In situ micro-and nanomechanical characterization

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Summary

In-situ methods are becoming extremely important to characterize the mechanical behavior of materials. There has been a rapid expansion of available in-situ techniques in recent years to examine mechanical properties of materials from the macroscale down to the nanoscale, with control of loading mode, temperature and atmosphere, while imaging in real-time. This symposium aims to bring together the rapidly growing in-situ mechanical testing research community, particularly in the areas of: 1) Time-resolved in-situ SEM, EBSD, and TEM mechanical testing 2) in-situ AFM mechanical testing 3) Mechanical testing using X-ray and optical techniques (e.g. Raman scattering) 4) Mechanical properties of materials in environmental cells 5) In-situ methods for biomaterials 6) Advances in in-situ tribology