



cost
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY



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COST Action TD1105

European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability - EuNetAir

THIRD SCIENTIFIC MEETING

**Working Groups and Management Committee
GEBZE Institute of Technology and Bahcesehir University
3 - 5 December 2014**

**hosted by Bahcesehir University
Ciragan Caddesi Osmanpasa School Sokak, No. 4 - 6,
34353 Besiktas Campus, Istanbul, Turkey**

Meeting AGENDA	
3 Dec. 2014 - Wednesday	
08:30 - 18:00	REGISTRATION
09:00 - 09:30	WELCOME SESSION
09:30 - 11:00	PLENARY SESSION 1: Indoor Environment Quality Applications
11:00 - 11:30	<i>Coffee-Break</i>
11:30 - 13:00	PLENARY SESSION 2: Indoor Environment Quality Applications
13:00 - 14:30	<i>Lunch</i>
14:30 - 16:30	WG1-WG2 Meeting WG3-WG4 Meeting
16:30 - 17:00	<i>Coffee-Break</i>
17:00 - 18:30	WG1-WG2 Meeting WG3-WG4 Meeting
18:30	<i>Gathering of Day</i>
20:30 - 23:00	<i>Social Dinner</i>
4 Dec. 2014 - Thursday	
09:00 - 18:00	REGISTRATION
09:00 - 09:30	Wrap-Up and Inputs from Action TD1105
09:30 - 10:30	KEYNOTE SESSION
11:00 - 11:30	<i>Coffee-Break</i>
10:30 - 13:00	SIG SESSIONS: SIG1-SIG4 Meeting
13:00 - 14:30	<i>Lunch</i>
14:30 - 15:30	POSTER SESSION
15:30 - 16:30	Indoor Environment Quality Cluster GENERAL ASSEMBLY
16:30 - 17:00	<i>Coffee-Break</i>
17:00 - 18:30	Action WGs/SIGs GENERAL ASSEMBLY
18:30	CONCLUSIONS
20:30	<i>Free Dinner</i>
5 Dec. 2014 - Friday	
09:30 - 13:00	6th MANAGEMENT COMMITTEE MEETING
13:00 - 14:00	<i>Lunch</i>
14:30	Meeting Closing



Background and goals

About COST Action TD1105 *EuNetAir*

COST Action TD 1105 *EuNetAir*, a Concerted Action on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability, is a running **Networking** funded in the framework *European Cooperation in the field of Scientific and Technical Research (COST)* during 2012-2016.

The main objective of the Concerted Action is to develop new sensing technologies for Air Quality Control at integrated and multidisciplinary scale by coordinated research on nanomaterials, sensor-systems, air-quality modelling and standardised methods for supporting environmental sustainability with a special focus on Small and Medium Enterprises.

This international Networking, coordinated by ENEA (Italy), includes over 80 big institutions from 28 COST Countries (EU-zone: *Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom*) and 7 International Partners Countries (extra-Europe: *Australia, Canada, China, Morocco, Russia, Ukraine, USA*) to create a S&T critical mass in the environmental issues.

About the **Third Scientific Meeting at Bahcesehir University, Istanbul, 3-5 December 2014**

The 6th MC Meeting jointly with WG1-4 Meeting will be held at Bahcesehir University, organized by GEBZE (Action MC partner) and Bahcesehir University, tentatively organized with a Plenary Session, parallel Inter-WGs Sessions including a General Assembly of the WGs and the four Special Interest Groups (SIGs), and finally, a MC Meeting. The Plenary Session will focus on ***New Sensing Technologies for Indoor Air-Pollution Monitoring*** in a multidisciplinary approach including International Experts and Coordinators of the running FP7 and H2020 research projects to consolidate an **EU Projects Cluster on Indoor Environment Quality and Applications**, with a possible patronage and sponsorship of the EC DG Research and Innovation.

Participation from research, academy, university, industry, environmental agencies, international stakeholders, policy-makers and institutional managers is widely planned with large outreach and dissemination activities, at high expected impact (28 Parties involved in the Action on July 2014).

Fruitful discussions between Action TD1105 participants, international experts, speakers and international institutional organizations delegates (e.g., WHO Europe, JRC, DG RTD) are strongly expected. At the open **Third Scientific Meeting** of the COST Action TD1105 *EuNetAir*, a strong impact on focusing of the critical indoor environmental issues would be mutual benefit.

