

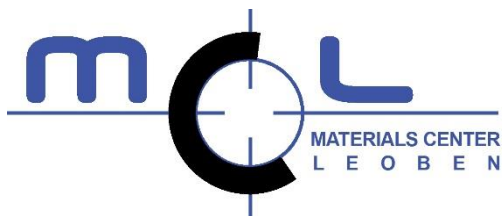
**European Network on New Sensing Technologies for Air Pollution  
Control and Environmental Sustainability - *EuNetAir*  
COST Action TD1105**

**1<sup>st</sup> EuNetAir Air Quality Joint-Exercise Intercomparison  
*Sensors versus Analyzers for Air-Pollution Monitoring in Aveiro City***

**Institute for Environment and Development - IDAD  
Aveiro, Portugal, 13 - 27 October 2014**

Action Start date: 01/07/2012 - Action End date: 30/06/2016 - Year 3: 2014-15 (*Ongoing Action*)

**MULTI SENSOR PLATFORM FOR SMART BUILDING  
MANAGEMENT – SENSOR BOX FOR CAMPAIGN**



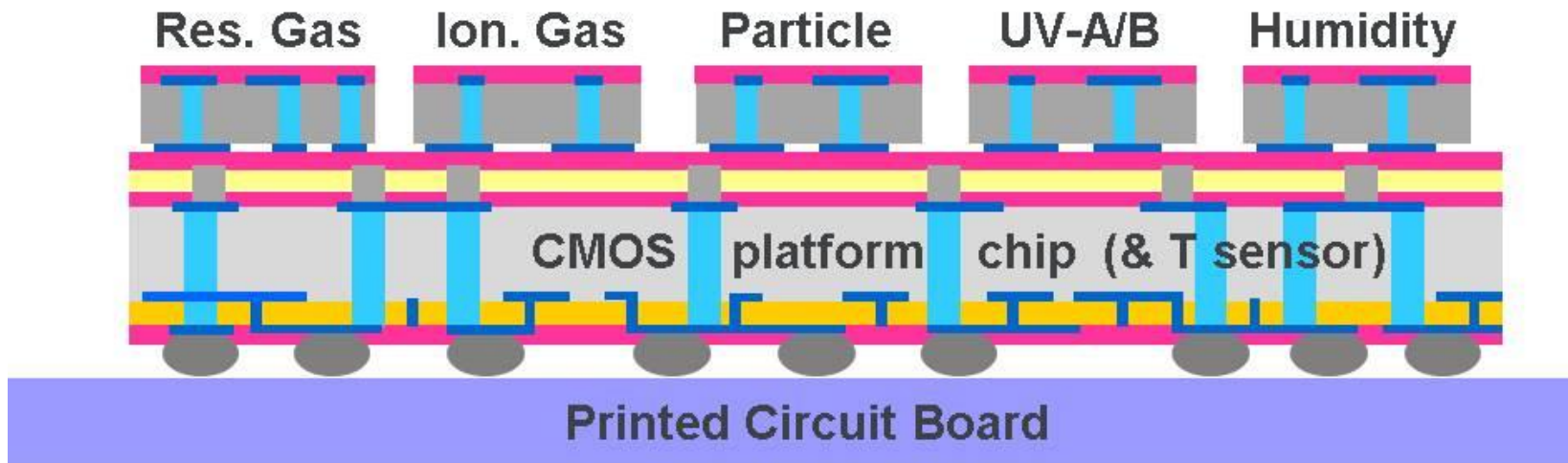
**Anton Köck**

Project Leader

**Materials Center Leoben / Austria**

# Scientific context and objectives

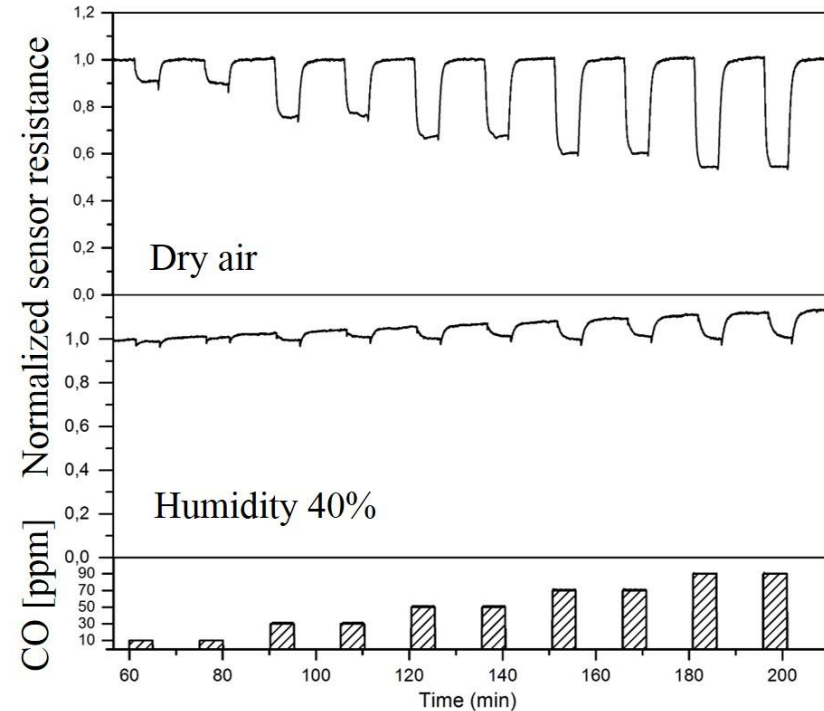
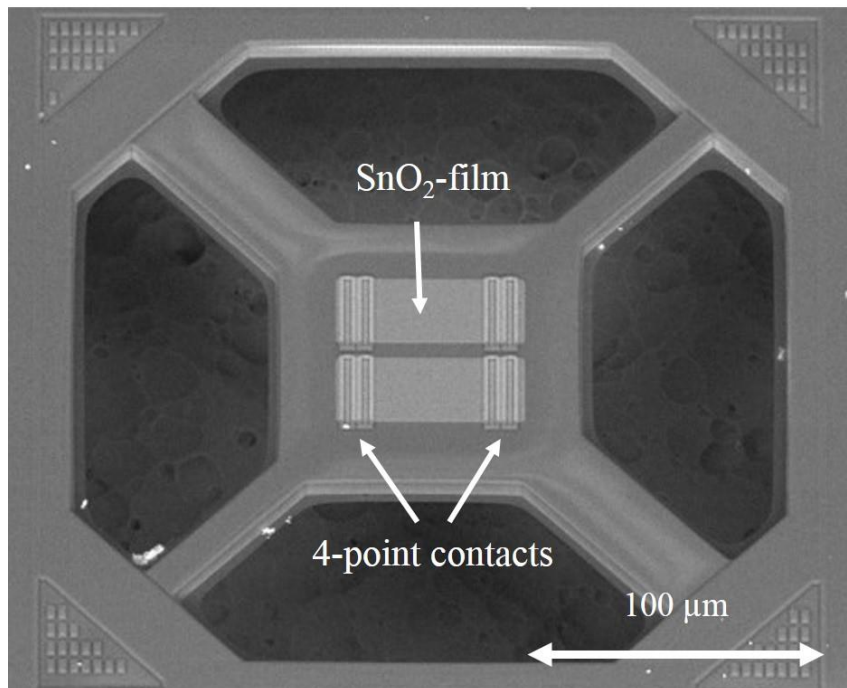
- **Background / Problem statement:**
- Platform chip as basic “LEGO™” building block for 3D-integration to MSP Multi Sensor Systems
- “Other than CMOS compatible materials” (GaN, CNTs,...)



