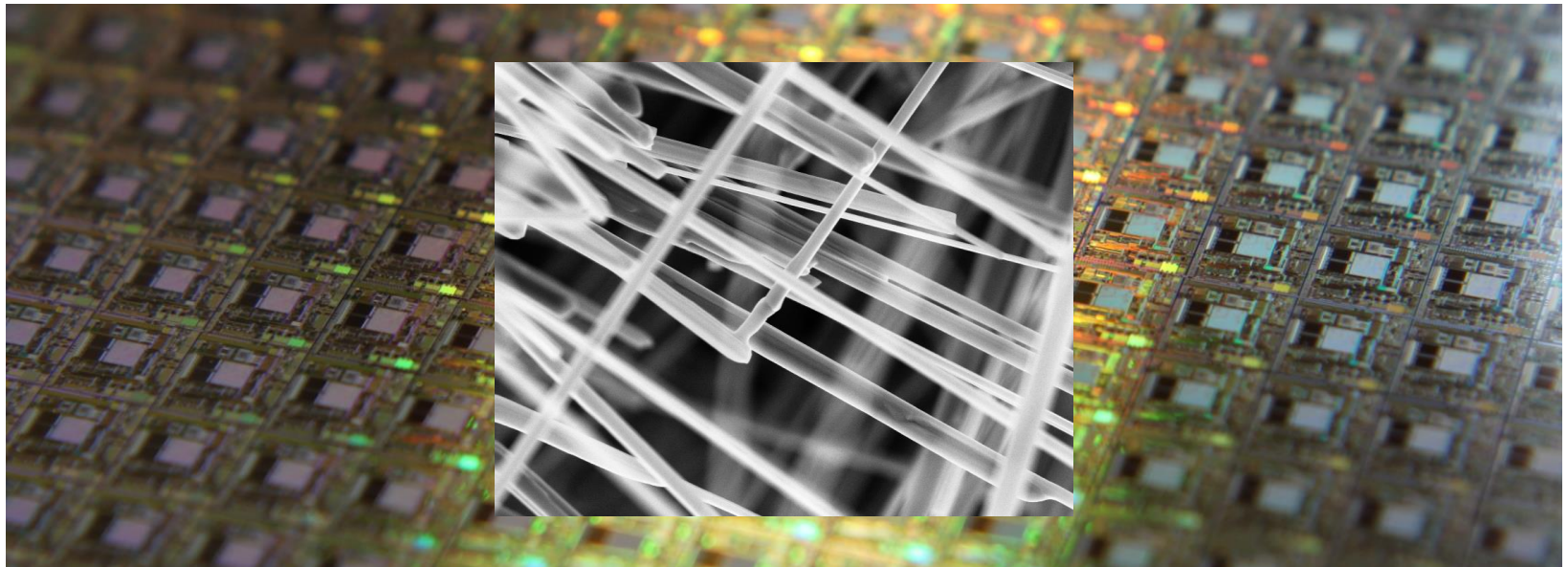


Welcome to the **FOURTH**  
**INTERNATIONAL ACTION WORKSHOP**  
on Innovations and Challenges for Air  
Quality Control Sensors  
25 - 26 February 2016, Vienna, Austria

Anton Köck

MCL Materials Center Leoben Forschung GmbH



## Materials Center Leoben Forschung GmbH

Integrated Materials, Processing and Product Engineering



Roseggerstrasse 12  
A-8700 Leoben  
[www.mcl.at](http://www.mcl.at)

Funded by:



