

# 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”.

