

# MRS Bulletin

November 2011 Vol. 36 No. 11

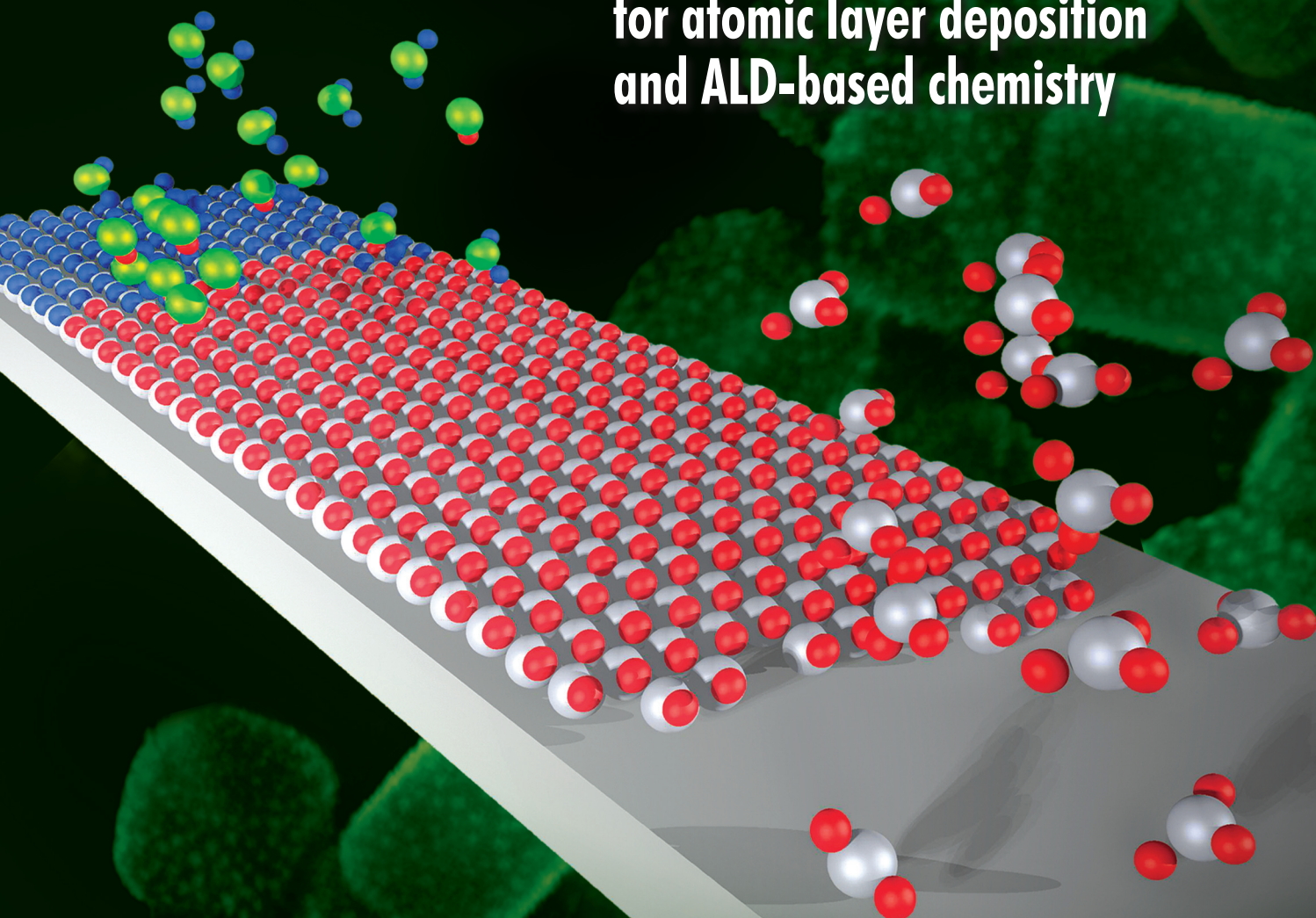
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## Progress and future directions for atomic layer deposition and ALD-based chemistry



