

## COMET CENTRE

### MATERIALS CENTER LEOBEN FORSCHUNG GMBH

RESEARCH PROGRAMME: IC-MPPE - INTEGRATED COMPUTATIONAL MATERIALS,  
PROCESS AND PRODUCT ENGINEERING

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**Main location:** Leoben (Styria)

**Other locations:** none

**Thematic area:** Material & Production

<https://www.ffg.at/comet/netzwerk>



#### Thematic focuses

- Basic research for integrated computational materials, process and product engineering
- Material engineering
- Process engineering
- Product engineering

#### Planned realisation and outcomes

At the COMET Center IC-MPPE, we focus on the integrated computer-assisted development of materials, production processes and products. The aim is to support companies from the production sector in the realization of material-based, resource-saving and climate-friendly innovations and in the digitalization of the production chain. We increase the performance and extend the service life of materials and develop solutions for the valuable reuse of materials. Using computer-aided technologies based on high-end characterization, measurement data, physical models and artificial intelligence, we accelerate and improve the development of new and more efficient materials, parts and components for green mobility, microelectronics, renewable energy technology and tool technology. We analyse, design and improve materials on all length scales, from the atomic level to metre-long components. Our solutions for condition monitoring and prediction enable adaptive, property-optimized production and maintenance-efficient products. We offer our services in the business areas of research, development & optimization and services.

#### History of establishment

1999: Funding as competence center in the frame of the Kplus Competence Center Program

2008 till 2017: K2 Center MPPE, project volume ~ 110 Mio. € (finished)

2018 till 2026: K2 Center IC-MPPE project volume ~ 88 Mio. € (in progress)

## COMET FACTSHEET

### Selected company partners (max. 10):

1. AMAG Rolling GmbH
2. AT&S Austria Technologie & Systemtechnik Aktiengesellschaft
3. Ceratizit Austria GmbH
4. Infineon Technologies Austria AG Partner
5. Linsinger Maschinenbau Gesellschaft m.b.H.
6. Primetals Technologies Austria GmbH
7. Siemens Mobility GmbH
8. Stahl Judenburg GmbH
9. voestalpine Stahl GmbH
10. voestalpine BÖHLER Edelstahl GmbH & Co KG

### Selected scientific partners (max. 5):

1. Montanuniversität Leoben, A
2. Österreichische Akademie der Wissenschaften, A
3. Technische Universität Wien, A
4. The University of British Columbia, CAN
5. The University of Sheffield, UK

### Selected international<sup>1</sup> partners (max. 5):

1. Ceratizit Luxembourg S.a.r.l., LUX
2. International Zinc Association, USA
3. Robert Bosch GmbH, DE
4. Schweizerische Bundesbahnen AG, SUI
5. VSPARTICLE B.V., NL

**Duration:** 01.01.2018 till 31.12.2026 (9 years)

**Staff employed at the Centre:** 108 FTE, thereof 85 scientists

**Management:** Dr. Werner Ecker, General Manager

**Contact:** Materials Center Leoben Forschung GmbH  
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<sup>1</sup> Partners with headquarters outside Austria