

MM 22 Hauptvortrag Andreas Schreyer

Zeit: Samstag 14:00–14:30

Raum: TU H1058

Hauptvortrag

MM 22.1 Sa 14:00 TU H1058

Engineering Materials Research with Neutrons and Photons: Contributions to better Lightweight Structures — •ANDREAS SCHREYER — GKSS Forschungszentrum GmbH, Max Planck Str. 1, 21502 Geesthacht

For the development and optimization of lightweight structural materials characterization methods are needed which provide an intimate knowledge of their micro- and nanostructure. Neutrons and photons from synchrotron radiation sources can provide information e.g. on strains, textures, precipitates, pores and cracks in a destruction-free way. In this talk a number of examples from the ongoing development of TiAl and Mg alloys and parts as well as on welding technologies will be presented, where neutrons and photons were able to make an important contribution using scattering or tomographic techniques. Specifically, the complementarity of both probes will be highlighted.