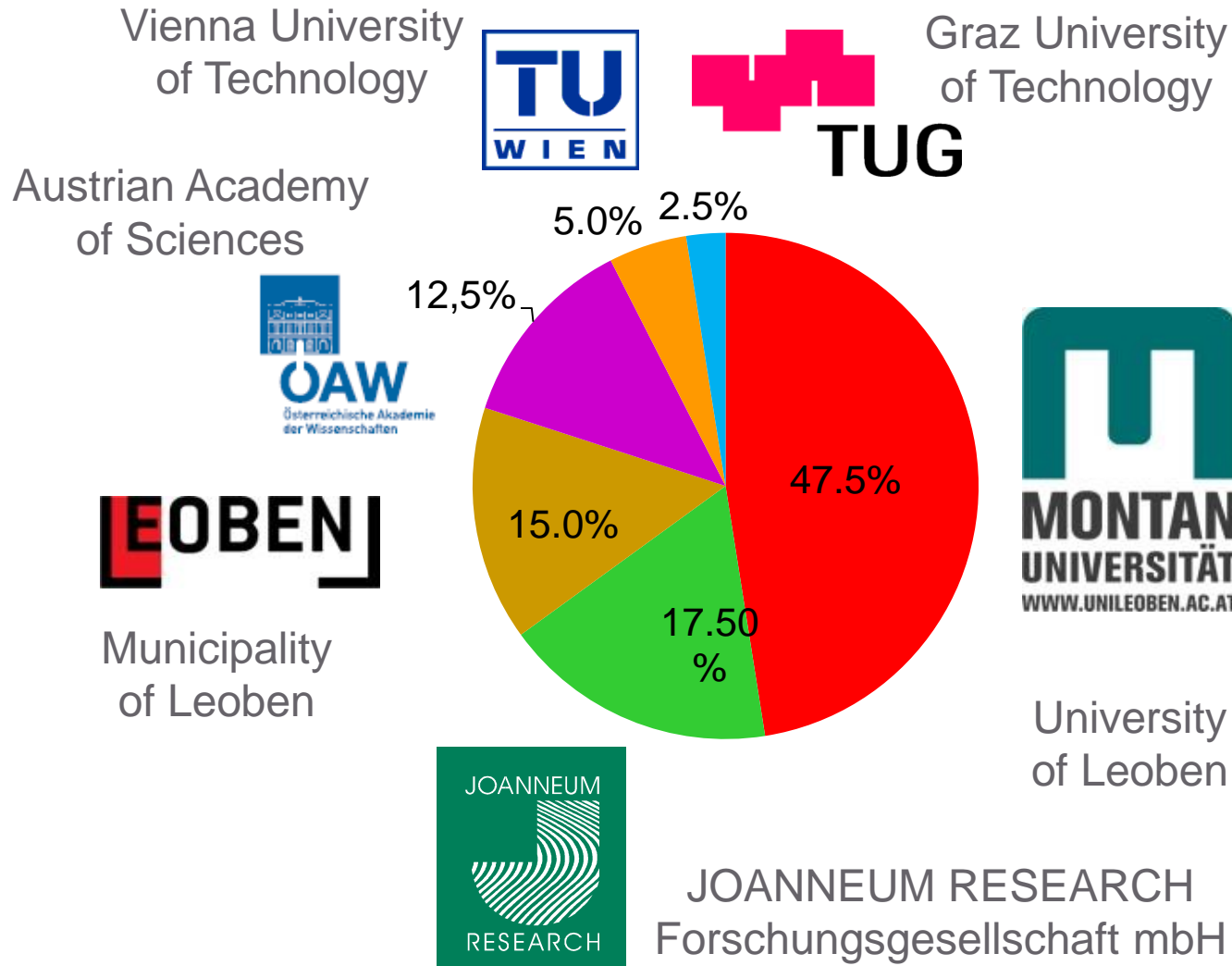
Competence Centers for  
Excellent Technologies



## History

- Founded 1999 MCL is one of the leading competence centres in material science in Austria with ~ 155 employees. The COMET K2 Centre for „Integrated Research in Materials, Processing and Product Engineering“ focuses on the full materials value chain in applications
- In March 2012 the research area „Materials for Microelectronics“ was established:
  - Nanosensors and multi-sensor systems
  - CMOS integration of nanotechnology based sensor components
  - 3D-System Integration, Packaging and Reliability
  - Materials characterization from nano- to microscale.

