Tabbetha A. Dobbins

Associate Professor
Physics & Astronomy/Molecular & Cellular Biosciences

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Education:
BS (Physics), Lincoln University (PA)
MS (Materials Science & Engineering), The University of Pennsylvania
PhD (Materials Science & Engineering), The University of Pennsylvania
Postdoctoral, National Institute of Standards and Technology

Research Expertise:
Synchrotron X-ray Studies | Neutron Scattering | Hydrogen Storage

My research interests are in two major areas: neutron and synchrotron X-ray studies for understanding reaction mechanism in metal hydrides and developing nanomaterials for enhancing cancer therapy.

Honors and Awards:
National Research Council Post-Doctoral Fellowship
Penn State University Alumni Association Achievement Award
National Science Foundation Early Faculty Career Award

Member of:
American Physical Society (www.aps.org)
National Society of Black Physicists (https://nsbp.org)
ASM International (http://www.asminternational.org/)
Materials Research Society (www.mrs.org)

Recent Publications:

NaraseGowda S, Brown CM, Tyagi M, Jenkins T, Dobbins TA (2016) Quasi-Elastic Neutron Scattering Studies of Hydrogen Dynamics for Nanoconfined NaAlH4. J Phys Chem C. 120:14863-73.

Wood B, Ham K, Hussey DS, Jacobson DL, Faridani A, Kaestner A, Vajo JJ, Liu P, Dobbins TA, Butler LG (2014) Real-Time Observation of Hydrogen Absorption by LaNi5 with Quasi-Dynamic Neutron Tomography. Nucl Instr Meth Phys Res B: Beam Interactions with Materials and Atoms. 324:95-101.

Hu X, Duki S, Forys J, Hettinger J, Buchicchio J, Dobbins T, Yang C (2014) Designing Silk-silm, Protein Alloy Materials for Biomedical Applications. J Vis Exp. 90:E50891.

Dobbins T, NaraseGowda S, Butler L (2012) Study of the Morphological Changes in MgH2 Destabilized LiBH4 Systems using Computed X-ray Microtomography. Materials. 5:1740-1751.

Dobbins T, Chevious R, Lvov Y (2011) The Behavior of Na+-Polystyrene Sulfonate at the Interface with Single-Walled Carbon Nanotubes (SWNTs) and Its Implication to SWNT Suspension Stability. Polymers. 3:942-954.