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Physical Vapor Deposition for the Controlled Synthesis of Magnetic Nanocrystals JONATHAN LEE, TONY VAN BUUREN, JASON JEFFRIES, CHRISTINE ORME, SCOTT MCCALL, LLNL — The ability to tailor the nanoscale architecture of magnetic materials provides an important pathway to enhancing their properties. For multicomponent systems, this necessitates precise control over the structure and composition of the nanoscale materials used in their manufacture. We report on the fabrication of a variety of nanoscale hard and soft magnetic materials using physical vapor deposition and will discuss characterization of their structure and physical properties, conducted with the aim of deriving structure-function relationships. This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344

Jonathan Lee LLNL

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