

4CF12-2012-000177

Abstract for an Invited Paper
for the 4CF12 Meeting of
the American Physical Society

Materials @ LANL: Solutions for National Security Challenges

DAVID TETER, Los Alamos National Laboratory

Materials science activities impact many programmatic missions at LANL including nuclear weapons, nuclear energy, renewable energy, global security and nonproliferation. An overview of the LANL materials science strategy and examples of materials science programs will be presented. Major materials leadership areas are in materials dynamics, actinides and correlated electron materials, materials in radiation extremes, energetic materials, integrated nanomaterials and complex functional materials. Los Alamos is also planning a large-scale, signature science facility called MaRIE (Matter Radiation Interactions in Extremes) to address in-situ characterization of materials in dynamic and radiation environments using multiple high energy probes. An overview of this facility will also be presented.