



Institute of Physics of the
Czech Academy of Sciences

SEMINAR

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Meeting Room 117, Na Slovance 1999/2, Prague 8

Elizaveta Iaparova

Department of Functional Materials, Division of Condensed Matter Physics

Characterization of nanocrystalline shape memory NiTi wires under tension

Widely investigated superelastic NiTi wire has low transformation temperatures which makes impossible to look at the changes in the martensitic structure. Shape memory NiTi wire is suitable for this purpose because it is in martensitic state at a room temperature. We used 0.1 mm thin NiTi wire annealed by joule heating with a different grain size from 15 to 1000 nm. We performed various thermomechanical tests in DMA and MITTER and also DSC. Dependences of different material parameters from the grain size, applied stress and deformation temperature will be shown in this presentation.

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