More Information

Dr. Michele Penza

*MC Chair/Proposer of COST Action TD1105 *EuNetAir**

ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development

Technical Unit for Materials Technologies - Brindisi Research Centre

PO BOX 51 Br-4, I-72100 Brindisi, ITALY. Email: michele.penza@enea.it. Action webpages: www.cost.eunetair.it

Prof. Dr. Zafer Ziya Ozturk

Local Organizing Team Chair

Faculty of Science, Department of Physics

GEBZE Institute of Technology, Kocaeli, Turkey

Çayırova Yerleşkesi, İstanbul Cad. 101, 41400 Gebze Kocaeli

Email: zozturk@gyte.edu.tr

Prof. Ali Gungor

Local Organizing Team Co-Chair

Bahcesehir University

Ciragan Caddesi Osmanpasa School Sokak, No. 4 - 6

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THIRD SCIENTIFIC MEETING Working Groups and Management Committee

New Sensing Technologies for Indoor Air Pollution Monitoring

Istanbul (Turkey), 3 - 5 December 2014

Bahcesehir University - Ciragan Caddesi Osmanpasa School Sokak, No. 4 - 6,
34353 Besiktas Campus, Istanbul, Turkey



European Network on New Sensing Technologies
for Air-Pollution Control and Environmental Sustainability



Action Meeting Programme Committee

Michele Penza, ENEA, Brindisi, Italy
Anita Lloyd Spetz, Linkoping University, Sweden
Andreas Schuetze, Saarland University, Germany
Zafer Ziya Ozturk, GEBZE Institute of Technology, Turkey
Ali Gungor, Bahcesehir University, Istanbul, Turkey
Carlos Borrego, IDAD, University of Aveiro, Portugal
Jurgen Frick, University of Stuttgart, Germany
Ole Hertel, Aarhus University, Denmark
Ingrid Bryntse, SenseAir AB, Sweden
Juan Ramon Morante, IREC, Spain
Marco Alvisi, ENEA, Italy
Corinna Hahn, Eurice GmbH, Saarbrucken, Germany
Juliane Roszbach, Eurice GmbH, Saarbrucken, Germany
Annamaria Demarinis Loiotile, University of Bari, Italy
Sadullah Ozturk, GEBZE Institute of Technology, Turkey
Lutfi Arda, Bahcesehir University, Istanbul, Turkey
Dogan Akcan, Bahcesehir University, Istanbul, Turkey

COST Action TD1105 EuNetAir Steering Committee

Michele Penza, ENEA, Brindisi, Italy - *Action Chair*
Anita Lloyd Spetz, Linkoping University, Sweden - *Action Vice-Chair*
Juan Ramon Morante, IREC, Spain
Andreas Schuetze, Saarland University, Germany
Ole Hertel, Aarhus University, Denmark
Ingrid Bryntse, SenseAir AB, Sweden
Jan Theunis, VITO, Belgium
Marco Alvisi, ENEA, Brindisi, Italy
Gianluigi De Gennaro, University of Bari, Italy
Fabio Galatioto, Newcastle University, UK
Ralf Moos, University of Bayreuth, Germany
Mar Viana, CSIC-IDAEA, Barcelona, Spain
Iveta Steinberga, University of Latvia, Riga, Latvia
Corinna Hahn, Eurice GmbH, Saarbrucken, Germany - *Grant Holder*
Julian Gardner, University of Warwick, UK
Rod Jones, University of Cambridge, UK
Giorgio Sberveglieri, University of Brescia, Italy
Eduard Llobet, Universitat Roviri i Virgili, Tarragona, Spain
Thomas Kuhlbusch, IUTA eV, Duisburg, Germany
Albert Romano-Rodriguez, Universitat de Barcelona (UB), Spain
Carlos Borrego, IDAD, University of Aveiro, Portugal
Annamaria Demarinis Loiotile, University of Bari, Italy - *Secretary*

