

International Cooperation in Materials Research

International cooperation is vitally important in science and technology, and particularly in materials research. Most advances build on prior discoveries and advances wherever they occur, irrespective of national boundaries. This is certainly true for better understanding high-temperature superconductivity and for overcoming obstacles to its practical application. Further progress in these research and development tasks deserves and requires international cooperation.

Advancing science and benefitting humanity are most efficient when there is good communication throughout the international scientific and technical communities. The natural course from discovery or invention to practical benefit includes protecting rights through patents, communicating results through conference presentations and technical publications, confirming research results, advancing understanding and performance through further research, developing applications, and manufacturing and marketing products—with opportunities for cooperation and competition at each stage, locally, nationally, and internationally.

Both cooperation and competition contribute toward bringing the results of scientific discoveries to the market place, and in making them accessible to society as rapidly and efficiently as possible. Cooperation reduces repetition and helps to conserve resources. Competition focuses efforts on being first to market, and on high-quality, low-cost production. In both areas, the scope is increasingly international. Neither discovery nor marketing naturally respects national borders. Science practiced in isolation, and develop-



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National interests are often perceived, however, as conflicting with international cooperation. Cultural and language differences must be overcome on individual and institutional levels. Industrial interests and competition can block intercompany cooperation. Yet, increasingly, companies are recognizing mutual benefits in joint development and manufacturing efforts.

International cooperation can take many forms. The recent International Workshop on Superconductivity co-sponsored by the International Superconductivity Technology Center (ISTEC) and MRS is an excellent example. Highlights from the workshop are reported in the IUMRS department in this issue. Another example is the European Materials Research Society, which pulls together materials research throughout Europe at its two annual meetings in Strasbourg. On a more global scale, the International Union of Materials Research Societies promotes information exchange and coordinates activities of its member societies. ISTEC's program of international visitors to research facilities in Japan is another example of international cooperation. Continued cooperation deserves and requires sincere efforts on all levels, with important roles for organizations like MRS, EMRS, IUMRS, and ISTEC.

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