# Sensor-System to be Used in Exercise

- **MCL Sensors:** two sensor types
- CMOS integrated micro-hotplate chips
- SnO<sub>2</sub>-thin film (50 nm) + Au-NPs

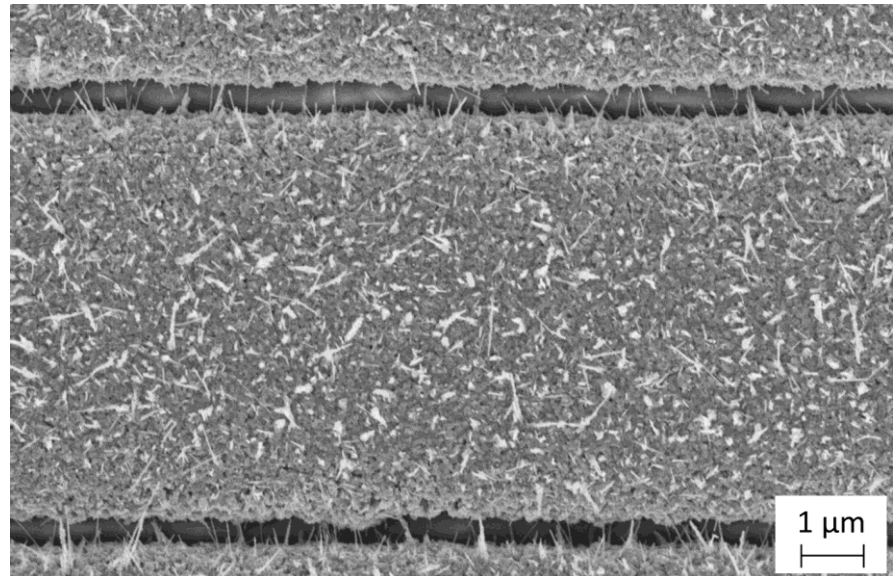
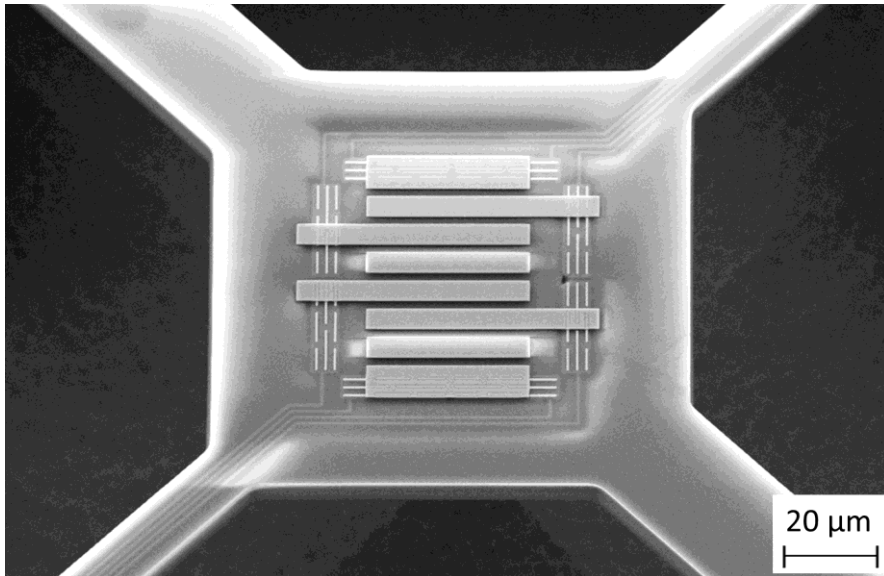
CO, rH



# Sensor-System to be Used in Exercise

$H_2S$ ,  $SO_2$ , rH

- **MCL Sensors:**
- CMOS integrated micro-hotplate chips
- CuO-NWs: Local synthesis of CuO nanowires thermal oxidation (T=350°C, 1h, ambient air)



# CONCLUSIONS

- **CONCLUSIONS:**
- Goal is to test sensors for the very first time in real life settings
- Durability and long-term stability of sensing component
- Durability and long-term stability of two different types of micro-hotplate