New Shape Memory and Multiferroic Materials with Exceptionally Low Hysteresis
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NNIN Facility utilized: Characterization Facility

Accomplishments
- New understanding of the origins of hysteresis in phase transformations
- Hysteresis is related to compatibility at interfaces, not pinning
- New highly reversible shape memory alloys found by systematically pursuing special conditions on lattice parameters
- Hysteresis reduced in some cases by a factor of 10

Planned applications to “multiferroics by phase change”.