## Shareholders

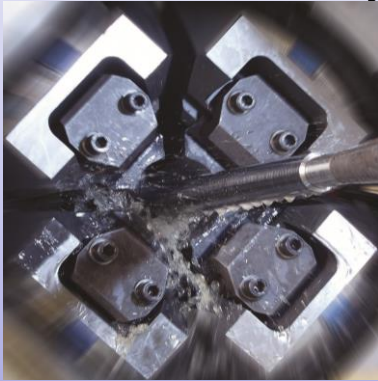


## Where is Leoben ?

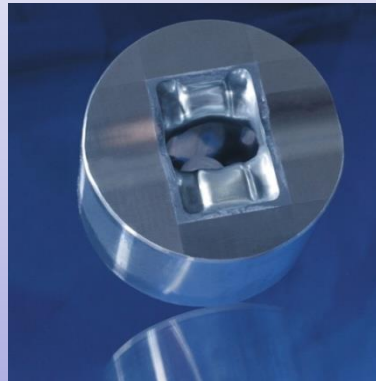


## Core competences of MCL GmbH

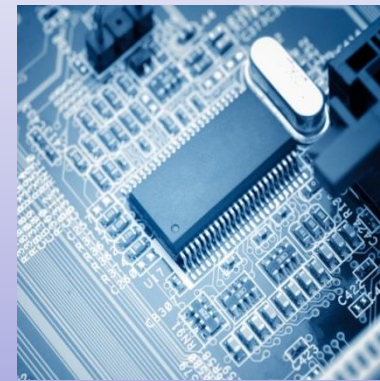
### Metallic Alloys technology



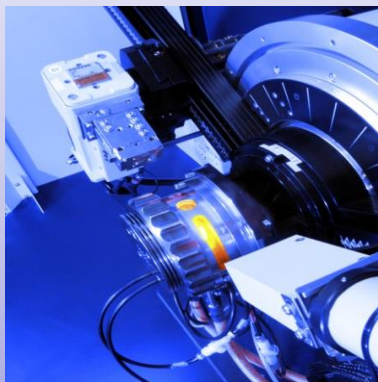
### Tool technology



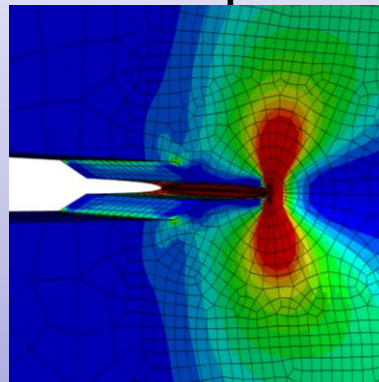
### Microelectronics



### Material Analytics



### Simulation – Materials & processes



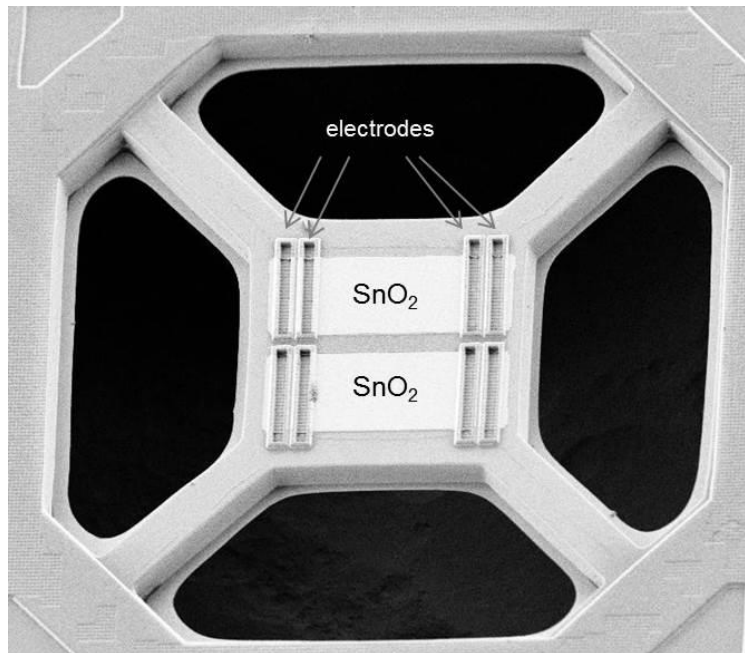
### Focus

- Innovative materials, processes & components
- Design & reliability
- Productivity
- Material-, energy & cost efficiency
- Quality

