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# "Seeing the Atoms More Clearly: The Impact of Aberration-Corrected STEM on Nanoscience"

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# "Seeing the Atoms More Clearly: The Impact of Aberration-Corrected STEM on Nanoscience"

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Aberration-correction is currently one of the most exciting developments in electron microscopy, thus doubling the achievable resolution and enormously improving image contrast and quality. It is now possible to image individual atoms inside materials or on their surfaces, and through electron energy loss spectroscopy, to identify them and probe their local electronic environment. Oak Ridge National Laboratory has two of the first such corrected microscopes, and recent insights will be presented from several areas of nanoscience, including nanoscale phase separation in “highly-correlated” oxides, La-stabilization of g-alumina for catalyst supports, and the activity of gold and semiconductor nanocatalysts. Future prospects for three-dimensional atomic-resolution tomography will be discussed.