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NND02 : Nanoscale mechanical properties of materials

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Invited Speakers: To be communicated

Content:

The field of nanoscale mechanics is rapidly evolving. Recently developed in situ and operando techniques now allow for real time observation of elementary deformation mechanisms (plasticity, phase change) under ambient or extreme conditions (temperature, high pressure, irradiation). This progress is mirrored by significant improvements in numerical simulations at the atomic, mesoscopic or continuum scales, which help to bridge the gap with experiments. Understanding and controlling mechanical properties allows for the design of high-performance nanomaterials for cutting-edge applications in various domains, such as structural materials, surface engineering, micro-electronics, biomedicine, etc...

This mini-symposium invites submissions that highlight studies expanding our understanding of the mechanical behavior of elementary or complex materials (nano-objects, thin films, nanostructured bulk materials), subjected to complex loading (fatigue, fracture) or extreme environments. In addition, we welcome contributions at the interface with other research subjects like biophysics, soft and active matter, geology, etc...