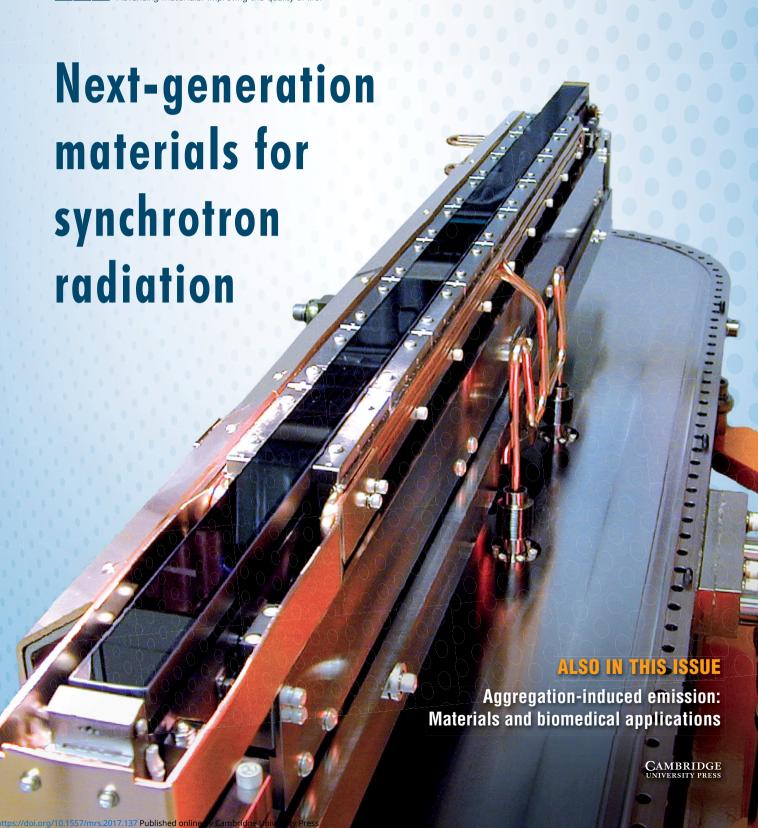


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NEXT-GENERATION MATERIALS FOR SYNCHROTRON RADIATION



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Materials for x-ray refractive lenses minimizing wavefront distortions

> Thomas Roth, Lucia Alianelli, Daniel Lengeler, Anatoly Snigirev, and Frank Seiboth



Diamond x-ray optics: Transparent, resilient, high-resolution, and wavefront preserving

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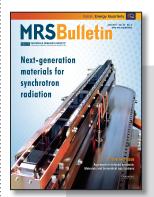


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The art of the scientific paper

Gopal R. Rao



ON THE COVER

Next-generation materials for synchrotron radiation. New materials and improved existing ones are at the root of recent developments of new technologies for synchrotron storage rings and free-electron laser sources. This issue explores several of these recent advances in materials for the optics, detectors, and other components that are essential parts of synchrotron systems for materials research. The cover shows an advanced Si x-ray mirror assem-

bly ready for installation in a synchrotron beamline. Courtesy of T. Rabedeau, SLAC/SSRL, Stanford University. See the technical theme that appears on page 418.



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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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