NANOSAFE 2014

PLATE-FORME NANO SÉCURITÉ

PROGRAMME

nanoSAFE'14

4TH INTERNATIONAL CONFERENCE ON SAFE PRODUCTION AND USE OF NANOMATERIALS

MINATEC, GRENOBLE, FRANCE

November 18-20 2014

MINATEC Grenoble France

NANOSAFE 2014

CONFERENCE ORGANIZATION

Organizing Committee

François TARDIF (CEA/PNS)
Frederic SCHUSTER (CEA, FR)
Jean Francois DAMLENCOURT (CEA/PNS)
Vanessa GAULTIER (CEA/PNS)

International Scientific Committee

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Frédéric SCHUSTER (CEA, FR)
Co-chair: Georgios KATALAGARIANAKIS (EC, BE)

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Bernd NOWACK (EMPA, CH)
Günter OBERDÖRSTER (U. ROCHESTER, USA)
David PUI (U. MINNESOTA, USA)
Myriam RICAUD (INRS, FR)
Olivier WITSCHGER (INRS, FR)

Welcome from the organizers

The issues of fast progress in the field of Nanosafety are up to the potential benefits that nanotechnology can bring to mankind. Making more efficient - more sustainable - easier to share mineral resources, increasing the yields of new energy technologies, enabling drugs that act selectively and locally are just few examples of the wide range of nanomaterial applications that currently benefit humanity.
Nevertheless, the dynamic development of nanomaterials requires the adhesion from the general public who rightly demand major progresses in Nanosafety as a prerequisite.

This is our exciting responsibility and challenge!

Following the successful outcome of the three past international conferences on **Safe production and use of nanomaterials: Nanosafe 2008, 2010 and 2012,** the organizing committee has the pleasure to welcoming you again to Minatec, Grenoble with some of the most famous specialists in the field.
This year, two new topics have been added dealing with the “New application of Nanomaterials” and Nano-responsible Development” in addition to the usual issues addressed in previous Nanosafe conferences such as Expology, Detection and Characterization, Toxicology, Environmental Interactions, Nanomaterials Release, Life Cycle Analysis, Regulation and Standardization, Risk Management.

The debates in 2012 proved highly successful so this formula has been kept with 3 round tables: **Nano-Responsible Development, Risks and Benefits for the Environment, Toxicology Progress.**

2014 is a great year for the organizing committee as we ramp up the Nano Safety “PNS” platform at Minatec, with a brand new building spread out over 2000 m^2 of laboratories and more than 50 doctors and engineers dedicated to Nanosafety.

We hope that you will enjoy this new Nanosafe edition!

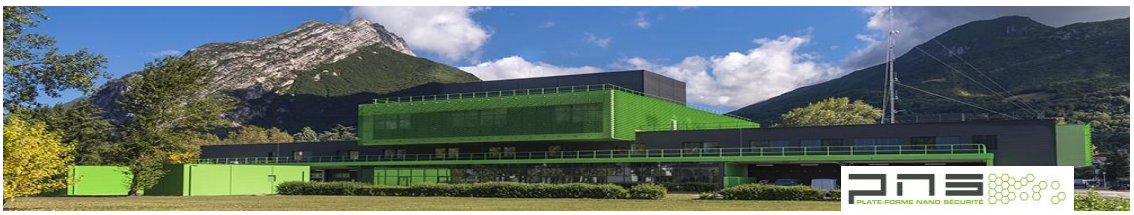
The Nanosafe2014 organisers


Francois TARDIF


Frederic Schuster


Jean Francois Damlencourt


Vanessa Gaultier



Monday	Tuesday	Wednesday	Thursday
	7:45 Registration 8:30 Auditorium Welcome from the Organizing Committee	08:00 Auditorium - Session 4: Toxicology 8:45 Auditorium Session 4 8:45 Room B Session 3 8:45 Room C Session 2 8:00 Scaffold Petit Salon « closed event »	08:00 Auditorium -Session 7 8:45 Auditorium Session 7 8:45 Room B Session 6 8:30 Room C NanoDiode 8:30 Petit Salon Charac
	10:30-11:00 Coffee break	10:00-10:30 Coffee break	10:00-10:30 Coffee break
	11:00 Auditorium Session 1: New applications of nanomaterials 11:45 Auditorium Session 1	10:30 Auditorium Session 5: Environmental interactions of nanomaterials 11:15 Auditorium Session 5 11:15 Room B Session 3 11:15 Room C Session 4 10:30 Scaffold Petit Salon « closed event »	10:30 Auditorium Session 8: Life Cycle Analysis 11:15 Auditorium Session 8 11:15 Room B Session 7 10:30 Room C NanoDiode 10:30 Petit Salon Charac Meeting 10: 30 S 225 Session 4
	13:00-14:00 Lunch	12:30-13:30 Lunch	12:30-13:30 Lunch
	14:00 Auditorium Session 2: Exposure 14:45 Auditorium Session 2 14:45 Room B Session 1 Room C Session 12 Nanoresponsible Development	13:30 Auditorium Session 6: Nanomaterials release 14:15 Auditorium Session 6 14:15 Room B Session 5 13:30 Room C Session 4 13:30 Scaffold Petit Salon « closed event » MARINA	13:30 Auditorium Session 11: Risk Management 14:15 Auditorium Session 11 14:15 Room B Session 8 14:15 Room C Session 3 13:30 Petit Salon Session 9 Regulation 15:15 Debate 13:30–14:00 S 225–
	16:00-16:30 Coffee break	15:30-16:00 Coffee break	15:30-16:00 Coffee break
Registration	16:30 Auditorium Session 3: Detection and Characterization 17:15-18:00 Auditorium Session 3 17:15-18:00 Room B Session 2 16:30-17-30 Room C Debate Responsible development 17:30 18:30 Room C Debate Environment 18:30-21:00 Petit Salon Harmonization	16:00-18:00 Auditorium Session10: Commercial Equipement 16:00-17:00 Room B Session 5 17:00-18:00 Room B DebateTox. 16:00 Room C Session 6 MARINA	16:00 Auditorium Session 11 17:00 End of the Conference – Conlusion
	18:00-21:00 Grand Salon Poster Session	20:00-23:30 Cocktail Party-Château de Sassenage	