# MCL & Air Quality Monitoring

## Thin film & nanowire sensors & nanoparticles

CMOS integrated!

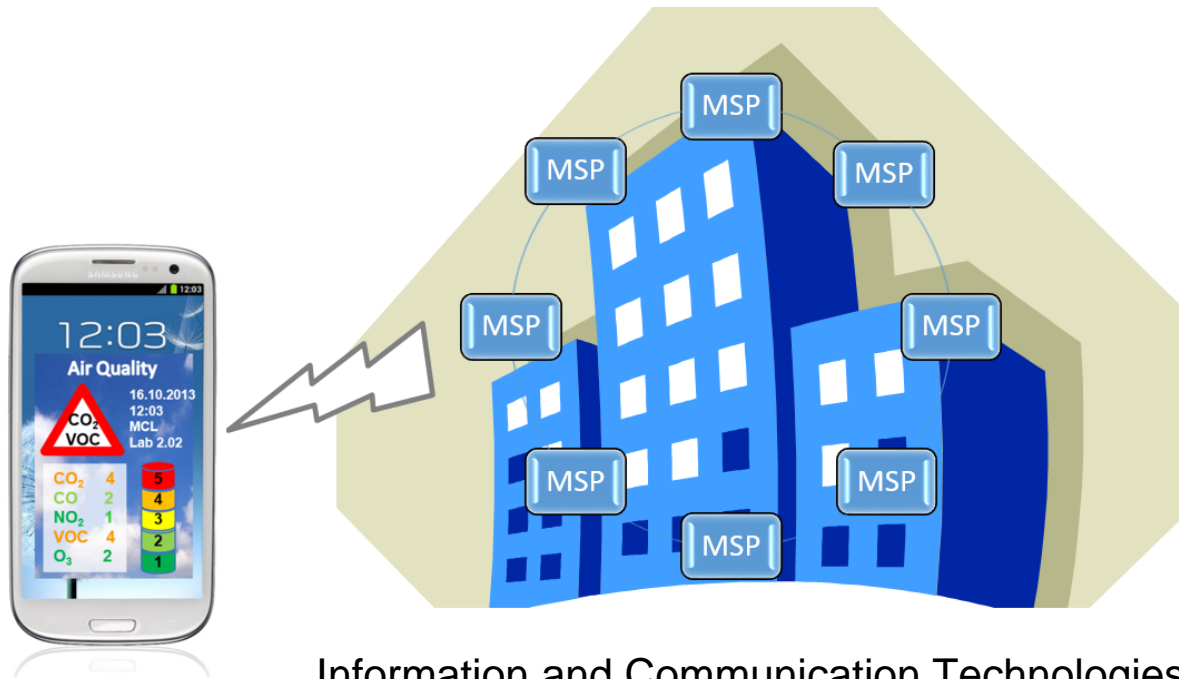


- SnO<sub>2</sub>-thin films
- SnO<sub>2</sub>-NWs (n-type)
- CuO-NWs (p-type)
- ZnO-NWs (n-type)

Target gases:  
CO, H<sub>2</sub>, H<sub>2</sub>S, O<sub>3</sub>  
CO<sub>2</sub>, VOCs, NO<sub>2</sub>  
in dry and humid air