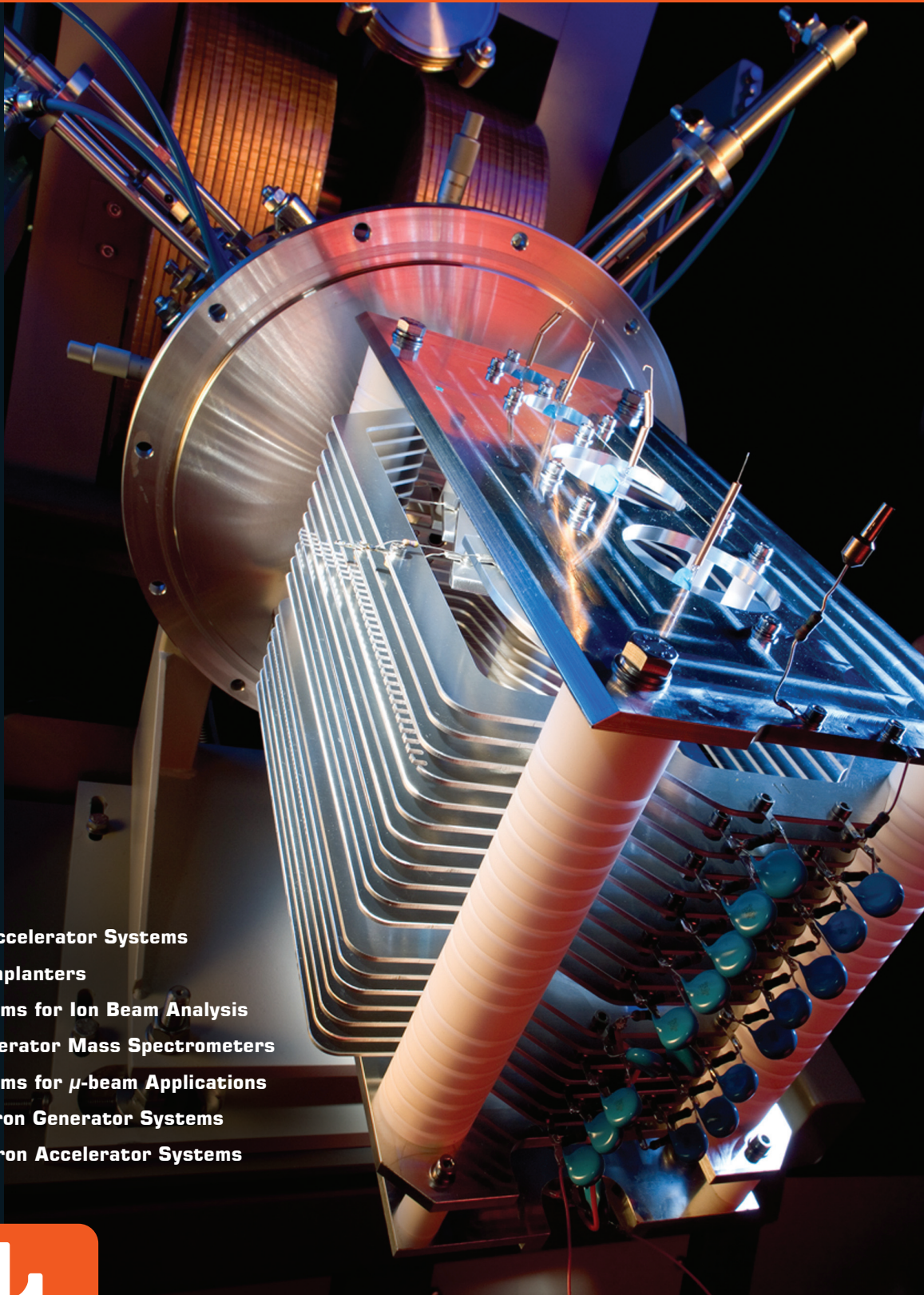
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Ion motion and electrochemistry  
in nanostructures

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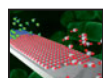


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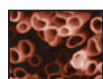
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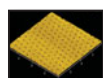
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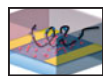
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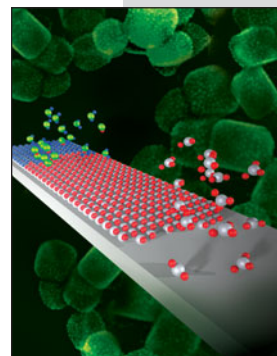
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### ON THE COVER

**Progress and future directions for atomic layer deposition and ALD-based chemistry.** This issue of *MRS Bulletin* details current progress in atomic layer deposition, including the extension of ALD to new regions of the periodic table, and molecular layer deposition and vapor infiltration for synthesis of organic-based thin films. The cover image shows a diagram of an ALD reaction scheme—a snapshot of the reactants and products as they would be flowing from left to right. This is a general, stylized ALD reaction scheme to visualize surface ligand exchange. The background is a scanning electron microscopy image of 2 nm ALD-deposited Pt nanoparticles uniformly dispersed on

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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 two major international annual meetings encompassing approximately 70 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.

MRS participates in the international arena of materials research through the International Union of Materials Research Societies (IUMRS). MRS is a member of ASTRA and is an affiliate of the American Institute of Physics.

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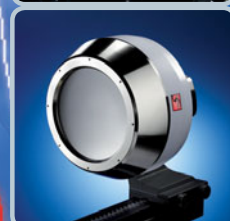
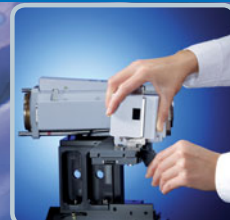
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