Monday 17 November 2014

16:30-19:30: Registration

Conference opening

Tuesday 18 November

MINATEC AUDITORIUM

(Chair:Georgios Katalagarianakis)

8:15-8:30	Welcome by the Organizing Committee **François Tardif** (CEA, PNS, France) and Jean- François Damlencourt (CEA, PNS, France)
PL0a 8:50-9:10	Nanosafety research policy under the EU H2020 programme Georgios Katalagarianakis (European Community, Belgium)
PL0b 9:10-9:30	Nanomaterials economy: future trends and forecast Tim Harper (Cientifica Plc, UK)
PL0c 9:30-9:50	Today and Tomorrow: nanoproducts available on the market Todd KuiKen (Wilson Center, U.S.A)
PL0d 9:50-10:10	Challenges and promising strategies for fabricating and using nanomaterial-enabled membranes for water treatment Mark Wiesner (Duke University, CEINT, USA)
PL0e 10:10-10:30	From nanomedicine to nanosafety: a journey into nanocharacterization Patrick Boisseau (CEA Leti, France)
10:30-11:00	*Coffee-break*

Session 1: New applications of nanomaterials

Tuesday 18 November

MINATEC AUDITORIUM

(Chair: François Tardif)

PL1
11:00-11:35
Nanoparticles properties and interest for industrial applications
François Tardif (Univ. Grenoble Alpes, PNS, CEA, France)

O1a-1
11:45-12:00
Nanoparticles: potential additives for sustainable lubrication
Fabrice Dassenoy (Ecole Centrale de Lyon – Laboratoire de Tribologie et Dynamique des Systèmes, France)

O1a-2
12:00-12:15
Prospects and potential safety implications of nanoformulation of agrochemicals in crops production
Cui Haixin, X. Zhao (Institute of Environment and Sustainable Development in Agriculture, The Chinese Academy of Agricultural Sciences, China)

O1a-3
12:15-12:30
Nanomaterials as a New Approach to Fire
Fiona Hewitt, D. Suleiman Eid Rbehat, A. Witkowski, A. Stec and T.R. Hull (University of Central Lancashire, U.K)

O1a-4
12:30-12:45
Super-strong nano-composite materials for bunker & command post in army
Dalvinder Singh Grewal (Desh Bhagat University)

O1a-5
12:45-13:00
The in vivo activation of persistent nanophosphors for optical imaging of vascularization, tumours and grafted cells.
Cyrille Richard, T. Maldiney , A. Bessière, J .Seguin, E.Teston, SK. Sharma, B. Viana, AJ. Bos, P. Dorenbos, M. Bessodes, D. Gourier, D. Scherman (Université Paris- Descartes, France)

13:00-14:00
Lunch

ROOM B

(Chair: François Tardif)

O1a-6
14:45-15:00
Exploration of Activation Energy and Electrical Applications of Synthesized Al Doped ZnO Nanomaterials as Humidity/Gas Nanosensors
Misra Suneet Kumar, N.K. Pandey and V. Shakya (Sensors and Materials Research Laboratory, University of Lucknow, India)

O1a-7
15:00-15:15
Application of carbon nano-tubes (CNTs)/alkyd resin composites as anticorrosive coating
M. A Deyab (Egyptian Petroleum Research Institute, EPRI, Egypt)

O1a-8 In vivo study of novel nanocomposite for prostate cancer treatment

15:15-15:30 Camila Silveira, A. J. Paula, L. M. Apolinário, W. J. Fávaro, N. Durán (Chemistry Institute, UNICAMP, Brazil)

O1a-9 Preparation, characterization and tests of incorporation in stem cells of superparamagnetic iron oxide

15:30-15:45 Haddad Paula, T.N. Britos, L. Min Li, L. D´Souza Li (Exact and Earth Sciences Department, Universidade Federal de São Paulo, Brazil)

16:00-16:30 *Coffee-break*

Session 2: Exposure

Tuesday 18 November

MINATEC AUDITORIUM

(Chair: Derk Brouwer)

2a. Methods and Strategies

PL2
14:00-14:35
Recent developments in human exposure assessment
Derk Brouwer (TNO, Risk Analysis for Products in Development, Netherlands)

O2a-1
14:45-15:00
Mass vs number-based exposure assessment to nanoparticles, a comparison of a personal sampler and monitors
Faure Bertrand, H. Dozol, A. Guiot, S. Clavaguera, A. M. Todea, C. Asbach (Univ. Grenoble Alpes, PNS, CEA, France)

O2a-2
15:00-15:15
Analysis and characterization of multivariate stochastic signals sampled by on-line particle analysers. Application to the quantitative assessment of exposure to noaa in occupational scenarios
Lopez de Ipiña Jesús, C. Vaquero, C. Gutierrez-Cañas, D.Y. H. Pui (TECNALIA, Spain)

