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MRS Bulletin

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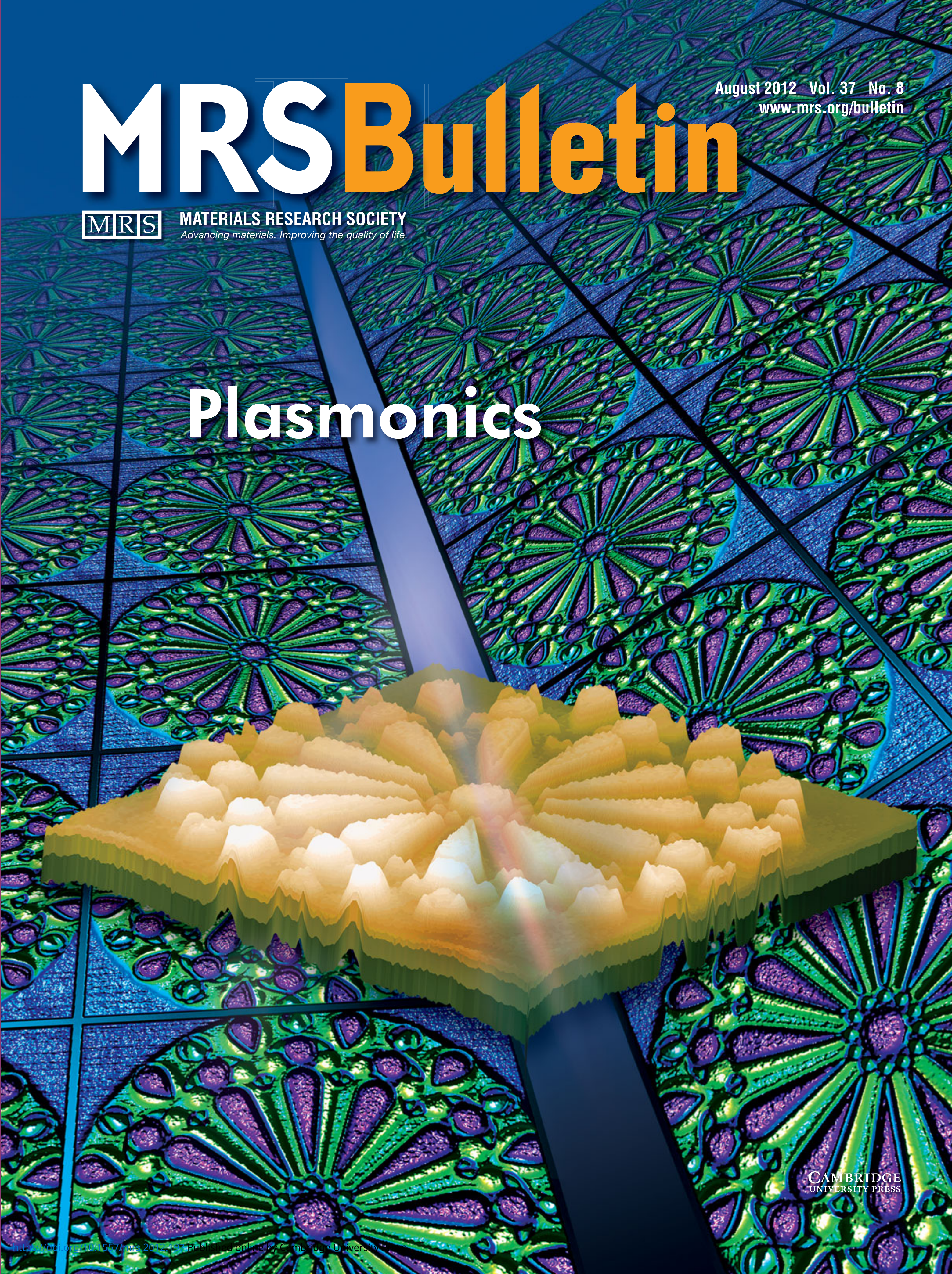

