

Department of Science and Technology

New Delhi 110 016

Call for Proposals

Under the framework of bilateral Agreement between the Government of the Republic of India and the Government of Republic of Bulgaria on cooperation in Science and Technology, a Programme of Cooperation (POC) for the period 2002–2004 exists which contains the administrative and financial terms for implementing the approved joint research projects; exchange visits; workshops; seminars, etc. Interested researchers from the scientific and technological research institutions and universities in India and Bulgaria are invited to submit joint research proposals of mutual interest in the following areas:

- Information Technology;
- Metal Science and New Materials;
- Alternate Renewal Energy Sources, including Solar Energy;
- Geophysical Instrumentation and Earthquake Engineering including its Forecasting;
- Food Technology;
- Traditional Medicines based on Herbs;
- Laser Science and Technology;
- Astronomy; and
- Ocean Science and Technology.

In addition to the above, it has also further been decided to accept new proposals in the following areas.

Nano-materials

- Research and Development projects on magnetic nanowires, encapsulated in organic matrix through bio-mimetic bonding.
- Bio-ceramic super paramagnetics.
- Mathematical simulation and validation of models to assess neutron induced radiation damage in pressure vessels of Nuclear reactors.
- Possibility of collaboration developing nanotechnology for Electronic devices.
- Preparation of bio-ceramic and super paramagnetic nano particles for biomedical applications.

High Energy Physics

- Development of High Power Electron Beam system and Copper Bromide Lasers for Industrial Applications.
- Study of Cosmic Ray Mass distribution in the Ultra-High Energy regime.
- Mathematical Simulation and Validation of Models to assess neutron induced radiation damage in pressure vessels of Nuclear reactors.
- Having and Retrieval algorithms (Data Mining).

Satellite Technology

- Explore the possibility of accommodating an environmental radiation monitoring payload of about 100 grams (Bulgarian Payload) in CHANDRAYAN Mission.
- Jointly studying satellite based monitoring for possible production of Earthquake occurrences in advance. [Bulgarian scientists have studied more on zoning and mapping of the earthquake areas. They have, however, not worked on development of techniques on satellite based monitoring or giving any advanced information].
- Joint study on advanced data processing algorithms for remote sensing data from IRS satellite.
- Joint study on Earth environmental monitoring through specialized payloads such as LIDAR.
- Continue to exchange information on new initiative and developments like high-efficiency solar cells, space materials, space forming, etc.

Setting up of portal for Indo-Bulgarian S&T cooperation on

- Materials and Nano-Technology

- High Energy Physics
- Space Science and associated earth observations.

Cooperation in other areas of Science and Technology can, however, be undertaken with mutual consultations between the two sides.

The scientists/researchers/engineers are invited to submit eight copies each of the joint research proposals in the attached format to the contact persons as under in India and Bulgaria to facilitate their peer review on both sides. Subsequently, the recommended proposals would be considered for implementation by the Joint S&T Committee. The Joint Committee approved proposals will be funded by the two sides according to the terms and conditions of the Programme of Cooperation in Science and Technology. Proposals involving industrial participation will be given preference. The project proposals may be framed for a maximum period of three years. The deadline for submission of projects/themes is **30 April 2006**. For further details and clarifications, if any, kindly contact any of the following in India or Bulgaria:

FOR INDIA

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**Jawaharlal Nehru Centre for
Advanced Scientific Research**

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Research Admissions – 2006

Advt. No. 08/2005–06

15 January 2006

Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), a premier research institution of the country, invites applications for following programmes: (i) Ph.D. (ii) M.S./M.S. (Engg.) and (iii) Int. Ph.D. [Post B.Sc. (Chem.)] programme at the highest level in frontier and interdisciplinary areas of science and engineering. The areas of research include: Chemistry and Physics of Materials (including specialization in nanoscience and nanotechnology), Evolutionary and Organismal Biology, Molecular Biology and Human Genetics, Engineering Mechanics and Theoretical Sciences.

For detailed requirements and information check our website: www.jncasr.ac.in/radm

or write to: Assistant Academic Coordinator, Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur PO, Bangalore 560 064, with a self-addressed envelope of 20 × 25 cm.

Last dates: Request of application forms: **31 March 2006**

Receipt of filled applications: **15 April 2006**