O2a-3
15:15-15:30
Exposure scenario libraries as a tool for exposure assessment
Sánchez Jiménez Araceli, S. Rashid, G. Boulougouris, M. Van Tongeren, D. Brouwer, W. Fransman, C. Fito (IOM, UK)

O2a-4
15:30-15:45
Towards a strategy for engineered nanomaterials exposure monitoring in the workplace: a case study
Boccuni Fabio, R. Ferrante, S. Lavicoli (INAIL, Italy)

O2a-5
15:45-16:00
Biomonitoring to nanoparticle exposure: approaches for the development of indicators of exposure and effect
Caroline Desvergne, M. Dubosson, V. Mossuz, M. Lacombe, V. Brun (Univ. Grenoble Alpes, PNS, CEA, France)

16:00-16:30
Coffee Break

ROOM B

2b.Release

(Co-chair: Jean-François Damlencourt)

O2b-1
17:15-17:30
Occupational exposure to nano-tio2 in the life cycle steps of new depollutant mortars used in construction
Celina Vaquero, N. Gelarza, J.L. López de Ipiña, C. Gutierrez-Cañas, I. Múgica, G. Aragón, M. Jaen, R. Pina, I. Larraza , A. Esteban-Cubillo, D. Thompson, D.Y.H. Pui (TECNALIA, Spain)

O2b-2
17:30-17:45
Quantitative characterization of airborne particulate release during spray-can and spray-gun application of nanoparticle-doped coatings
Daniel Göhler, M. Stintz (Institute of Process Engineering, Technische Universität Dresden, Germany)

O2b-3
17:45-18:00
First development to model aerosol emission from engineering materials subjected to mechanical stresses
Neeraj Shandilya, M. Morgeneyer, O. Le Bihan (INERIS, France)

18:00-21:00 Poster Session

Wednesday 19 November

ROOM C

2c. Case Studies

(Co-chair: Olivier Witschger)

O2c-1
8:45-9:00
Exposure to airborne nano-sized particles from ceramic milling processes
Ana Sofia Fonseca, M. Viana, N. Pérez, X. Querol, A. López, E. Monfort (Universidad de Barcelona/IDÆA-CSIC, Spain)

O2c-2
9:00-9:15
Occupational exposure assessment during high volume synthesis and subsequent handling of multi-walled carbon nanotubes
Kuijpers Eelco, C. Bekker, W. Fransman, A. Pronk, D. Brouwer, P. Tromp, J. Vlaanderen, R. Vermeulen, L. Goderis (TNO, Netherlands)

O2c-3
9:15-9:30
Assessment of Exposure to ENM during Manufacturing and Downstream Use of Pigments, Inks and Paints
Spankie Sally, A. Apsley, S. Steinle, A. Sanchez Jimenez, M. van Tongeren, E. de la Cruz, C. Fito (Institute of Occupational Medicine, UK)

O2c-4
9:30-9:45
Exposure assessment to noaa during mixing of nanomaterials powders
Elżbieta Jankowska, P. Sobiech, W. Zatorski (Central Institute for Labour, Poland)

O2c-5
9:45-10:00
Strategy for the lowering and the assessment of exposure to nanoparticles at workspace case of study concerning the potential emission of nanoparticles of lead in an epitaxy laboratory
Sébastien Artous, E. Zimmermann, D. Locatelli, S. Derrough, Paul-Antoine Douissard (Univ. Grenoble Alpes, PNS, CEA, France)

10:00-10:30

Session 3: Detection and Characterization

Tuesday 18 November

MINATEC AUDITORIUM

3a. Detection

(Chair: David Y.H. Pui)

PL3
16:30-17:05
Measurement and filtration of air/liquid/surface-borne nanoparticles in support of sustainable nanotechnology
David Y.H. Pui (Distinguished McKnight University Professor, LM Fingerson/TSI Inc Chair in Mechanical Engineering, Director of the Particle Technology Laboratory, University of Minnesota, Minneapolis)

O3a-1
17:15-17:30
Towards an indicator of nanomaterial deposition in the human lung
Dimitrios Bitounis, C. Guibert, V. Forest, D. Boudard, J. Pourchez, J.M. Vergnon, M. Cottier (LINA / Pneumology and Histology-Cytology Departments, France)

O3a-2
17:30-17:45
Identification of Carbon Nanotubes by Thermal-Optical Analysis
Bertrand Faure, P. Babbar, A. Guiot, S. Artous, P. Tiquet, S. Clavaguera, S. Derrough, J.-F. Damlencourt (Univ. Grenoble Alpes, PNS, CEA, France)

18:00-21:00
Poster Session

Wednesday 19 November

ROOM B

(Chair: David Y.H. Pui)

O3a-3
8:45-9:00
Experimental challenges for the detection of nanoparticles in food and cosmetic products
Retamal Marín Rodrigo Renato, F. Babick, M. Stintz (Technische Universität Dresden, Germany)

O3a-4
9:00-9:15
Detection of carbon nanotubes after an abrasion experiment
Lukas Schlagenhauf, A. Wichser, F. Nüesch, J. Wang (Swiss Federal Institute for Materials Testing and Research, Switzerland)

O3a-5
9:15-9:30
The use of small-angle x-ray scattering for the characterization of nanoparticles in biological matrices
Zoltan Varga, C. Gollwitzer, R. Garcia-Diez, M. Krumrey (Research Centre for Natural Sciences, Hungary)

O3a-6
9:30-9:45
Properties of nanoparticles affecting simulation of fibrous gas filter performance
Paolo Tronville, R. Rivers (Politecnico di Torino DENERG, Italy)

