

Tomographic and In-Situ Characterization in Electron Microscopy			
	Organiser	Institution	Contact
D1.II	Niels de Jonge	INM Leibniz Germany	niels.de.jonge@vanderbilt.edu
	Christian Kübel	INT Eggenstein-Leopoldshafen, Germany	christian.kuebel@kit.edu
	Frank Mücklich	Univ. Des Saarlanders Saarbrücken Germany	muecke@matsci.uni-sb.de
	Summary		
<p>This symposium aims to address forefront scientific and technological developments in the field of electron microscopy (EM). Exciting new developments are currently occurring in the areas of three-dimensional (3D) EM and in-situ EM. 3D EM subjects include cryo EM, phase-plate technology for 3D imaging, analytical and scanning transmission electron microscopy (STEM) tomography, aberration corrected 3D EM, focused ion beam (FIB) sectioning combined with scanning electron microscopy (SEM). This symposium will also explore novel computational approaches for 3D reconstruction, segmentation, and visualization. In-situ EM aims to study materials under close to realistic conditions. Topics include the (sub-)nanoscale study of biological samples and functional materials in, for example, gaseous environments, at elevated temperatures, in electric fields, under mechanical stress, or in liquid. It will be discussed how processes can be studied by including the time domain in electron microscopy.</p>			