# MSP-Projekt

## MSP - Multi Sensor Platform for Smart Building Management



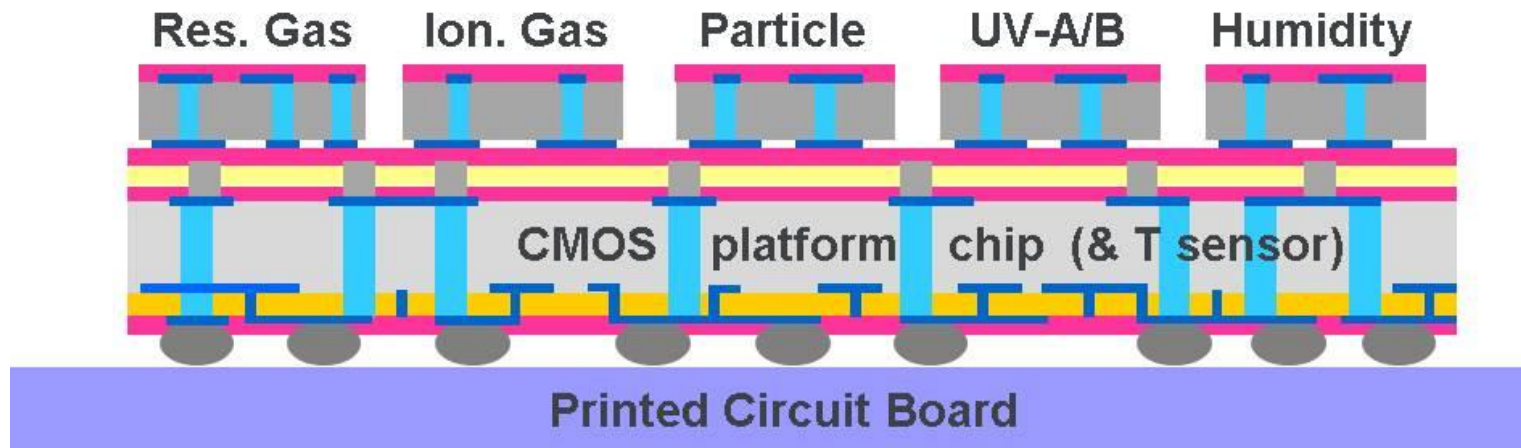
Information and Communication Technologies ICT  
FP7-ICT-2013-10

GA no: 611887



## 3D-integrated Multi Sensor Systems

- Development of 3D-integrated demonstrators, processes and technologies for stacking all components and devices. The key building block is the platform chip that can be used as the basic “LEGO™” building block for 3D-integration to MSP demonstrator systems



<b>AGENDA</b>	
<b>25 February 2016 - Thursday</b>	
09:00 - 18:00	<b>REGISTRATION</b>
09:30 - 10:00	<b>Welcome Address</b>
10:00 - 11:00	<b>Session 1: Plenary Session</b>
11:00 - 11:30	<i>Coffee Break</i>
11:30 - 13:00	<b>Session 2: Oral Presentations</b>
13:00 - 14:30	<i>Lunch</i>
14:30 - 16:00	<b>Session 3: Oral Presentations</b>
16:00 - 16:30	<i>Coffee Break</i>
16:30 - 18:00	<b>Session 4: Oral Presentations</b>
20:00 - 23:00	<i>Social Dinner</i>
<b>26 February 2016 - Friday</b>	
09:00 - 16:00	<b>REGISTRATION</b>
09:00 - 11:00	<b>Session 5: Oral Presentations</b>
11:00 - 11:30	<i>Coffee Break</i>
11:30 - 13:00	<b>Session 6: Oral Presentations</b>
13:00 - 14:30	<i>Lunch</i>
14:30 - 15:30	<b>Session 7: Poster Presentations</b>
15:30 - 17:00	<b>Session 8: Keynote Presentations</b>
17:00	<b>Closure of Meeting</b>

- Bierheuriger Gangl, Alser Straße 4/Hof 1, 1090 Wien



# COST Workshop Social Dinner



- Bierheuriger Gangl, Alser Straße 4/Hof 1, 1090 Wien