O3a-7
9:45-10:00
Investigation of the life cycle of titania nps using radiolabeling techniques for highly sensitive np detection
Heike Hildebrand, K. Franke, S. Schymura, A. Freyer, E. Bilz' Reiner Mehnert, E. Mai, C. Isaacson, H. Schug, K. Schirmer, A. Ammann, L. Sigg (Helmholtz-Zentrum Dresden-Rossendorf, Germany)

10:00-10:30
Coffee-break

ROOM B

3b. Characterization

(Co-chair: Samir DERROUH)

O3b-1 11:15-11:30 CANCELLED
Sonication effects on multi-walled carbon nanotube characteristics for toxicity studies
Soline Allard, S. Che Mansor, M. Ferrie, M. Mayne-L'Hermite, M. Pinault, C. Reynaud (Laboratoire Edifices Nanométriques, DSM-IRAMIS-NIMBE, CEA Saclay, France)

O3b-2 11:30-11:45
Ignition and Explosion Properties of Different Types of Nano-Materials
Arne Krietsch, M. Schmidt , O. Holzschuh, T. Papirer (BAM Federal Institute for Materials Research and Testing, Germany)

O3b-3 11:45-12:00
Characterization of nanoparticle size and state in nanotoxicological and ecotoxicological studies using nanoparticle tracking analysis (nta)
Pierre Peotta, P. Hole, P. Peotta, S. Capracotta, B. Carr (Malvern Instruments, NanoSight, UK/Malvern Instruments, France)

O3b-4 12:00-12:15
Detailed characterization of welding fume in personal exposure samples
Bernadette Quemerais, C. Scott, H. Golshahi (Department of medicine, University of Alberta, Canada)

12:30-13:30 *Lunch*

Thursday 20 November

ROOM C

3c. Instrumentation

O3c-1 14:15-14:30
Hyphenation of nta on-line with af4/mals/icp-ms for the characterisation of nanomaterials in a complex matrix
Dorota Bartczak, H. Goenaga-Infante, P. Vincent (LGC Limited, UK)

O3c-2 14:30-14:45
Towards routine nanoparticle measurements with person-carried instruments
Dirk Dahmann, C. Monz, V. Neumann, C. Asbach, H. Kaminski, A. Maria Todea, C. Möhlmann (Institute for the Research on Hazardous Substances/IUTA, Germany)

O3c-3 14:45-15:00
Design of an exposure chamber for evaluation of personal samplers
Izadi Hossein, B. Quémerais (University of Alberta, Canada)

O3c-4 15:00-15:15
Design of nanoparticle reference materials for sensor development in the context of the eu-project instant
Patrick Knappe, A. F. Thuenemann (BAM Federal Institute for Materials Science and Testing, Germany)

O3c-5 15:15-15:30
Multi-instrument manager tool for data acquisition and data merging of optical and electrical mobility size distributions
Tritscher Torsten, L. Bustin, C. Kykal, O. F. Bischof, E. Filimundi, H.S Han, T. Johnson, S. Elzey, Aaron Avenido (TSI GmbH, Germany)

15:30-16:00 *Coffee-break*

Session 4: Toxicology

Wednesday 19 November

MINATEC AUDITORIUM

(Chair: Günter Oberdörster)

4a. Respiratory tract dosing studies

PL4
8:00-8:35
Nanoparticle Toxicology: A critical appraisal of hazard and risk characterization
Günter Oberdörster (University of Rochester, Department of Environmental Medicine, USA)

O4a-1
8:45-9:00
What is the impact of carbide nanomaterials to the mineral composition of rat lungs? a pixe-µpixe comparative study
Omar Lozano García, S. Lucas, J. Colaux (PMR/NNC/NARILIS/FUNDP, Belgium)

O4a-2
9:00-9:15
The impact of sic and tic nanomaterials in a rat model
Omar Lozano García, S. Lucas, J. Laloy, J.M Dogné, O. Toussaint (PMR, Belgium)

O4a-3
9:15-9:30
Organ weight changes in mice after long-term inhalation exposure to manganese oxides nanoparticles
Tomá Zeman, M. Buchtová, I. Míšek, O. Šerý, B. Dočekal (University of Defence, Department of Population Protection, Czech Republic)

O4a-4
9:30-9:45
Silica nanoparticles cause pleural effusion, pericardial effusion and pulmonary fibrosis in rats
Song Yuguo, X. Zhu, W. Cao, Y. Niu, and L. Si (Capital University of Medical Sciences, China)

4b. Carbon based nano materials, in vitro and in vivo studies

O4b-1
9:45-10:00
Interlab study on nanotoxicology of representative graphene oxide
Nelson Duran, D. S.T. Martinez, G. Z. Justo, R. de Lima, V. Lúcia de Castro, G. A. Umbuzeiro, E. Barbieri, M. Durán, P. S. Melo, O.L. Alves, W. J. Fávaro (Universidade Estadual de Campinas–UNICAMP/NanoBioss, Brazil)

10:00-10:30 *Coffee-break*

ROOM C

(Chair: Günter Oberdörster)

O4b-2
11:15-11:30
Biological response to purification and acid functionalization of carbon nanotubes
Agathe Figarol, J. Pourchez, D. Boudard, V. Forest, J.M Tulliani, J.P Lecompte, D. Bernache-Assolant, M. Cottier, and P. Grosseau (Ecole Nationale Supérieure des Mines, SPIN-EMSE, CNRS, France)

O4b-3
11:30-11:45
Cytotoxicity evaluations of carbon dots with different surface charge
Marketa Havrdova, K. Hola, J. Skopalik, K. Tomankova, O. Kozak, M. Petr, K. Cepe, K. Polakova, A.B. Bourlinos, E.P. Giannelisd J.Tucek, R. Zboril (Regional Centre of Advanced Technologies and Materials, Czech Republic)

O4b-4
11:45-12:00

Interaction of nanomaterials with toll like receptor ligands: characterization of the biomolecule corona and influence on the cellular response
Isabella Radauer-Preiml, A. Andosch, M. Himly, M. S. P. Boyles, J. Horejs-Hoeck, U. Luetz-Meindl, C. Huber, A. Duschl (Department of Molecular Biology, Division of Allergy and Immunology, University of Salzburg, Austria)

4c. Cell-free in vitro testing

O4c-1
12:00-12:15

Characterization of nanoparticulate surfaces and their relation to different protein coronae
Doris Segets, W. Lin, U. Weichsel, J. Walter, W. Peukert, M. Pink, S. Schmitz-Spanke (Institute of Particle Technology, Germany)

O4c-2
12:15-12:30

Computational methods for the toxicological assessment of manufactured nanomaterials
Lara Lamon, D. Asturiol, K. Gerloff, T. Palosaari, J. Bessems, K. Aschberger, A. Worth (European Commission, Joint Research Centre, Institute for Health and Consumer Protection, Italy)

12:30-13:30 *Lunch*

ROOM C

(Co-chair: Marie Carriere)

O4c-3
13:30-13:45

Assessment of the oxidative potential of nanoparticles: comparison and improvement of methods
Mathilde Delaval, W. Wohlleben, L. Ma-Hock, R. Landsiedel, A. Baeza-Squiban, S. Boland (Univ Paris Diderot, France)

O4c-4
13:45-14:00

Nanomaterials solubility/biodurability and reactivity in synthetic biological fluids and cell media
Jensen Keld Alstrup (The National Research Centre for the Working Environment, Denmark)

O4c-5
14:00-14:15

Easy to digest? A comprehensive in vitro approach to monitor the fate of orally ingested nanoparticles
Patrick Knappe, A. F. Thuenemann (BAM Federal Institute for Materials Science and Testing, Germany)

4d. Correlating cell, cell-free and in vitro studies

O4d-1
14:15-14:30

Study of lung lining fluid interactions with nanoparticles: Towards more relevant in vitro toxicity tests
Fanny Mousseau, E. Seyrek, J.F. Berret (Université Paris Diderot, Laboratoire MSC, France)

O4d-2
14:30-14:45

Toxicity of Ag nanoparticle and induction of an inflammatory response in the GI tract and mediation of this toxicity by associated bio-fluid components
Anna Murphy, K. Sheehy, A. Casey, G. Chambers (Nanolab Research Centre, Focas Institute, Dublin Institute of Technology, Ireland)

O4d-3
14:45-15:00

Cerium dioxide nanoparticles affect in vitro fertilization in mice
Lise Preaubert, B. Courbiere, V. Achard, V. Tassistro, T. Orsiere, J.Y. Bottero, J. Rose, M. Auffan, J. Perrin (Aix-Marseille Université, Biogénotoxicologie, Faculté de Médecine, France)

O4d-4
15:00-15:15

Treatment of cells with nanoparticles boosts intercellular communication
Julia Schoelermann, T. Sprenger, M. Roxana Cimpan (Department for Clinical Dentistry, University of Bergen, Norway)

O4d-5
15:15-15:30

Titanium dioxide nanoparticles toxicology: towards more physiological in vitro exposure models?
Lucie Armand, M. Biola-Clier, M. Dilger, S. Muelhopt, C. Schlager, V. Collin-Faure, H.R Paur, S. Diabate, C. Weiss, N. Herlin-Boime, T. Rabilloud, M. Carriere (Laboratoire Lésions des acides nucléiques, UMR E3 CEA, UJF, DSM, INAC, SCIB, CEA, France)

15:30-16:00 *Coffee-break*

Thursday 20 November

S225

(Co -chair: Claude Emond)

O4d-6
10:30-10:45

An approach to evaluate which in vitro model and exposure method is more predictive for in vivo biological responses
Thomas Loret, E. Peyret, T. Amodeo, M. Hanot-Roy, B. Trouiller, C. Egles, G. Lacroix (INERIS, France / Université de Technologie de Compiègne, France)

4e. Cellular uptake, dosimetry and distribution and oxidative potential

O4e-1
10:45-11:00

How do oxide and carbide enm dispersions evolve in an in vitro assessment?
Omar Lozano García, J. Mejia, J.P. Piret, C. Saout, C. C. Zouboulis, O. Toussaint, S. Lucas (Research Centre for the Physics of Matter and Radiation, PMR, Namur Nanosafety Centre, NNC, Namur Research Institute for Life Sciences, NARILIS, University of Namur, Belgium)

O4e-2
11:00-11:15

Characterization of the oxidative potential of nanomaterials
Leticia A Santiago, L. Chi Bui, J. Dairou, S. Boland, A. Baeza-Squiban (University Paris Diderot, BFA, UMR CNRS, France)

O4e-3
11:15-11:30

Fate of metallic nanoparticles in cellular models: dissolution, speciation and complexation in cellulo probed by synchrotron-based techniques
Giulia Veronesi, E. Brun, T. Gallon, M. Cuillel, P. Charbonnier, F. Rollin-Genetet, C. Vidaud, P. Delangle, C. Aude-Garcia, T. Rabilloud, E. Mintz, I. Michaud-Soret, M. Carrière (CEA/CNRS, LCBM/Univ. Grenoble Alpes, France)

O4e-4
11:30-11:45

The influence of size, time and dose on the translocation of gold nanoparticles across mouse and human alveolar epithelial cell monolayers
Gerald Bachler, N. Von Goetz, K. Hungerbuhler, Y. Umehara, L. Rodriguez-Lorenzo, A. Petri-Fink, B. Rothen-Rutishauser, S. Losert (ETH Zürich - Institute for Chemical and Bioengineering, Switzerland)

O4e-5
11:45-12:00

Comparison of in vitro cytotoxicity and oxidative stress of Poly (propylene imine) and poly (amido amine) dendritic nanoparticles
Khalid Humza, L. O'Neill, H. J. Byrne Mark Byrne, A. Heise, S. Prasanna Mukherjee (Focas Research Institute, Ireland)

4f. Brain and skin as targets and biokinetic modeling

O4f-1
12:00-12:15
The need for physiologically-based models to predict nanoparticle biodistribution
Gunnar Johanson, U. Carlander, C. Emond, (Institute of Environmental Medicine,Sweden Karolinska Institutet, BioSimulation Consulting Inc, Sweden)

O4f-2
12:15-12:30
Effects on the nervous system of exposure to engineered nanomaterials – an overview
Mattsson Mats-Olof, M. Simkó (Austrian Insitute of Technology, Austria)

12:30-13:30 *Lunch*

O4f-3
13:30-13:45
Cyto- and genotoxicity of silver nanoparticles in human keratinocytes: infulence of surface coating
Helena Oliveira, V. Bastos, T. Pedrosa, J. Miguel P Ferreira de Oliveira, C. Santos, L. Duarte (CESAM & Laboratory of Biotechnology and Cytomics, Portugal)

O4f-4
13:45-14:00
Nano-TiO2 modulates the dermal sensitization potency of DNCB after topical exposure
Peter Hoet, Stijn Smulders, J. Vanoirbeek (KU Leuven, Faculty of Medicine, Department of Public Health and Primary Care, Belgium)

Session 5: Environmental interactions of nanomaterials

Wednesday 19 November

MINATEC AUDITORIUM

(Chair: Jean-Yves Bottero)

PL5 10:30-11:05
Nanotechnology, global development in the frame of environmental risk forcasting. a necessity of interdisciplinary research
Jean Yves Bottero, M. Auffan, D. Borschnek, P. Chaurand, J. Labille, C. Levard, A. Masion, J. Rose, M.R Wiesner (CEREGE, France)

O5a-1 11:15-11:30
Imogolites as a model for the study of nanoparticle's ecotoxicity toward Pseudomonas brassicacearum
Astrid Avellan, C. Levard, J. Rose, A. Masion, W. Achouak (CEREGE, CNRS, France)

O5a-2 11:30-11:45
Relationships between nano-design of ceria nanoparticle and their impact on a terrestrial soil-microbe-plant ecosystem
Mohamed Hamidat, C. Simonet, M. Barakat, P. Ortet, J. Rose, W. Achouak, C. Santaella (Lab Ecologie Microbienne de la Rhizosphère et Environnements Extrêmes, CNRS-CEA, France)

O5a-3 11:45-12:00
Environmental transformations of silver nanoparticles: impacts on stability, bioavailability and toxicity
Clément Levard, R. Ma, J. Stegemeier, G.V. Lowry, S. Mitra, F.M. Michel, N. Bossa, J. Rose and G.E Brown (CNRS, Aix-Marseille University, IRD, CEREGE, France), (Surface and Aqueous Geochemistry Group, Department of Geological & Environmental Sciences, Stanford University, USA), (Department of Civil and Environmental Engineering, Carnegie Mellon University, United States), (CEINT)

O5a-4 12:00-12:15
Comparison of tio2 nano-objects toxicity on caenorhabditis elegans
Gladys Saez, Q. Le Trequesser, G. Devès, P. Barberet, C. Michelet, M. Petrel, E. Gontier, D. Dupuy, M.H. Delville, H. Seznec (Université de Bordeaux, Centre Etudes Nucléaires de Bordeaux Gradignan, France)

12:30-13:30 *Lunch*

ROOM B

(Chair: Jean-Yves Bottero)

O5a-5 14:15-14:30
Nanoparticles interactions with plants from model to ecosystem: nano-design matters
Catherine Santaella, M. Hamidat, C. Simonet, M. Barakat, P. Ortet, W. Achouak (Lab Ecologie Microbienne de la Rhizosphère et Environnements Extrêmes, CNRS-CEA, France), (iCEINT, France)

O5a-6 14:30-14:45
Environmental Mobility of Carbon Nanotubes
Stefan Schymura, J. Kulenkampff, K. Franke, J. Lippmann-Pipke (HZDR, Institute of Resource Ecology, Germany)

O5b-1
14:45-15:00
Evaluation of the effects of nitric oxide-releasing nanoparticles on plants
A. B. Seabra, Anderson E.S. Pereira, A. M. Narciso, L. F. Fraceto (Universidade Estadual de Campinas, Campus Universitário Zeferino Vaz, Brazil)

O5b-2
15:00-15:15
Effect of silver nanoparticles on estuarine bivalves scrobicularia plana
Carole Bertrand, L. Poirier, A. Zalouk-Vergnoux, S. Devin, M. Auffan, M. Tella, J. Labille, H. Perrein-Ettajani, L. Giamberini, C. Mouneyrac (Université de Lorraine/LIEC, France)

05b-3
15:15-15:30
Comparative study of the two types of nanoparticles on fresh water microcosm at low level concentrations
Kumar Deepak, N. Chandrasekaran, A. Mukherjee (VIT University, Centre for Nanobiotechnology, India)

15:30-16:00 *Coffee-break*

ROOM B

(Co-chair: Jérôme Rose)

O5b-4
16:00-16:15
Comprehensive study on the impact of tio2 nps on biofilm formation of the freshwater sediment bacterial isolates and their consortium: projected risks for aquatic environment
Kumari Jyoti, N. Chandrasekaran, A. Mukherjee, R. Nagarajan (Centre for Nanobiotechnology, VIT University, India)

O5b-5
16:15-16:30
Aging of nano-products and impacts toward aquatic organisms across a salinity gradient
Marie Tella, E. Mohr, A. Pariat, D. Borschneck, B. Angeletti, M. Cabie, J.H. Ferrasse, A. Masion, C. Mouneyrac, L. Giamberini, M. Auffan (CNRS, Aix-Marseille Université, CEREGE, France), (GDRi iCEINT, France)

O5c-1
16:30-16:45
Genotoxic and cytotoxic effects of silver nanoparticles in the bivalve scrobicularia plana
Amélie Châtel, P.E. Buffet, H. Perrein-Ettajani, I. Métais, A. Zalouk-Vergnoux, L. Poirier, D. Gilliland, C. Risso-de Faverney, M. Guibbolini, E. Valsami-Jones, C. Mouneyrac (LUNAM Université/Université Catholique de l'Ouest, France)

O5c-2
16:45-17:00
Chronic contamination of aquatic mesocosms by ag nanoparticles with different shape
Marie Tella, M. Auffan, C. Levard, A. Thiéry, C. Santaella, L. Brousset, C. Pailles, J. Issartel, E. Mohr, W. Achouak, B. Angeletti, J. Rose, M. R. Wiesner, J.Y. Bottero (CNRS, Aix-Marseille Université, CEREGE, France), (GDRi iCEINT, France)

Session 6: Nanomaterials Release

Wednesday 19 November

MINATEC AUDITORIUM

(Chair: Wendel Wohlleben)

PL6
13:30-14:05 Nanotechnology commercialization and the need of release testing along the product lifecycle
Wendel Wohlleben (BASF, Germany)

6.a. Release by Mechanical Stress

O6a-1
14:15-14:30 Characterization methods for MWCNT polymer composites and nanocomposite release particles
Keana Scott *(Invited Speaker)*, J. Woodcock, C. Davis, J. Gilman, G. Myers, J. Schumacher, A. Meyers (National Institute of Standards and Technology, USA)

O6a-2
14:30-14:45 An overview of release from solid nanocomposites
Stephan J. Froggett, Froggett & Associates (LLC, Seattle, WA)

O6a-3
14:45-15:00 Nanoaerosol release characteristics of silver nanocomposite by sanding test
Gwi-Nam Bae *(Invited Speaker)*, K.S. Kim, J.H. Ji, D.Woo, J.B. Kim, J.H. Kim, H.J. Lee (Korea Institute of Science and Technology, Korea)

O6a-4
15:00-15:15 Measurement of nanoparticles release during drilling of polymer nanocomposites
Laura Gendre, K. Blackburn, V. Marchante Rodriguez, J. Brighton and H. Abhyankar (Cranfield University, Centre for Automotive Technology, UK)

O6a-5
15:15-15:30 Particle release from single-wall and multiwall carbon nanotubes in polystyrene-based composites during grinding
Ogura Isamu, M. Shigeta, M. Kotake, M. Uejima, K. Honda (National Institute of Advanced Industrial Science and Technology, Japan), (Technology Research Association for Single Wall Carbon Nanotubes, Japan)

15:30-16:00 *Coffee-break*

ROOM C

(Chair: Wendel Wohlleben)

O6a-6
16:00-16:15 Towards harmonized investigations on the release of nanomaterials from composites during mechanical treatment – results from an interlaboratory comparison
C. Asbach, J. Meyer, S. Clavaguera, B. Fiorentino, H. Kaminski, S. Kreckel, M.W. Meier, B. Stahlmecke, W. Wohlleben and T.A.J. Kuhlbusch (Institut für Energie - und Umwelttechnik, Germany), (Univ. Grenoble Alpes, PNS, CEA, France), (BASF, Germany)

6b. Release by Washing/Leaching, Fire, End-of-Life

(Chair: Jean-Francois Damlencourt)

O6b-1 16:15-16:30
Nanomaterials release from comercial fabrics for sportswear and automotive applications
Elisabet Fernández-Rosas, Socorro Vázquez-Campos *(Invited Speaker)*, A. Vílchez, V. Pomar, D. González-Gálvez, M. Blázquez, A. Satti (LEITAT Technological Center, Spain)

O6b-2 16:30-16:45
Tracking nanomaterials through the laundry wash cycle: release, dissolution and complexation
Denise M. Mitrano and B. Nowack (EMPA – Swiss Federal Laboratories for Materials Science and Technology, Switzerland)

O6b-3 16:45-17:00
Effects of released particles: nanohouse results
Peter Hoet (Pneumology, Leuven)

O6b-4 17:00-17:15
Leaching potential of nanomaterials during different human contact scenarios and end-of-life
Steffen Foss Hansen, A. Mackevica, L. Heggelund, M. Emil Olsson, A. Boldrin (Department of Environmental Engineering, Technical University of Denmark, Denmark)

O6b-5 17:15-17:30
What is emitted from combustion of nanocomposites? results on pu and pe polymers with carbon black, nanotubes, iron oxides, organic pigments
Georgios A. Sotiriou, D. Singh, Wendel Wohlleben, and P. Demokritou (Center for Nanotechnology and Nanotoxicology, U.S.A)

