

MRS Bulletin

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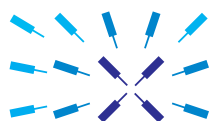
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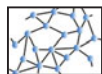
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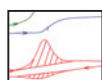
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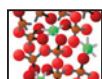
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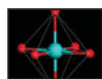
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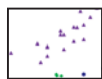
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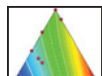
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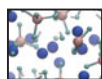
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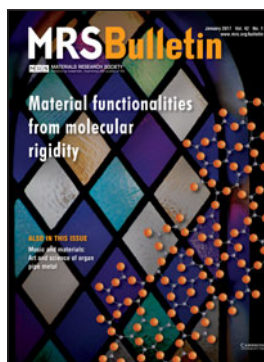
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ON THE COVER

Material functionalities from molecular rigidity. This issue of *MRS Bulletin* provides an overview of the field of rigidity theory applied at the atomic scale, addressing the relationship between functionality and molecular rigidity. Basic phenomena associated with the onset of rigidity have been discovered, which has led to "smart glasses" with multiple functionalities and mechanical performances. Topological prediction and engineering of physical properties are enabling intelligent design of new disordered materials. Guidance from molecular rigidity is particularly helpful for developing improved and new functionality in the fields of glass science, civil engineering, electrical engineering, optoelectronics, and biology. The cover shows a stained glass window and a stressed-rigid network of connectivity. See the technical theme that appears on page 18.



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The Materials Research Society (MRS), a not-for-profit scientific association founded in 1973 and headquartered in Warrendale, Pennsylvania, USA, promotes interdisciplinary materials research. Today, MRS is a growing, vibrant, member-driven organization of over 16,000 materials researchers spanning over 80 countries, from academia, industry, and government, and a recognized leader in the advancement of interdisciplinary materials research.

The Society's interdisciplinary approach differs from that of single-discipline professional societies because it promotes information exchange across many scientific and technical fields touching materials development. MRS conducts three major international annual meetings and also sponsors numerous single-topic scientific meetings. The Society recognizes professional and technical excellence and fosters technical interaction through University Chapters. In the international arena, MRS implements bilateral projects with partner organizations to benefit the worldwide materials community. The Materials Research Society Foundation helps the Society advance its mission by supporting various projects and initiatives.

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