Electron Microscopy and Advanced Materials

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We live and work in a world of materials. Modern technology depends critically on the availability of advanced materials, e.g., in transportation, communication, data processing, production systems, etc. and more and more emphasis is being placed on R & D of materials. Materials R & D in metals, ceramics, composites, including designing for better mechanical and physical properties, processing, forming, joining, catalysis, etc. all require scanning and transmission electron microscopy because of the scale of relevant microstructure and microanalysis.

In this presentation, some examples of typical application of electron microscopy in advanced materials R & D are presented.