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Abstract for an Invited Paper
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Opportunities for Funding at NSF

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Materials science, inter- and multi-disciplinary in nature, provides the bridge to many areas of fundamental and applied sciences such as biology, chemistry, physics, mathematics, computer sciences, and engineering. Strong links that may exist between materials science and other disciplines, such as biology or chemistry or physics, very often lead to novel applications and enable technologies of great benefit to our society. The Division of Materials Research (DMR) invested \$274.0 M in FY 2008 and is estimated to invest \$324.6 M in FY 2009 funding research and education as well as enabling tools instrumentation for individual investigators, groups, centers, and national facilities. DMR programs cover a wide spectrum of materials research and education ranging from condensed matter and materials physics, solid-state and materials chemistry, multifunctional, hybrid, electronic, photonic, metallic, ceramic, polymeric, bio-materials, composites and nanostructures to list a few. New modes of funding, research opportunities and directions, such as the recent SOLAR solicitation, will be described. This Solar Energy Initiative launched jointly by three divisions, namely Chemistry, Materials Research and Mathematical Science is aimed at supporting truly interdisciplinary efforts that address the scientific challenges of highly efficient harvesting, conversion, and storage of solar energy. The goal of this new program is to create a new modality of linking the mathematical with the chemical and materials sciences to develop transformative paradigms based on the integrated expertise and synergy from three disciplinary communities. DMR is also seeking new ways to transform materials science and education, and make it more attractive as a career for bright, young women men. A description will be given of several workshops held this year and planned for next year with this purpose in mind. Outreach programs that emphasize how the innovations resulting from materials research lead to a better quality of life and improved economic development for people all over the world will also be given. As science is becoming increasingly global, DMR is particularly interested in preparing students to be agile thinkers in this universal environment and in forging collaborations and cooperation among scientists and engineers around the world. Free movement of knowledge without any obstacles can only be achieved through a more coordinated approach for international collaboration.

Following the presentation there will be a question-and-answer period. For additional information, visit the DMR Web page at www.nsf.gov/materials