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# CALL FOR PAPERS

**ABSTRACT DEADLINE: NOVEMBER 1, 2005**

**REMINDER:** *In fairness to all potential authors, late abstracts will not be accepted.*

## MRS Symposium H: Chalcogenide-Based Phase-Change Materials for Reconfigurable Electronics

Compounds such as GeTe, Sb<sub>2</sub>Te<sub>3</sub>, and alloys such as Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>, undergo dramatic changes of optical and electrical properties through a rapid phase change between polycrystalline and amorphous states. This phenomenon has already been exploited in rewritable DVDs and is emerging in some electronic, nonvolatile memories. These materials are also candidates for a variety of reconfigurable applications in RF circuitry, antennae, analog circuits, and even as reconfigurable wiring harnesses. While they have been exploited technologically, there are many fundamental questions to be answered. The goal of this symposium is to bring together the technological and scientific communities to identify outstanding, fundamental problems, to present technological trends, and to share current scientific results. We foresee a mix of physicists, chemists, materials scientists, device physicists, and process engineers.

Symposium topics will include, but not be limited to:

- Physics of chalcogenide alloys (microscopic structure and spectroscopy)
- Mechanism for rapid phase change
- Novel chalcogenide devices
- Emerging materials
- Materials science of chalcogenide reliability

A joint session is anticipated with Symposium G: *Science and Technology of Nonvolatile Memories*. This session will focus on applications beyond nonvolatile, electronic memory.

**Invited speakers** include (partial list): **Stephen Bishop** (Univ. of Illinois-Urbana), **James Chelikowsky** (Univ. of Texas-Austin), **Paul Fons** (National Inst. of Advanced Industrial Science and Technology, Japan), **Steven Hudgens** (Ovonyx, Inc.), **M. Paisler** (North Carolina State Univ.), **J. Tominaga** (NIAIST, Ctr. for Applied Near-Field Optics Research, Japan), **Guy Wicker** (Ovonyx, Inc.) and **N. Yamada** (Panasonic Corp).

### Symposium Organizers

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