Plasmonics

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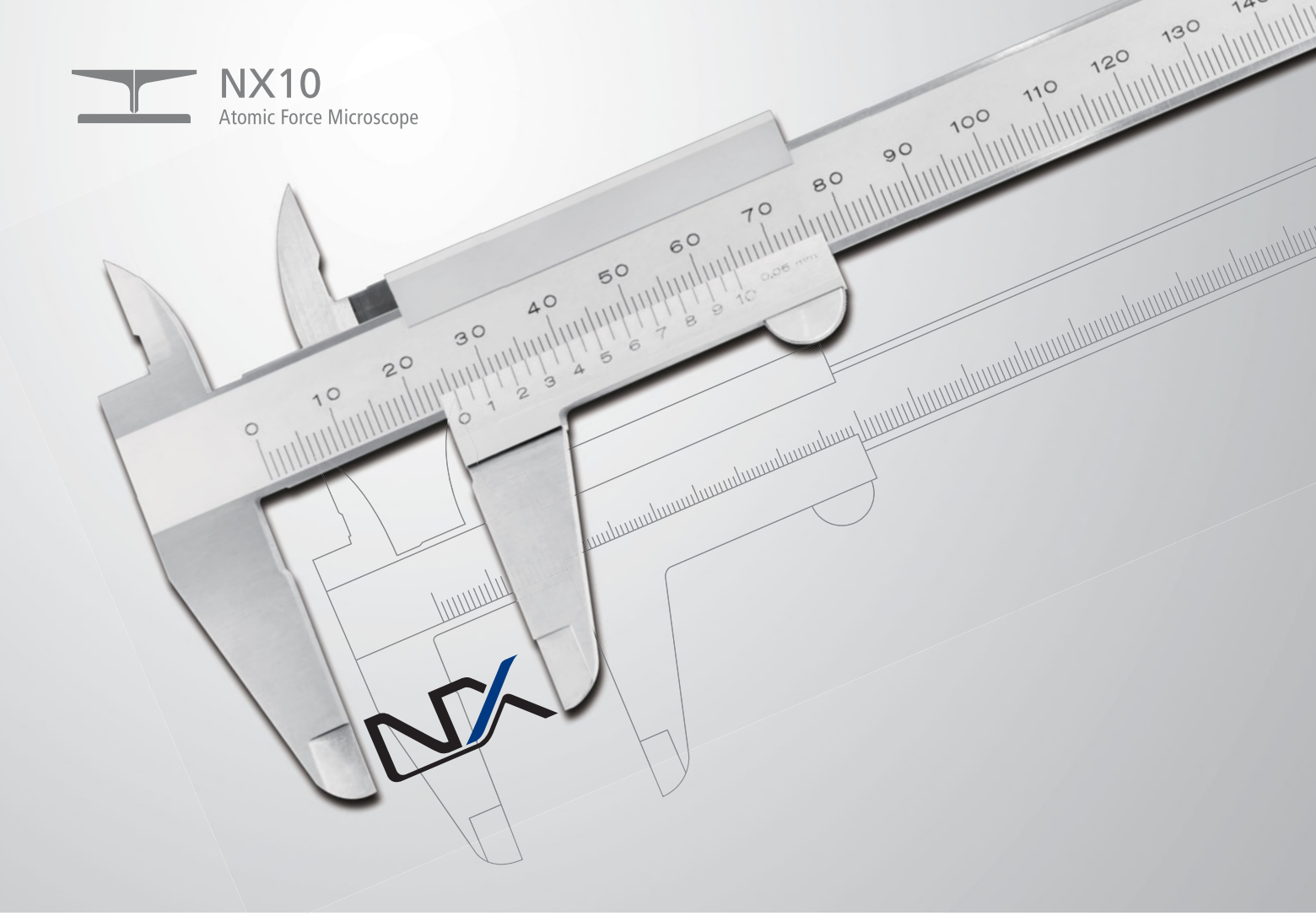
NX10
Atomic Force Microscope



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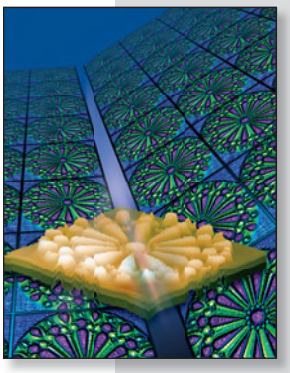

ON THE COVER

Plasmonics. The field of plasmonics has seen significant progress over the last 55 years. This issue reviews the characterization tools that have allowed nanometer-scale probing of plasmons as well as new materials that may enable low-loss, active, and quantum plasmonics. The cover shows a topographic map of a micron-sized plasmonic resonator made with focused ion beam milling. The background image is the same structure viewed in an optical microscope; the colors arise from plasmons propagating within the resonator. The resonator was patterned to mimic rose (stained-glass) windows characteristic of Gothic architecture, which provide some of the earliest examples of plasmon resonances; metallic nanoparticles in the glass yield the vibrant colors. Images courtesy of Brian Baum. See the technical theme that begins on page 717.

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The Materials Research Society (MRS), a not-for-profit scientific association founded in 1973, promotes interdisciplinary goal-oriented basic research on materials of technological importance. Membership in the Society includes almost 16,000 scientists, engineers, and research managers from industrial, government, and university research laboratories in the United States and over 80 countries.

The Society's interdisciplinary approach differs from that of single-discipline professional societies because it promotes information exchange across the many technical fields touching materials development. MRS sponsors three major international annual meetings encompassing approximately 125 topical symposia, and also sponsors numerous single-topic scientific meetings. The Society recognizes professional and technical excellence and fosters technical interaction in local geographic regions through Sections and University Chapters.

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