

Structure-resolved properties of nanomaterials probed by in-situ TEM

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Summary

The in-situ transmission electron microscopy (TEM) method has been developed to probe the novel properties of nanomaterials. It is powerful in a way that it can directly correlate the microstructure of the nanomaterials with their physical properties for the same nanoscale sample. In this talk, I will report on the construction and applications of a home-made in-situ TEM platform for nanomanipulation and nanomeasurements.

Mechanics and electromechanical coupling of individual nanowires have been studied inside TEM. The mechanism of resistance switching effects of nanoscale ionic conductors has been revealed by in-situ TEM high-resolution observation. And the transport properties of carbon nanotubes and graphene will be also included in this talk.

