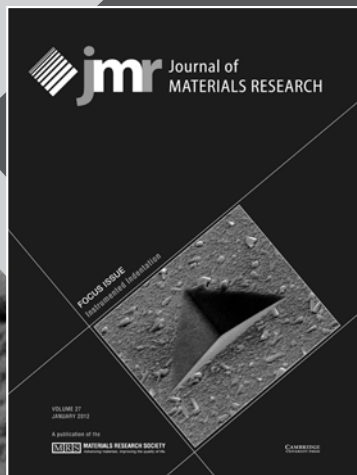


Submission Deadline—May 5, 2011



## Instrumented Indentation

Research on indentation has seen significant growth in recent years and *Journal of Materials Research* has been there to document the progress – boasting three highly cited focus issues on the topic over the past decade. With two years passed since the last focus issue on indentation, and with no sign of declining interest, the time seems ripe to visit the subject again. The swift evolution of instrumented indentation is the result of a rapid convergence of (1) improved fundamental understanding of indentation mechanisms, (2) advances in instrumentation, and (3) diverse applications of instrumented indentation in multiple research fields. This special focus issue, **scheduled for publication in January 2012**, will offer a snapshot of the state of the art in indentation and highlight current and emerging topics.

### Contributed papers are solicited in the following areas:

- ◆ Extracting mechanical properties of materials, including thin films, nanomaterials, and biological materials
- ◆ Modeling and simulation of instrumented indentation
- ◆ Nanomechanics and *in-situ* indentation
- ◆ Instrumented indentation under various environmental conditions
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Submission Deadline—June 28, 2011



## Advances in Mechanics of One-Dimensional Micro/Nanomaterials

Fabrication of one-dimensional materials—nanotubes, nanowires, and nanopillars—is an area of significant interest, as these materials have promising applications in electronics, composites, optics, and MEMS. In many application venues, including flexible systems, the mechanical properties of 1-D materials can determine both reliability and performance. Experimental and theoretical modeling of 1-D materials subjected to mechanical straining demonstrates unexpected behaviors, including crystal structure transformation, brittle-to-ductile transition, and remarkable ductility. Both experimentalists and modelers will come together in a **February 2012 focus issue of *Journal of Materials Research*** to discuss the latest on deformation, failure, and mechanics of 1-D materials across micro- and nanoscales.

### Contributed papers are solicited in the following areas:

- ◆ Mechanical properties of nanotubes, nanowires, and nanopillars
- ◆ Mechanical failures in nanotubes, nanowires, and nanopillars
- ◆ Deformation and strengthening mechanisms in nanotubes, nanopillars, and nanowires
- ◆ Theoretical modeling and simulation of fracture and deformation

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