



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

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SIG3: Guidelines for Best Coupling Air Pollutants and Transducer



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Outline

- **Definition of the objectives, activities, deliverables and strategies for SIG3 (*for the first year*)**

Guidelines for Best Coupling Air Pollutants and Transducer



Outline

Partner activities

- **Materials (metal oxides, molecular organic semiconductors, graphene and CNMATs)**
- **Transducers (rigid/flexible substrates, u-hotplates, FET, contactless) resistive/conductometric, impedimetric, potentiometric, resonant mass-sensitive.**
- **Applications: (indoor/ outdoor, sensors/dosimeters SO₂, NO_x, VOCs (BTEX), H₂S, NH₃, CO, O₃)**



Definition of the objectives, activities, deliverables and strategies for SIG3

Objectives...

To help the different groups focus on a reduced set of applications

To reach a meaningful comparison of sensor advantages, drawbacks, ...

To promote the use of different, innovative transduction modes



Definition of the objectives, activities, deliverables and strategies for SIG3

Activities...

**Suggest common evaluation protocols for sensors
(sensor benchmarking)**

**Study the combination of different transduction
principles to enhance selectivity**

**Selection of target applications so specifications
(sensitivity, selectivity, interference rejection, use of
sample pre-treatment, response time) can be set.**



Definition of the objectives, activities, deliverables and strategies for SIG3

Deliverables...

Report on the physical parameters being affected by gas/material interaction

Report on the common evaluation protocols to be used



Definition of the objectives, activities, deliverables and strategies for SIG3

Strategies:....

Identify which are the physical parameters being affected by gas/material interaction (for a rationale design of the transducer)

Continuous vs exposure/recovery measurements