

## COMET Module

<b>Chemitecture</b>	
<b>Imparting new functions in digitalized polymers by bridging CHEMistry with macroscopic archiTECTURE</b>	
<b>Main location</b>	Polymer Competence Center Leoben GmbH, Roseggerstrasse 12, 8700 Leoben, Styria
<b>Other locations</b>	-
<b>Research programme</b>	(i) Synthesis of functional resins for 3D printing of adaptable polymers (ii) Development of new 3D printing techniques (iii) Design, modelling and characterization of printed objects (iv) Mechanics and topology optimization of advanced printed objects (v) Recycling aspects and self-healing strategies for digitalized materials
<b>Planned realisation and outcomes</b>	
Future technical applications and personalized products addressed in Chemitecture are: (i) adaptive and personalized prostheses and orthoses, (ii) “soft robotics” and “soft exosuits”, (iii) advanced materials for light-weight design (“ <i>ultra-light</i> ” & “ <i>ultra-stiff</i> ”), (iv) fully integrated and personalized sensor applications, (v) materials which are adaptive to impact and crash loadings for personalized protection gear or automotive crash boxes, (vi) self-adaptive elastomers for smart hoses and tires.	
<b>Selected company partners</b> (max. 10)	<b>Selected scientific partners</b> (max. 5)
1. Andritz AG 2. Continental Automotive GmbH 3. FACC Operations GmbH 4. Helios TBLUS, d.o.o. 5. In-Vision Digital Imaging Optics GmbH 6. Rembrandtin Lack GmbH Nfg. KG 7. voxeljet AG	1. Joanneum Research GmbH 2. Montanuniversität Leoben 3. Politecnico di Torino 4. Texas A&M University 5. Vrije Universiteit Brussel
	<b>Selected international partners</b> <sup>1</sup> (max. 5)
	1. Continental Automotive GmbH 2. Helios TBLUS, d.o.o. 3. Technische Universität Dortmund 4. Texas A&M University 5. Vrije Universiteit Brussel
<b>Start of the COMET Module</b>	01.01.2020 (4 years)
<b>Number of personnel</b>	8.03 (p.a.) (FTE) are involved (8.03 (p.a.) FTE are scientists)
<b>Project management</b>	Sandra Schlögl, Division Manager
<b>Contact/ COMET Centre</b>	Polymer Competence Center Leoben GmbH Roseggerstrasse 12, 8700 Leoben office@pccl.at www.pccl.at

<sup>1</sup> Partners with headquarters outside Austria