

MAR07-2006-020154

Abstract for an Invited Paper
for the MAR07 Meeting of
the American Physical Society

Cross-Cutting Basic Research Needs for Solid State Lighting¹

JAMES MISEWICH, Brookhaven National Lab

The recent DOE workshop on basic research needs for solid-state lighting has identified a number of cross-cutting scientific research areas that have potential to impact solid-state lighting. Basic research in the following areas were identified as priorities: new functionality through heterogeneous nanostructures, innovative photon management, enhanced light-matter interactions, multiscale modeling for solid-state lighting, and precise nanoscale characterization. We will provide an overview of the challenges and opportunities in these areas and describe how advances here could impact solid-state lighting.

¹This work was supported by the DOE Office of Basic Energy Sciences