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# Nanoscale deformation of composite structures and heterophase interfaces

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## Nanoscale deformation of composite structures and heterophase interfaces

Interfaces often govern the properties and performance of composite structures, especially in the context of mechanical response. However, nature of deformation in nanoscale composites and their interfaces requires improved understanding. We have been utilizing in-situ TEM based nanomechanics measurements to isolate individual heterophase interfaces and characterize their properties. Specific applications discussed relate to the role of alloy chemistry in affecting the interfacial strength in nanocomposites and the importance of interfacial deformation in affecting the wear resistance nanoscale tribofilms. The talk will also discuss the important role that nanoscale structural elements play in affecting overall composite properties.