National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

CBET 12-005

Dear Colleague Letter: The Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET) Employment Opportunities for Program Director

DATE: May 2, 2012

The Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET), within the Directorate for Engineering at the National Science Foundation (NSF), announces a nationwide search for an engineering professional to fill the following position:

Program Director: Interfacial Processes and Thermodynamics Program

Formal consideration of interested applicants will begin May 10, 2012, with an approximate beginning appointment date of August 20, 2012.

While disciplinary expertise will be expected for the program director, the focus of the search is to locate a scholarly, open-minded, diverse and intellectually integrated individual to join the present team in sharing The Engineering Directorate's responsibilities within NSF's overall mission: to promote the progress of science and engineering; to advance the national health, prosperity, and welfare; and to secure the national defense.

BRIEF PROGRAM DESCRIPTION

The **Interfacial Processes and Thermodynamics** Program supports fundamental research in engineering areas related to: Interfacial phenomena: Mass transport phenomena; Molecular thermodynamics. Program emphasis is placed on molecular engineering approaches at interfaces, especially as applied to the nano-processing of soft materials. Molecules at interfaces with functional interfacial properties are of special interest and have uses in many new technologies, based on nano-fabrication. These interfacial molecules may have biomolecular functions at the micro- and nano-scale. Interfacial materials are generally formed through molecular self-directed, -templated, and/or -assembly; and they are driven primarily by thermodynamic intermolecular forces, although may be influenced by flow and electrical forces. In some cases, these interfacial processes may also be supplemented by weak chemical reactions. Complex simulations of molecular systems are often used in molecular design of interfaces, if possible, in conjunction with experimental comparisons. New theories and complex simulation approaches are supported for determining the interfacial, transport, and thermodynamic properties of fluids and fluid mixtures in biological and other fluids with complex molecules in the bulk phase and at interfaces, in membranes, two-phase mixtures, and in a nano-environment. Many of the physical systems involve polymer and surfactant molecules, as well as special bio-molecules. Some projects involve collaboration with industrial researchers.

NSF Program Directors bear the primary responsibility for carrying out the Agency's overall mission. To discharge this responsibility requires not only knowledge in the appropriate disciplines, but also a commitment to high standards, a considerable breadth of interest and receptivity to new ideas, a strong sense of fairness, good judgment, and a high degree of personal integrity.

Qualification requirements include a Ph.D. or equivalent professional experience in the relevant discipline, plus six or more years of successful research, research administration and/or substantial

managerial experience in academe, industry, or government. Appointees are expected to have significant and relevant knowledge of research related to interfacial processes and thermodynamics. Also desirable is knowledge of the general scientific community, skill in written communication and preparation of technical reports, an ability to communicate orally, and several years of successful independent research of the kind normally expected of the academic rank of associate or full professor. Research accomplishments on topics related to interfacial processes and thermodynamics are highly desirable. All appointees are expected to function effectively both within specific programs and in a team mode, contributing to and coordinating with organizations in the Directorate, across the Foundation, and with other Federal and State government agencies and private-sector organizations as necessary. Such responsibilities can include serving on committees developing new administrative approaches and implementing new focused research activities.

Periodic appointments to leadership of inter-divisional, inter-directorate and interagency programs may be made. NSF is an equal opportunity employer committed to employing a highly qualified staff that reflects the diversity of our nation. Program Director positions recruited under this announcement may be filled by one of the following appointment options:

Intergovernmental Personnel Assignment (IPA) Act: Individuals eligible for an IPA assignment with a Federal agency include employees of State and local government agencies or institutions of higher education, Indian tribal governments, and other eligible organizations in instances where such assignments would be of mutual benefit to the organizations involved. Initial assignments under IPA provisions may be made for a period up to two years, with a possible extension for up to an additional two-year period. The individual remains an employee of the home institution and NSF provides the negotiated funding toward the assignee's salary and benefits. Initial IPA assignments are made for a one-year period and may be extended by mutual agreement. Under the provisions of the Intergovernmental Personnel Act (IPA), non-citizens may be considered as long as the individual is employed at an IPA-eligible institution.

Visiting Scientist Appointment: Appointment to this position will be made under the Excepted Authority of the NSF Act. Visiting Scientists are on non-paid leave status from their home institution and placed on the NSF payroll. NSF withholds Social Security taxes and pays the home institution's contributions to maintain retirement and fringe benefits (i.e., health benefits and life insurance), either directly to the home institution or to the carrier. Appointments are usually made for a one-year period and may be extended for an additional year by mutual agreement.

Temporary Excepted Service Appointment: Appointment to this position will be made under the Excepted Authority of the NSF Act. Candidates who do not have civil service or reinstatement eligibility will not obtain civil service status if selected. Candidates currently in the competitive service will be required to waive competitive civil service rights if selected. Usual civil service benefits (retirement, health benefits, and life insurance) are applicable for appointments of more than one year. Temporary appointments may not exceed three years.

For additional information on NSF's rotational programs, please see
http://www.nsf.gov/about/career_opps/rotators/index.jsp.

Applications will be accepted from **U.S. Citizens**. Due to a recent change in Federal Appropriations Law, only Non-Citizens who are permanent U.S. residents and actively seeking citizenship can be considered. Therefore, you are required to provide documentation that confirms you are actively seeking citizenship at the time you submit your application. Non-citizens who do not provide documentation will not be considered.

Should you or your colleagues be interested in this position, or wish to nominate suitable candidates, please email a current CV accompanied by a cover letter that highlights the background that specifically relates to the program objectives to:

Dr. Robert Wellek, Search Committee Coordinator, Deputy Division Director
Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET)
National Science Foundation

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