

Understanding catalysts using advanced methods in the transmission electron microscope

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New understanding of catalysts comes with new technique developments. The field of electron microscopy continues to undergo advances with new ways of performing in-situ microscopy in gas, liquid, hot, or cold environments, with faster detectors, with 3-D imaging, and with ultrafast imaging capabilities. Catalyst characterization requires the atomic-resolution imaging afforded by transmission electron microscopy methods, combined with gas or liquid environments to more closely emulate the catalysts' working environment. This presentation will overview some of these advanced characterization methods, and provide examples of how they can be used to enable new understanding of catalysts.