URL: www.cost.eunetair.it



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Wednesday, 3 December 2014

COST Action TD1105 Working Groups and Special Interest Groups MEETING

Main Hall: Fazil Say Room

8:30 - 18:00	Registration
09:00 - 10:00	Welcome Address Session <i>Chairman: Zafer Ziya Ozturk, MC Member, GEBZE Institute of Technology, Istanbul, Turkey</i>
09:00 - 09:10	Welcome Address from Host Institution and Local Co-Organizer <i>Ali Gungor, Vice-President of Bahcesehir University, Istanbul, Turkey</i>
09:10 - 09:20	Welcome Address from Local Organizer <i>Zafer Ziya Ozturk, MC Member, GEBZE Institute of Technology, Istanbul, Turkey</i>
09:20 - 09:30	Welcome Address from COST Action TD1105 <i>Michele Penza, Action Chair, ENEA, Italy</i>
09:30 - 11:00	Plenary Session 1: Indoor Environment Quality Applications <i>Chairman: Michele Penza, Action Chair - ENEA, Italy</i>
09:30 - 10:00	COST Action TD1105: European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability <i>Michele Penza, Action Chair, ENEA, Italy</i>
10:00 - 10:20	FP7 SENSIndoor Project (NMP-2013-5) and VOC-IDS Project (Era-Net): Selective VOCs Detection in the ppb Range for Demand Controlled Ventilation <i>Andreas Schuetze, Saarland University, Saarbrucken, Germany</i>
10:20 - 10:40	FP7 Project MSP (ICT-2013-10): MSP for Air Quality in Building Technology Applications <i>Oliver von Sicard, Siemens AG, Munich, Germany</i>
10:40 - 11:00	Smart Calibration for Successful European Gas Sensor Production <i>Ingrid Bryntse, Action WG4 Leader & MC Member, SenseAir AB, Delsbo, Sweden</i>
11:00 - 11:30	Coffee Break
11:30 - 13:00	Plenary Session 2: Indoor Environment Quality Applications <i>Chairman: Anita Lloyd Spetz, Action Vice-Chair - University of Linkoping, Sweden</i>
11:30 - 11:50	FP7 Project CETIEB (EeB-2011): Active and Passive Measures to Assess and Improve Indoor Environment Quality <i>Jurgen Frick, Project Coordinator, University of Stuttgart, Germany</i>
11:50 - 12:10	IEQ Cluster: Technologies and Materials for a Healthier Indoor Environment <i>Lorenzo Miccoli, BAM Federal Institute for Materials Research and Testing, Berlin, Germany</i>
12:10 - 12:30	Highlights from EU and Belgian Projects on IAQ and Health and Future Needs for Sensor Technologies <i>Jan Theunis, STSMs Coordinator and MC Member, VITO, Mol, Belgium</i>
12:30 - 12:50	FP7 Project OFFICAIR: On the Reduction of Health Effects from Combined Exposure to Indoor Air Pollutants in Modern Office Buildings <i>John Bartzis, Project Coordinator, University of West Macedonia, Kozani, Greece</i>
12:50 - 13:10	FP7 Projects TeACH and NANOMATCH: Environmental Aspects in the Field of Cultural Heritage Conservation <i>Adriana Bernardi, Project Coordinator, CNR, Institute of Atmospheric Science and Climate, Padova, Italy</i>
13:00 - 14:30	Lunch offered by COST Action organization



Wednesday, 3 December 2014

Action TD1105 Working Groups Meetings

Parallel Session of WG1-WG2. Location: Main Hall - Fazil Say Room (Theatre 300 seats)

14:30 - 16:30

WG1: Sensor Materials and Nanotechnology

Chairman: Jyrki Lappalainen, Action WG1 Vice-Chair - Oulu University, Oulu, Finland

14:30 - 14:50

Effect of Dopants and Humidity on NO₂-Sensing with Semiconducting Oxides

Bilge Saruhan-Brings, WG Member, German Aerospace Center, Institute of Materials Research, Cologne, Germany

14:50 - 15:10

Pulsed Laser Deposition of Nanostructured Metal Oxides for Gas Sensors

Jyrki Lappalainen, Action WG1 Vice-Chair, Oulu University, Oulu, Finland

15:10 - 15:30

Metal Functionalized ZnO Nanorods for Gas Sensing Applications

Zafer Ziya Ozturk, Gebze Institute of Technology, Kocaeli, Turkey

15:30 - 15:45

Electrophoretic Au-NPs Deposition on Carbon Nanotube Networked Layers for Gas Sensors

E. Dilonardo^{1}, M. Penza², M. Alvisi², C. Di Franco³, D. Suriano², R. Rossi², F. Palmisano¹, L. Torsi¹, and N. Cioffi¹; ¹Department of Chemistry, Università degli Studi di Bari Aldo Moro, Bari, Italy; ²ENEA Brindisi, Italy; ³CNR-IFN Bari, Bari, Italy*

15:45 - 16:00

Aerosol Deposited Thick Film BaFe_{0.7}Ta_{0.3}O_{3-δ} Ceramic for Nitrogen Monoxide Sensing

Murat Bektas, University of Bayreuth, Bayreuth, Germany

16:00 - 16:15

Application of Chemiresistive Polymer Films in Air Quality Control

G.Sakale, M.Knite, I.Klemenoks, S.Stepina, S.Sergejeva, Riga Technical University, Latvia

16:15 - 16:30

Nanostructured Metals and Metal Alloys for Hydrogen Sensors

Necmettin Kilinc, WG Member, Nigde University, Nigde, Turkey

16:30 - 17:00

Coffee Break

Parallel Session of WG1-WG2. Location: Main Hall - Fazil Say Room (Theatre 300 seats)

17:00 - 18:30

WG2: Sensors, Devices and Systems for AQC

Chairman: Andreas Schuetze, Action WG2 Chair - Saarland University, Saarbrücken, Germany

17:00 - 17:15

RFID Passive and Semi-Passive Tags for Environmental Monitoring: Current Results and Future Prospects

Eduard Llobet, Action MC Member, Universitat Roviri I Virgili, Tarragona, Spain

17:15 - 17:30

Examples Modelling and Simulation Studies on Indoor Air Quality Monitoring

Ahmet Özmen, Sakarya University, Department of Computer Engineering, Sakarya, Turkey

17:30 - 17:45

Particle Detection Using Acoustic Wave Technology for Air Quality Monitoring

Farah H. Villa-López, S. Thomas, M. Cole and J.W. Gardner, Warwick University, Coventry, UK

17:45 - 18:00

New Principle of Gas Molecule Detection based on Nonlinear Electromagnetic Response of Graphene Nanoribbons

