

# MRS Bulletin

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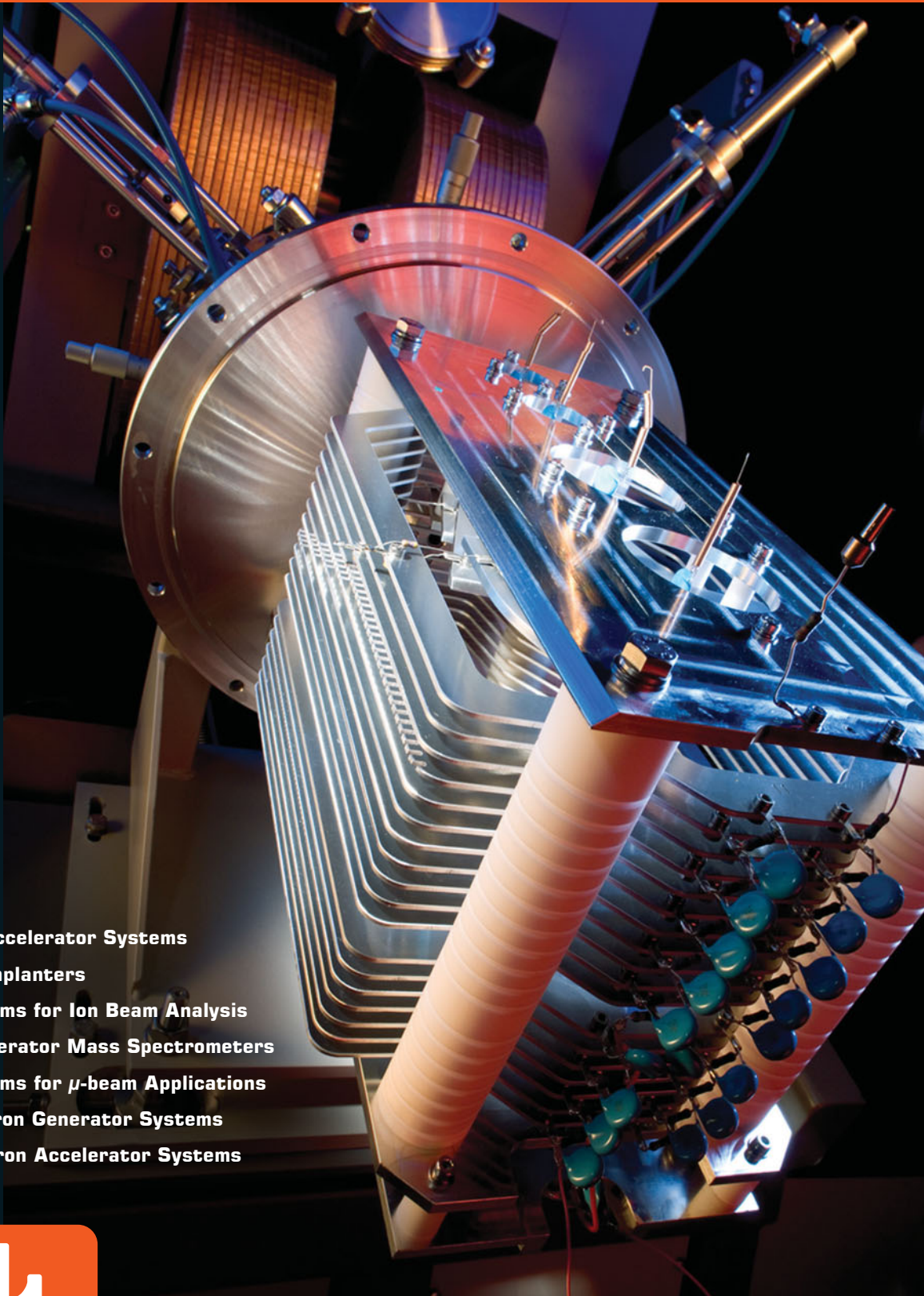
## Power electronics with wide bandgap materials

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Innovation in electronic materials

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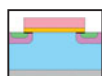
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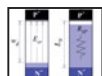
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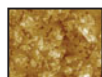
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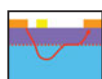
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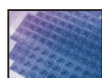
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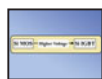
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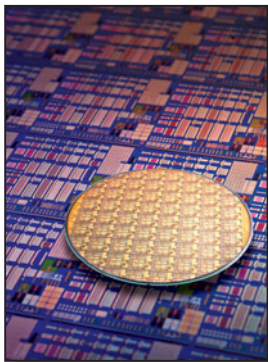
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**Power electronics with wide bandgap materials.** Wide bandgap semiconductors such as GaN and SiC represent next-generation materials for power electronics replacing Si. They show promising advantages over Si-based conventional electronics. This issue overviews research revolving around GaN and SiC power electronics, from the choice of substrate, film growth process, devices, and circuits to examples of applications.

The cover shows Au-free GaN power devices processed on 200-mm-diameter Si wafers in a standard Si CMOS process line. Courtesy of GaN Imec Industrial Affiliation Program, Leuven, Belgium. See the technical theme that begins on page 390.



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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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