**A. PROJECT IDENTIFICATION**

**1. Title of the Project:**

**2. Duration of the Project:**

**3. Expected date of commencement:**

**4. Field of S&T covered by the proposal:**

**Key words qualifying the scope of the proposal:**

**5. Project Investigators (PIs) & Collaborating Institutions**

**INDIAN**

**USA**

**Name of PI:**

**Designation:**

**Institution's Address:**

**Telephone No.**

**Fax No.**

**Telex No.**

**E-mail**

**Name of the Co-Investigator:**

**Designation:**

**Institution's Address:**

**Telephone No.**

**Fax No.**

**Telex No.**

**E-mail**

**B. TECHNICAL INFORMATION**

**1. Objective of the Project (up to 200 words)**

**Key Words :**

**2. Justification for collaboration & short information about national and international scenario in the proposed area of research (up to 200 words)**

**3. Short scientific & technical description of the project including methodology (up to 400 words).**

**Methodology**

**4. Plan or work**

<b>Time scheduled</b>	<b>Responsibilities Indian side</b>	<b>Responsibilities of USA side</b>
1 <sup>st</sup> Year		
2 <sup>nd</sup> Year		
3 <sup>rd</sup> Year		

**5. Number of exchange visits required to achieve the Project Objectives (year wise).**

India to USA

USA to India

<b>Period</b>	<b>Number</b>	<b>Duration</b>	<b>Number</b>	<b>Duration</b>
1 <sup>st</sup> Year				

2 <sup>nd</sup> Year				
3 <sup>rd</sup> Year.				

6. **Expected results of this cooperation (e.g. joint publications, patents).  
Are any of the expected results likely to have commercial value ? How do you propose to share them ? (up to 100 words)**
7. **Bio-data of investigators from both the sides (the description should highlight the expertise of the PIs) in the proposed field of work supported by citing relevant publications only. (to be appended in about 2 pages).**

**C. ADMINISTRATIVE & FINANCIAL INFORMATION.**

1. **Project Cost (Pl. give separate estimates from both the sides)**

Indian Side

Rs. In lakhs

Year	Equipment *	Consumables	Contingency	Exchange Visits **
1 <sup>st</sup> Year				
2 <sup>nd</sup> Year				
3 <sup>rd</sup> Year				

\* Only minor equipment grant could be considered.

\*\* As per details given at Annexure -I

**Project Cost (Co.PI), USA**

US Side

Year	Equipment	Consumables	Contingency	Exchange Visits
1 <sup>st</sup> Year				
2 <sup>nd</sup> Year				
3 <sup>rd</sup> Year				

2. **Signatures of the Project Investigators & Co-Investigators.**

**INDIAN**

**USA**

3. **Declaration from the Heads of the Collaborating Institutions.**

**Signature & Seal of the Head of the Institutions.**

INDIAN

USA

Annexure- I

**DST-NSF S&T COOPERATION PROGRAMME FOR SCIENTISTS AND ENGINEERS**

**Budget**

<b>Budget head</b>	<b>1<sup>st</sup> year</b>	<b>2<sup>nd</sup> year</b>	<b>3<sup>rd</sup> year</b>	<b>Total</b>
International travel and related domestic travel				
Accommodation charges for the visiting US scientist (No. of days x Rs.....)				
Per diem charges for the visiting US scientist (No. of days x Rs. 500)				
Institutional overhead @ 5%				

**FORMAT FOR ENDORSEMENT FROM THE HEAD OF INSTITUTION**

It is certified that:

- i. the Institution agrees to participate in this joint research project
- ii. the Institution shall provide infrastructure and necessary facilities for implementing the joint project.
- iii. the Institution agrees to undertake financial and other administrative responsibilities for part of the project to be carried out at their institution.
- iv. the back up support for manpower, consumable etc. is available to this project.

**Signature and seal of the  
Head of the Institution.**

**FORMAT FOR PROVIDING INFORMATION ON ONGOING AND PENDING PROPOSALS BY THE INVESTIGATORS.**

**A. INVESTIGATOR (S)**

**B. PROJECT TITLE**

**C. PROJECT IDENTIFICATION**

**1. Title of the Project:**

**2. Expected date of commencement:**

**3. Field of S&T covered by the proposal:**

**Key words qualifying the scope of the proposal:**

**4. Project Investigators (PIs) & Collaborating Institutions**

**D. STATUS : Please tick appropriate box**

**D.1 Ongoing**

**Duration : 2. Duration of the Project: From ----- to -----**

**Total cost : Rs. -----**

**D.2. Proposed**

**E. Name of funding agency for ongoing project**

**F. Summary of the Project**

**G. Highlights of the achievements under ongoing project**

**FORMAT FOR LIST OF FACILITIES / EQUIPMENT / OTHER RESOURCES**  
**List of Facilities to be extended to the Investigator(s) by the Implementing**  
**Institutions(s) for the Project**

**Infrastructure facilities (Tick the appropriate box)**

Item	Yes	No	NR*	Item	Yes	No	NR*
Workshop				Transportation			
Water & Electricity				Administrative & Secretarial support			
Standby power supply				Library facilities			
Laboratory Space & Furniture				Computational Facilities			
Air-conditioned Room for Equipment				Animal /Glass House			
Telecommunication				Any other			

NR : Not Required.

Available equipment and accessories to be utilized for the project

SL. No.		Name of Equipment and accessories
	(a) Available within Investigators Group	
	(b) Available in the Investigators Department	
	(c) Available elsewhere in the Institution or in the Region	