M. Eriksson, L.Y. Gorelik, M.V. Voinova, Chalmers University of Technology, Goteborg, Sweden

18:00 - 18:15

Automated Computational Intelligence Model Selection for Sensor Data

Roman Neruda, Petra Vidnerova, Vera Kurkova, Institute of Computer Science, Academy of Sciences of Czech Republic, Prague, Czech Republic

18:15 - 18:30

Gas Sensors for Environmental Monitoring

Sadullah Ozturk, Gebze Institute of Technology, Kocaeli, Turkey



Parallel Session of WG3-WG4. Location: A101 Room (Boardroom 50 seats)

14:30 - 16:30 **WG3: Environmental Measurements and Air-Pollution Modelling**

Chairman: Ole Hertel, Action WG3 Chair - Aarhus University, Roskilde, Denmark

- 14:30 - 14:50** **Particle Pollution in Danish Domestic Homes: Impact of Outdoor Sources for Indoor Exposure**
Ole Hertel, Action WG3 Chair - Aarhus University, Roskilde, Denmark
- 14:50 - 15:10** **Air Quality in Subway Systems**
MariaCruz Minguillon, Action WG Member, CSIC-IDAEA, Barcelona, Spain
- 15:10 - 15:30** **Spatial Data Fusion of Observations from Low-Cost Air Quality Sensors and Models for Urban-Scale Air Quality Mapping**
Philipp Schneider, Action MC Member, NILU, Kjeller, Norway
- 15:30 - 15:45** **An Example of Low-Cost Devices for Indicative Indoor PM, CO₂ and Meteorological Parameters Monitoring**
Milena Jovasevic-Stojanovic, Action WG3 Member, Institute Vinca, Belgrade, Serbia
- 15:45 - 16:00** **Influence of the Meteorological Conditions on Air Pollution in City of Skopje**
Igor Atanasov, Ministry of Environment and Physical Planning, Skopje, Republic of Macedonia
- 16:00 - 16:15** **Impact of NO_x Emissions on Air Quality Simulations with the Bulgarian WFR-CMAQ Modelling System**
Emilia Georgieva, Action WG Member, NIMH, Bulgarian Academy of Sciences, Sofia, Bulgaria
- 16:15 - 16:30** **Indoor Growing Plants of *Chlorophytum comosum* L. Phytoremediate of Particulate Matter from Air**
H. Gawrońska, B. Bakera, Stanislaw Gawronski, Warsaw University of Life Science, Warsaw, Poland

16:30 - 17:00 **Coffee Break**

Parallel Session of WG3-WG4. Location: A101 Room (Boardroom 50 seats)

17:00 - 18:30 **WG4: Protocols and Standardisation Methods**

Chairman: Ingrid Bryntse, Action WG4 Chair - SenseAir SA, Delsbo, Sweden

- 17:00 - 17:15** **Gas and Particulate Monitors: Advances and Setbacks**
John Saffell, Action Sub-WG4.3 Leader, Alphasense Ltd, Essex, UK
- 17:15 - 17:30** **Application of MEMS, CMOS Broadband Infrared Emitters and Detectors for Compact NDIR CO₂ Sensing**
Foyso Chowdhury, Action WG Member, CCMOSS Ltd, Cambridge, UK
- 17:30 - 17:45** **Case-Study of the Spin-off RED: Devices for Indoor Environments Control**
Luc Pockelè, Research and Environmental Devices, RED srl, Padova, Italy
- 17:45 - 18:00** **Citizen Science in Mapping Outdoor and Indoor Environments: Potentials and Challenges**
Jamal Jokar Arsanjani, Action WG Member, Heidelberg University, Germany
- 18:00 - 18:15** **Green Smart Net: Environmental Data Acquisition, Handling and Transmission for Risk Assessment in Agriculture and Beyond**
Oriol Gonzales, WG Member, Universitat Roviri I Virgili, Tarragona, Spain
- 18:15 - 18:30** **A Success Case of Synergy and Knowledge Transfer from Academia to Enterprise**
Annamaria Demarinis Loiotile, University of Bari, Bari, Italy

18:30 **Gathering of Day**

20:30 - 23:00 **Social Dinner on a Boat Turning Bosphorus**



Thursday, 4 December 2014

Action TD1105 Special Interest Groups Meetings

Main Hall: *Fazil Say Room*

09:00 - 18:00 Registration

09:00 - 09:30 Inputs from Action TD1105

- 09:00 - 09:10** **Inputs from Action TD1105: Upcoming Action Events**
Michele Penza, Action Chair, ENEA, Brindisi, Italy
- 09:10 - 09:20** **Inputs from Action TD1105: Online Travel Reimbursement Request & Strong Feature Authentication**
Juliane Roszbach, Grant Holder Manager, Eurice GmbH, Saarbrucken/Berlin, Germany
- 09:20 - 09:30** **Inputs from Action TD1105: *EuNetAir* at COST Strategic Event *Cities of Tomorrow - The Challenges for Horizon 2020*, Turin (Italy), 17 - 19 September 2014**
Anita Lloyd Spetz, Action Vice-Chair, Linkoping University, Linkoping, Sweden

