

Materials Synthesis and Modification Using Ion Beams at ORNL

T. E. Haynes

This talk will provide an overview of research activities in ion-solid interactions in the Solid State Division of Oak Ridge National Lab. I will describe unique capabilities of the Surface Modification and Characterization user facility and illustrate their use through selected examples from our research. Examples will include synthesis of composites containing embedded nanocrystals of ferromagnetic and optical switching materials having remarkable hysteresis properties, studies of layer transfer using hydrogen implantation, and basic investigations of defect interactions following ion implantation in Si and SiC.

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