MM 36 Symposium Tomographic Methods in Materials Research Hauptvortrag Astrid Haibel

Zeit: Dienstag 10:30–11:00 Raum: TU H1058

Hauptvortrag MM 36.1 Di 10:30 TU H1058

Synchrotron X-ray microtomography: principles and applications — •A. Haibel, A. Rack, S. Zabler, and J. Banhart — Hahn-Meitner-Institut Berlin, Abteilung Strukturforschung, Glienicker Str. 100, 14109 Berlin

Synchrotron tomography images the interior structure of real objects three-dimensionally, non-destructively, and with a high spatial resolution. This allows for a detailed microstructural analysis of many different kinds of materials or small engineering components. The wide field of applications of synchrotron microtomography will be presented by means of several examples, i.e. metallic foams, thixotropic alloys as well as further components and materials. Our research topics aim at the understanding of the structural and chemical nature of these objects. Moreover, by in-situ experiments, reorganization processes, e.g. the discharge process inside an alkaline battery or the accumulation of SiC particles on the pore surfaces in metallic foams during the foaming process will be visualized and characterized quantitatively. All presented results were measured at the tomographic facility of the BAMline at the BESSY II synchrotron.