09:30 - 10:30 KEYNOTE SESSION: Sensors for Sustainable Cities

- 09:30 - 10:30** *Chairman: Michele Penza, Action Chair*
Italian National Agency for New Technologies, Energy and Sustainable Economic Development - ENEA, Brindisi, Italy
- 09:30 - 10:00** **The SENSEable Cities**
Marguerite Nyhan, SENSEable City Lab, Massachusetts Institute of Technology, Cambridge, USA
- 10:00 - 10:30** **Environmental Measurements Using Low-Cost Sensors: Latest Results and Future Directions**
Rod Jones, Action SIG2 Leader and MC Member, University of Cambridge, Cambridge, UK

10:30 - 11:00 SIG1: Network of spin-offs

- 10:30 - 11:00** *Chairman: Marco Alvisi, Action SIG1 Leader*
Italian National Agency for New Technologies, Energy and Sustainable Economic Development - ENEA, Brindisi, Italy
- Specific Presentations from SIG1**
- 10:30 - 10:45** **Overview of Support Structures and Funding Opportunities for Small and Medium Sized Enterprises in Europe**
Corinna Hahn, Action GH Manager and EEN Germany National Contact Point, Saarbrucken, Germany
- 10:45 - 11:00** **Applications and Trends in Gas Sensing for Home and Health**
Oliver von Sicard, Siemens AG, Munich, Germany

11:00 - 11:30 Coffee Break



11:30 - 12:00 **SIG2: Smart Sensors for Urban Air Monitoring in Cities**
Chairman: Rod Jones, Action SIG2 Leader
University of Cambridge, Centre for Atmospheric Science, Cambridge, UK

Specific Presentations from SIG2

11:30 - 11:45 **Comparison of Low Cost Sensors and Reference Equipment in Laboratory and in Real-World. First Experiences in Oslo, Norway**
Nuria Castell-Balaguer, Action Sub-WG3.1 Leader, NILU - Norwegian Institute for Air Research, Kjeller, Norway

11:45 - 12:00 **Indoor Air Quality Monitoring: Guidelines for Design of a Sensor Network in a Shopping Mall**
Joao Ginja, WG Member, IDAD, Aveiro, Portugal

12:00 - 12:30 **SIG3: Guidelines for Best Coupling Air Pollutants and Transducer**
Chairman: Eduard Llobet, Action SIG3 Vice-Chair, Universitat Roviri i Virgili, Tarragona, Spain

Specific Presentations from SIG3

12:00 - 12:15 **Detection of Odorant Molecules Using Proteins**
Marcel Bouvet, Action Sub-WG1.3 Leader, Université de Bourgogne, Dijon, France

12:15 - 12:30 **Mastering VOC Detection for Better Indoor Air Quality**
Donatella Puglisi¹, C. Bur^{1,2}, M. Bastuck², A. Schuetze², M. Andersson^{1,3}, R. Yakimova¹, A. Lloyd Spetz¹, J. Eriksson¹, WG Member, ¹Linköping University, Linköping, Sweden; ²Saarland University, Saarbrücken, Germany; ³SenSiC AB, Kista/Stockholm, Sweden

12:30 - 13:00 **SIG4: Expert Comments for the Revision of the Air Quality Directive (AQD)**
Chairman: Nuria Castell-Balaguer, Action MC Member, NILU, Kjeller, Norway

Specific Presentations from SIG4

12:30 - 12:45 **Outline of Chemical Sensors Applications for IAQ Evaluation**
Anne-Claude Romain, Action Sub-WG4.2 Leader, Université de Liège, Arlon, Belgium

12:45 - 13:00 **Eye Symptoms from Reactive Indoor Air Chemistry ?**
Peder Wolkoff, National Research Centre for the Working Environment, Copenhagen, Denmark

13:00 - 14:30 **Lunch offered by COST Action organization**

Main Hall: Fazil Say Room - 4 December 2014

15:15 - 15:20 **Live Video Chat - nanoFIS Conference 2014 in Graz**
(Local time) *nanoFIS Conference, Graz (Austria time: 14:15 - 14:20)*
COST Action TD1105 Meeting, Istanbul (Turkey time: 15:15 - 15:20)
nanoFIS Conference 2014
1st International Conference on Functional Integrated nano Systems
Dr. Anton Kock, MSP FP7-project Coordinator, Materials Center Leoben Forschung GmbH (Austria)
Email: Anton.Koeck@mcl.at **URL: www.nanofis.net**



Thursday, 4 December 2014

Gallery of Main Hall Fazil Say Room

14:30 - 15:30 **Poster Session:**
New Technologies and Methods for Environmental Monitoring
Chairperson: *Andreas Schuetze*, Action WG2 Leader, Saarland University, Saarbrücken, Germany

Posters (max sizes: 90 cm width x 120 height) will be exhibited on Panels. The Poster Presenter, preferably Early Stage Researcher, is required to stay near poster for discussion with interested people.

