

Title of the Talk:

“Processing and characterization of both Bulk and Nanophase-MgB₂ materials”: A presentation summary detailing involved scientific activities will be discussed.

Presentation By:

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Abstract:

The simplest and easy Powder In Tube (PIT) method, is used to deliver bulk MgB₂ material. In this contest, the literature data detailing Mg-Reactive Liquid Infiltration (Mg-RLI) into Boron precursor (particle size $\leq 1 \mu\text{m}$) will be outlined. Mg-RLI PIT processing parameters optimization to deliver MgB₂ phase is addressed by employing X-Ray Diffraction (XRD) and TG/DSC measurements. Subsequently, possible liquid phase exfoliation of these μ -sized MgB₂ particles by sonication results will be illustrated. Obtained experimental data of TEM, UV-VIS optical, and Raman spectroscopic techniques is collected, to support success in achieving exfoliation to also deliver 2D-MgB₂ nanoscale layers.

Graphical Abstract:

