

EUROMAT 2017/ Symposia Structure/Area F

Title: The Next Generation of Implants with Multi-functional Properties: Advanced Synthesis, Processing and Surface Modification Methods for Biomaterials		
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Summary		
F.4	<p>The next generation of implants will exhibit added functions. In addition to the standard mechanical properties required for orthopaedic and dental devices, implants should for example be integrated in the host tissue (e.g. bone). For this purpose, the implant surface must be modified, and current effort is for example dedicated to surface modification of biomaterials to insure a suitable biological response. In some cases, the implanted material must favour specific biological interactions, and then degrade at a specific rate without compromising clinical success. It is the aim of this symposium of reviewing the latest achievement in terms of surface modification of biomaterials, new biodegradable materials, and drug release, for example.</p> <p>This is also the objective of the session to review the evolution of biomaterials in terms of mechanical properties or other properties of interest as far as new implants are concerned. These properties are linked to the structure of the materials at different scales. Therefore, contributions providing new generic materials science in the field of structure-properties are welcome.</p> <p>In vitro characterization methods able to provide, in advance and without heavy in-vivo trial, insights into the biological and functional properties of new biomaterials will also be addressed in this symposium.</p>	