- P01** **Acetylene Detection by Fiber Loop Ring-Down Technique**
M. Fatih Danişman¹, Okan Esentürk¹, Md. Abu Sayed¹, Alim Yolalmaz²;
¹Department of Chemistry, Middle East Technical University, Ankara;
²Micro and Nano-Technology Program, Middle East Technical University, Ankara
- P02** **Simulation of Air Pollution in the Cross-Border Region Bulgaria-Turkey**
E. Georgieva, K. Slavov, D. Syrakov, Action WG3 Member, NIMH, Bulgarian Academy of Sciences, Sofia, Bulgaria
- P03** **Distributed Online Gas Sensor Simulator For Indoor Air Quality Monitoring**
Deniz Balta and Ahmet Özmen; Department of Computer Engineering, University of Sakarya, Esentepe Campus, Sakarya, Turkey
- P04** **Indoor Modelling and Simulator Development for Measurement Systems and Gas Sensors**
N. Yalçın¹, A. Özmen²; ¹Department of Computer Engineering, University of Bilecik Şeyh Edebali, Gülümbe Campus, Bilecik, Turkey; ²Department of Computer Engineering, University of Sakarya, Esentepe Campus, Sakarya, Turkey
- P05** **Graphene Sheets and Silicon Cantilevers Employed in Laser Photoacoustic Spectroscopy for Gas Sensing**
M. Dostál^{1,2}, J. Suchánek^{1,2}, P. Janda¹, Z. Zelinger¹;
¹J. Heyrovský Institute of Physical Chemistry, v.v.i., Academy of Sciences of the Czech Republic, Dolejškova 3, 182 23 Praha 8, Czech Republic;
²Technical University of Ostrava, Faculty of Safety Engineering, Lumírova 13, Ostrava-Vyškovice, 700 30 Ostrava, Czech Republic
- P06** **Magnetic and Optical Properties of Nanostructured Iron Biogenic Materials for Sensoric Applications**
I. Nedkov, Action MC Member, Institute of Electronics, Bulgarian Academy of Sciences, Sofia, Bulgaria
- P07** **Preparation, Growth, and Gas Sensing Properties of Nonvacuum Er-doped ZnO Thin Films**
L. Arda¹, D. Akcan¹, S. Ozturk², O. Sisman², A. Gungor¹, Z. Z. Ozturk²
¹Department of Mathematics Engineering, Bahcesehir University, Besiktas, 34100, Istanbul
²Department of Physics, Gebze Institute of Technology, Gebze, 41400, Kocaeli
- P08** **Structural, Electrical and Gas Sensing Properties of Mg-doped ZnO Films**
D. Akcan¹, L. Arda¹, S. Ozturk², O. Sisman², A. Gungor¹, Z. Z. Ozturk²
¹Department of Mathematics Engineering, Bahcesehir University, Besiktas, 34100, Istanbul
²Department of Physics, Gebze Institute of Technology, Gebze, 41400, Kocaeli
- P09** **Palladium Modified TiO₂ Nanorods to Methanol Sensing Device**
Onur Alev¹, Erdem Sennik¹, Z.Z. Ozturk^{1,2};
¹Gebze Institute of Technology, Department of Physics, Kocaeli, Turkey
²TÜBITAK-Marmara Research Center, Materials Institute, Kocaeli, Turkey



- P10** **Simple Fabrication of Network-like CuO Nanowires with Thermal Oxidation on Glass Substrate and Their Ethanol Sensing Properties**
O. Sisman¹, E. Sennik¹, S. Ozturk², N. Kilinc³, Z.Z. Ozturk¹;
¹Department of Physics, Gebze Institute of Technology, KOCAELI; ²Department of Physics, Fatih Sultan Mehmet University, ISTANBUL; ³Department of Mechatronics Engineering, Nigde University, NIGDE
- P11** **In Situ Monitoring of Oxidation Process of Tin Oxide Nanolayers by the Novel Deposition Technique Based on Rheotaxial Growth and Vacuum Oxidation**
Monika Kwoka, Institute of Electronics, Silesian University of Technology, Gliwice, Poland
- P12** **Characterization of Dust and Ash Particles with a Micro-heater and Gas Sensitive SiC Field Effect Transistors**
Christian Bur^{1,2}, Manuel Bastuck¹, Andreas Schütze¹, Mike Andersson², Anita Lloyd Spetz²;
¹Linköping University, Linköping, Sweden; ²Saarland University, Saarbrücken, Germany
- P13** **Gas Sensor Self-Test Using Fourier-based Impedance Spectroscopy**
Marco Schüler, Tilman Sauerwald, Andreas Schütze
Saarland University, Saarbrücken, Germany
- P14** **Illumination Comfort in a Retrofitted Shopping Center in Sopron Hungary**
L. Pockelé¹, A. Whang²;
¹R.E.D. Srl, Padova, Italy; ²National Taiwan University of Science and Technology, Taipei City 106, Taiwan (R.O.C.)
- P15** **Indoor Comfort Determination in Apartments Designed according to Passive Haus Standards in ECO-SILVER House, a High Rise Building in Ljubljana**
Luc Pockelé¹, A. Bernardi², P. Bison³, G. Cadelano³, A. Bortolin³, G. Ferrarini³, M.C. Di Tuccio^{2,4};
¹R.E.D. Srl, Padova, Italy; ²CNR-ISAC, Padova, Italy; ³CNR-ITC, Padova, Italy; ⁴Physics Department, University of Milan (Italy).
- P16** **Environmental Impact of PCMs Incorporated in Gypsum Panel for Cultural Heritage Application**
A. Bernardi¹, F. Becherini¹, A. Vivarelli¹, M. Favaro², M.C. Di Tuccio^{1,3};
National Research Council (CNR), ¹ISAC- ²IENI, Corso Stati Uniti 4, Padova (Italy); ³Physic Department, University of Milan (Italy), Via Giovanni Celoria 16, Milano (Italy)
- P17** **Towards Air Quality Indices (AQIs) in Smart Cities by Calibrated Low-Cost Sensors Applied to Networks**
Domenico Suriano, Mario Prato, Gennaro Cassano, Michele Penza
ENEA, Technical Unit for Materials Technologies - Brindisi Research Centre, Brindisi, Italy
- P18** **Electrochemical Modification of Nanostructured Metal-Oxides by Gold Nanoparticles for Gas Sensing Application**
E. Dilonardo^{1}, M. Penza², M. Alvisi², C. Di Franco³, F. Palmisano¹, L. Torsi¹, and N. Cioffi¹;*
¹Department of Chemistry, Università degli Studi di Bari Aldo Moro, Bari, Italy; ²ENEA Brindisi, Italy; ³CNR-IFN Bari, Bari, Italy
- P19** **Vascular and Lung Function Related to Ultrafine and Fine Particles Exposure Assessed by Personal and Indoor Monitoring**
Yulia Olsen¹, Dorina Gabriela Karotki¹, Ditte Marie Jensen¹, Gabriel Beko², Birthe Uldahl Kjeldsen², Geo Clausen², Lars-Georg Hersoug¹, Aneta Wierzbicka³, Gitte Juel Holst⁴, Torben Sigsgaard⁴, Peter Møller¹, Steffen Loft¹;
¹University of Copenhagen, Copenhagen, Denmark; ²Technical University of Denmark, Lyngby, Denmark; ³Lund University, Lund, Sweden; ⁴Aarhus University, Roskilde, Denmark



Thursday, 4 December 2014

COST Action TD1105 for EU Clusters

Main Hall: *Fazil Say Room*

15:30 - 16:30 **Action TD1105 ROUND-TABLE DISCUSSION**
Chairman(s): Michele Penza, Action Chair, ENEA, Brindisi, Italy
Chairman(s): Jurgen Frick, IEQ Cluster Coordinator, University of Stuttgart, Stuttgart, Germany

EU Clusters: The Indoor Environment Quality (IEQ) Cluster

15:30 - 15:50 **RTD Environment: *Nature Based Solutions and Renaturing Cities H2020 Initiative***
*Maria Yeroyanni, Policy Officer, EC DG Research & Innovation, Unit I.3 - Sustainable Management of Natural Resources, Brussels, Belgium - **tbc***

15:50 - 16:00 **Presentation of the IEQ Cluster Paper given to EC Policy-Makers**
Jurgen Frick, IEQ Cluster Coordinator, University of Stuttgart, Germany

16:00 - 16:10 **Presentation of the NANOMECH Cluster: Environment and Health Impact of Nanomaterials for Cultural Heritage**
Adriana Bernardi, NANOMECH Cluster Coordinator, CNR, Institute of Atmospheric Science and Climate, Padova, Italy

16:10 - 16:15 **A New EC DG R&I Clusters Initiative: The Characterization Cluster**
Michele Penza, COST Action TD1105 Chair, ENEA, Brindisi, Italy

16:15 - 16:30 **Discussion of Action/Cluster Participants:**
Comments and Inputs on Priorities, R&I Needs, Strategies, Roadmap for future joint-activities of IEQ Cluster and COST Action TD1105 *EuNetAir*
Speeches and Comments from Action WGs/SIGs Leaders and Participants
Free Comments from Action and IEQ Cluster Stakeholders

16:30 - 17:00 **Coffee-Break**



Thursday, 4 December 2014

Action TD1105 Working Groups and Special Interest Groups Meetings

Main Hall: *Fazil Say Room*

Action WGs GENERAL ASSEMBLY

17:00 - 18:30

*Chairman: Michele Penza, Action Chair
Italian National Agency for New Technologies, Energy and Sustainable Economic Development - ENEA, Brindisi, Italy*

Specific Presentations from Vice-Chair and WGs Leaders

17:00 - 17:10

New Methods for Control of Nanoparticles in Indoor Environment
Anita Lloyd Spetz, Action Vice-Chair, Linkoping University (Sweden) and University of Oulu (Finland)

17:10 - 17:20

Research and Innovation Needs of WG1: Sensor Materials and Nanotechnology
Jyrki Lappalainen, Action WG1 Vice-Chair, Oulu University, Oulu, Finland

17:20 - 17:30

Research and Innovation Needs of WG2: Sensors, Devices and Systems for AQC
Andreas Schuetze, Action WG2 Chair, Saarland University, Saarbrucken, Germany

17:30 - 17:40

Research and Innovation Needs of WG3: Environmental Measurements and Air-Pollution Modelling
Ole Hertel, Action WG3 Chair, Aarhus University, Roskilde, Denmark

17:40 - 17:50

Research and Innovation Needs of WG4: Protocols and Standardisation Methods
Ingrid Bryntse, Action WG4 Chair, SenseAir SA, Delsbo, Sweden

Action SIGs GENERAL ASSEMBLY

17:00 - 18:30

*Chairman: Anita Lloyd Spetz, Action Vice-Chair
Linkoping University (Sweden) and Oulu University (Finland)*

Specific Presentations from SIGs Leaders

17:50 - 18:00

Research and Innovation Needs of SIG1: Network of Spin-offs
Marco Alvisi, Action SIG1 Leader, ENEA, Brindisi, Italy

18:00 - 18:10

Research and Innovation Needs of SIG2: Smart Sensors for Urban Air Monitoring in Cities
Rod Jones, Action SIG2 Leader, University of Cambridge, UK

18:10 - 18:20

Research and Innovation Needs of SIG3: Guidelines for Best Coupling Air Pollutants and Transducer
Eduard Llobet, Action SIG3 Vice-Chair, Universitat Roviri I Virgili, Tarragona, Spain

18:20 - 18:30

Research and Innovation Needs of SIG4: Expert Comments for the Revision of the Air Quality Directive (AQD)
Nuria Castell-Balaguer, Action MC Member, NILU, Kjeller, Norway

18:30

CLOSING of WGs and SIGs MEETING

20:30

Free Dinner



Friday, 5 December 2014

Action TD1105 MANAGEMENT COMMITTEE Meeting

Main Hall: Fazil Say Room

Action TD1105 6th MANAGEMENT COMMITTEE MEETING

09:30 - 13:00

Chairman: Michele Penza, Action Chair

Italian National Agency for New Technologies, Energy and Sustainable Economic Development - ENEA, Brindisi, Italy

09:30 - 10:00

Integrated Nanosensors for Indoor Air Quality Applications

Juan Ramon Morante, WG1 Leader and MC Member, IREC, Barcelona, Spain

10:00 : 13:00

6th Management Committee Meeting

Michele Penza, Action Chair, ENEA, Brindisi, Italy

- **DISCUSSION** (see MCM AGENDA)
- **Coffee-Break** (timely scheduled)

13:00 - 14:30

- **Lunch offered by the Conference Organization**

14:30

- **Meeting Closing**



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Draft Agenda
6th Management Committee Meeting
COST Action TD1105

European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability

THIRD SCIENTIFIC MEETING
Working Groups and Management Committee
New Sensing Technologies for Indoor Air Pollution Monitoring
Istanbul (Turkey), 3 - 5 December 2014

hosted by Bahcesehir University
Ciragan Caddesi Osmanpasa School Sokak, No. 4 - 6,
34353 Besiktas Campus, Istanbul, Turkey

Management Committee Meeting, 5 December 2014, 9:30 - 14:30 (local time)

To be completed by the meeting secretary and circulated to the MC, the DC Rapporteur(s) and the COST Office (Science and Administrative Officer)

1. Welcome to participants
2. Adoption of agenda
3. Approval of minutes and matters arising of last meeting
4. Update from the Action Chair
 - a. Status of Action, including participating countries
 - b. Action budget status
 - c. STSM status and new applications
5. Promotion of gender balance and of Early Stage Researchers (ESR)
6. Update from the Grant Holder
7. Update from the COST Office
8. Update from the DC Rapporteur
9. Annual Progress Conference (preparation and/or feedback from DC)
10. Follow-up of MoU objectives
 - a. Progress report of working groups
11. Scientific planning
 - a. Scientific strategy
 - b. Action Budget Planning
 - c. Long-term planning (including anticipated locations and dates of future activities)
 - d. Dissemination planning (Publications and outreach activities)
12. Requests for new members
13. Non-COST applications to the Actions
14. AOB
15. Location and date of next meeting
16. Summary of MC decisions
17. Closing



6th MC Meeting Venue/Location of COST Action TD1105 EuNetAir

THIRD SCIENTIFIC MEETING

Working Groups and Management Committee

New Sensing Technologies for Indoor Air Pollution Monitoring

Istanbul (Turkey), 3 - 5 December 2014

Bahcesehir University - Ciragan Caddesi Osmanpasa School Sokak, No. 4 - 6,
34353 Besiktas Campus, Istanbul, Turkey

Google Map Link: <http://content.bahcesehir.edu.tr/diger/bau-map.html>

