

Vendors
Federal Business Opportunities



A -- RESEARCH SUPPORT FOR ELECTRONIC DEVICES AND MATERIALS

General Information

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Contracting Office Address

Department of the Navy, Office of Naval Research, Naval Research Laboratory, 4555 Overlook Ave. S.W., Washington, DC, 20375, UNITED STATES

Description

The Naval Research Laboratory (NRL) has a requirement for contractor support for research efforts on electronic devices, materials, circuits and assemblies and radiation effects experimental work. This effort is both theoretical and experimental and involves the development of analytical, fabrication, diagnostic, and characterization techniques. The objective of this electronics research is to provide new state of the art electronic devices and circuits for experimental systems used to solve problems of military significance. This effort will be

performed on-site at the Naval Research Laboratory, Washington, D.C. Major tasks include 1) Microwave Solid State Technology Support, 2) Development and Evaluation of Opto-Electronic Materials and Devices, 3) Space Environmental Effects Experimental Work, 4) Microelectronic Technology Support and 5) Radiation Hardening of Metal Oxide Semiconductor (MOS) Technology. Microwave Solid State Technology Support includes such tasks as 1) reliability testing of devices, 2) fabrication of solid state devices, 3) maintenance, operation, and upgrading of a molecular beam epitaxy (MBE) facility, 4) performing microwave device measurements, 5) microwave device modeling and simulation, and 6) microwave circuit design, fabrication and testing. Development and Evaluation of Opto-Electronic Materials and Devices includes 1) fabrication and characterization of infrared imaging devices and 2) using MBE to grow heterostructure layers. and 3) Development and characterization of advanced photovoltaic devices, including space solar cell development, measurement, and characterization and integrated power source development. Space Environmental Effects Experimental Work includes 1) performing irradiations on various electronic devices and semiconductors and characterizing properties of semiconductor materials and devices over a range of temperature and other environmental conditions and 2) extending modeling and statistical techniques to energy deposition in semiconductor and dielectric materials, and performing calculations using various computer codes on the response of test structures and integrated circuits to energetic ion and pulsed laser perturbations on a picosecond time scale. Microelectronic Technology Support includes 1) development of analog circuits, circuit design and optimization, designing experiments for the fabrication of microelectronic devices and electric characterization and 2) wafer bonding fabrication and characterization. Radiation Hardening of Metal Oxide Semiconductor Technology includes 1) operation of a total ionizing dose irradiation facility, 2) performing irradiation and related testing 3) characterization of properties of semiconductor facilities 4) investigating the basic mechanisms of radiation effects and radiation hardening and 5) use of fabrication technology and specialized processing equipment. A Cost Plus Fixed Fee type of contract is anticipated. The period of performance for this effort will be a base year of twelve months plus four one year option periods. The anticipated level of effort is 38,050 hours yearly, or 190,250 total hours if all options are exercised, but is subject to revision at the time of solicitation issuance. The statement of work, labor categories, and personnel qualifications will be included in the solicitation package when issued. It is anticipated that only one award will result from this procurement. The incumbent contractor is SFA, Inc. 2200 Defense Highway, Suite 405, Crofton, Md. 21114. The actual closing date for the receipt of proposals will be stated in the solicitation when issued. This procurement is a full and open competitive procurement. NRL uses Electronic Commerce (EC) to issue RFPs and amendments to RFPs. This solicitation and other business opportunities for NRL are available at our website <http://heron.nrl.navy.mil/contracts/listrfp.htm>. All responsible sources may submit a bid, proposal, or quotation which shall be considered by the agency. Paper copies of the RFP will not be provided. See Numbered Note(s) 25 and 26.

Point of Contact

Kevin King, Contract Specialist, Phone 202-767-1495, Fax 202-767-5896, Email kevin.king@nrl.navy.mil - F. Janilea Bays, Contracting Officer, Phone 202-767-2974, Fax 202-767-0430, Email jan.bays@nrl.navy.mil

Place of Performance

Address: Naval Research Laboratory 4555 Overlook Ave. SW. Washington, D.C.
Postal Code: 20375-5326

Country: UNITED STATES

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