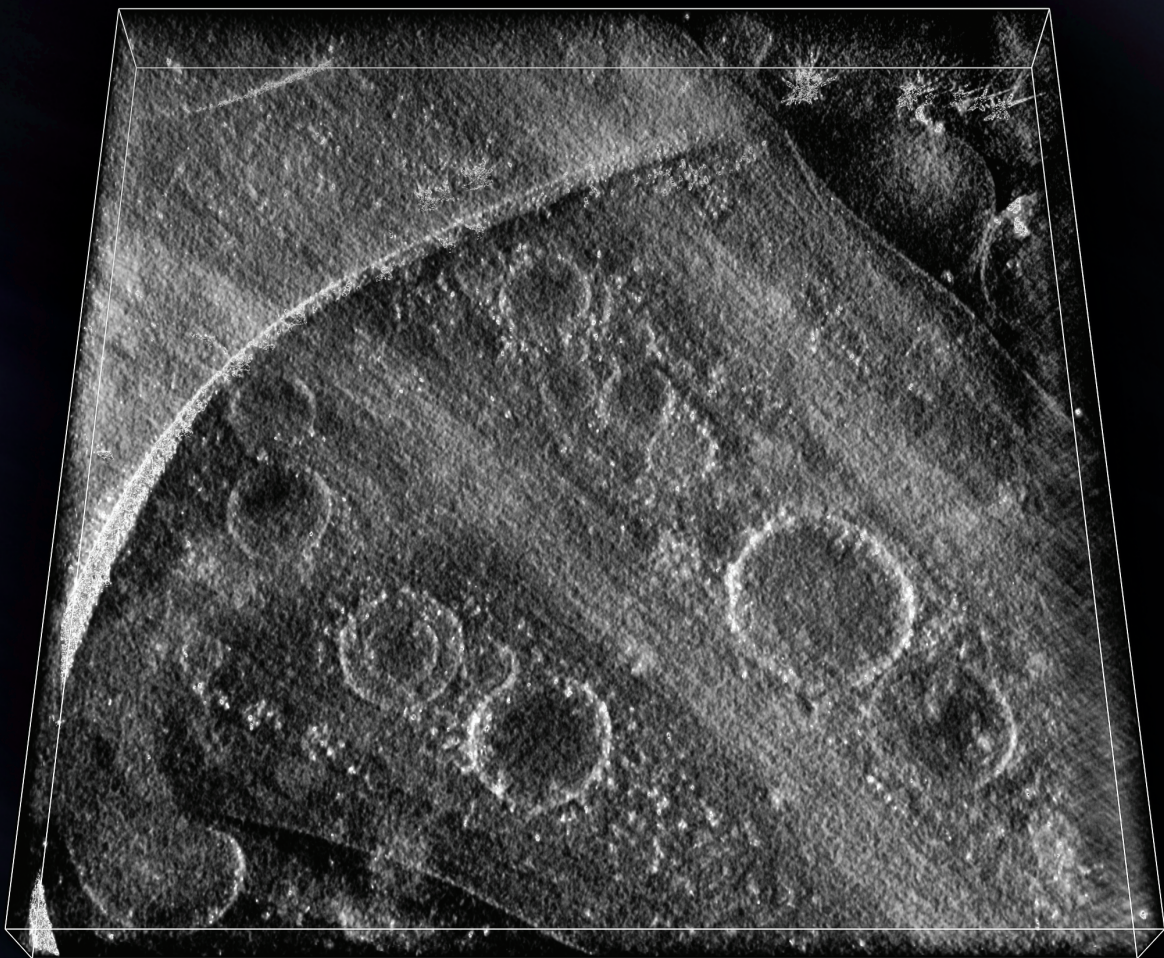


MRS Bulletin

July 2016 Vol. 41 No. 7
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Advanced tomography techniques for materials applications



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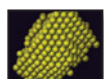
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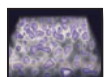


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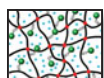


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Engaging and equipping members to be the future of the Society

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ON THE COVER

Advanced tomography techniques for materials applications. Three-dimensional (3D) tomography using electrons and x-rays has pushed and expanded our understanding of the micro- and nanoscale spatial organization in inorganic, organic, and biological materials. While significant impact on the field of materials science has already been realized from tomography applications, new advanced methods are quickly expanding the versatility of this approach. This issue of *MRS Bulletin* describes some of these latest developments in analytical electron tomography. The cover shows cryo-scanning transmission electron tomography of mammalian fibroblasts. Because of the quantitative contrast formation, dense areas are seen as bright in volume representation, with sparse areas seen as transparent. Image courtesy of Wiley. (E.F. Pettersen, T.D. Goddard, C.C. Huang, G.S. Couch, D.M. Greenblatt, E.C. Meng, T.E. Ferrin, *J. Comput. Chem.* **25** [13], 1605 [2004]). See the technical theme that begins on page 516.



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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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