O6b-6 17:30-17:45
Characterising the release of carbon nanotubes from burning cnt-polymer nanocomposite
Antonis Christou and A. A. Stec (Centre for Fire and Hazard Sciences, University of Central Lancashire, UK)

20:00-23:30 *Cocktail Party-Château de Sassenage*

Thursday 20 November

ROOM B

6c. Release by Weathering

(Chair: Tinh Nguyen)

O6c-1
08:45-09:00
Development of a conceptual framework for evaluation of nanomaterials release from nanocomposites: environmental and toxicological implications
Alexander Orlov *(Invited Speaker)*, J. Ging, R. Tejerina-Anton, G. Ramakrishnan, M. Nielsen, K. Murphy, JM. Gorham, T. Nguyen (Materials Science and Engineering, Stony Brook University, USA)

O6c-2
9:00-9:15
Mechanisms of entangled cnt layer formation and its resistance to release during uv irradiation of polymer nanocomposites
Tinh Nguyen and L. Sung (Scientific Consulting, National Institute of Standard and Technology, USA)

O6c-3
9:15-9:30
Lifecycle of commercial photocatalytic nanocoatings: nanoparticles aerosol emission during mechanical and environmental stresses application
Neeraj Shandilya, O. Le Bihan, C. Bressot, M. Morgeneyer (INERIS, France)

O6c-4
9:30-9:45
In search of factors affecting the release of nanomaterial from product's life cycle: the guidenano project
Alexandro Vílchez Villalba, Stefano Zuin, A. Massari, S. Vázquez-Campos, D. Boutry (LEITAT Technological Center, Spain), (Venice Research Consortium, Italy)

O6c-5
9:45-10:00
Insight into mechanisms leading to the release of ceo_2 nanoparticles embedded in an acrylic wood coating
Lorette Scifo, P. Chaurand, A. Avellan, N. Bossa, A. Masion, M. Auffan, D. Borschneck, J. Labille, J.Y. Bottero and J. Rose (Aix-Marseille Université, CNRS, IRD, CEREGE UMR 7330, France), (Tecnalia-France, France)

O6c-6
10:00-10:15
Investigation of the nanoparticles release mechanism from paints due to environmental and mechanical aging
Brice Fiorentino, D. Boutry, J.F. Damlencourt (Univ. Grenoble Alpes, PNS, CEA, France)

Session 7: Industrial production and prevention

Thursday 20 November

MINATEC AUDITORIUM

(Chair: Eric Gaffet)

7a. Safer by design approach

PL7
8:00-8:35
Nanomaterials : Industrial Production and Prevention
E. Gaffet (Institut Jean Lamour, UMR 7198 CNRS – Université de Lorraine, France)

O7a-1
8:45-9:00
Dustiness testing: a support to nanosafety by design
Olivier Le Bihan, C. Bressot, C. Dutouquet, T. Jayabalan Yuri Fedutik, A. Antipov (PlasmaChem GmbH, Germany), (INERIS, France)

O7a-2
9:00-9:15
Wet state characterization as key step in a safety by design approach
Camilla Delpivo, S. Ortelli, M. Blosi, A. Vaccari, T. Syed, A. L. Costa (Nanotechnologies and Colloidal Processing, CNR-ISTEC, Italy)

O7a-3
9:15-9:30
Safety by design to control the biological reactivity of nanosilver
Magda Blosi, S. Ortelli, C. Delpivo, D. Gardini, M. G. Bianchi, M. Allegri, O. Bussolati, E. Bergamaschi, A. Luisa Costa (CNR-ISTEC, Institute of Science and Technology for Ceramics, National Research Council, Italy)

O7a-4
9:30-9:45
Nano cuo case study: integration of safety by molecular design approach
Anna.L. Costa, L. Viale, M. Blosi, S. Ortelli (ISTEC – CNR, Italy)

10:00-10:30 *Coffee-break*

7b. Safe equipment, collective and individual protection

ROOM B

(Co -chair: Catherine Durand)

O7b-1
11:15-11:30
Efficiency of current alternatives for personal dermal protection towards nanohydrosols
Delphine Boutry, J.F. Damlencourt (Univ. Grenoble Alpes, PNS, CEA, France)

O7b-2
11:30-11:45
Secured nanomaterial workplaces at the liten-pns (CEA Grenoble - Nano Safety Platform) open to industrials, as practical case
Catherine Durand, A. Sperandio, D. Boutry, J.F. Damlencourt, V. Fenneteau, C. Tardif (Univ. Grenoble Alpes, PNS, CEA, France)

O7b-3
11:45-12:00
Nanosecured plateform to assess risks along the industrial lifecycle of nanomaterials
Bruno Debray, A. Vignes, J. Bouillard (INERIS, France)

7c. Static and dynamic containment

O7c-1
12:00-12:15
Toward understanding the mechanisms and the kinetic of nanoparticle penetration through protective gloves
Ludwig Vinches, M. Zemzem, N. Boutrigue, S. Hallé Kevin, J. Wilkinson, C. Peyrot, L. Lemarchand, N. Tufenkji (École de technologie supérieurs, Canada)

12:15-13:30 *Lunch*

8: Life Cycle Analysis

Thursday 20 November

MINATEC AUDITORIUM

(Chair: Bernd Nowack)

PL8
10:30-11:05
The life cycle perspective as basis for assessing environmental risks of engineered nanomaterials
Bernd Nowack (EMPA, Swiss Federal Laboratories for Materials Science and Technology, Switzerland)

O8a-1
11:15-11:30
Nanomaterials in construction and demolition – how can we assess the risk if we don't know where they are?
Wendy Jones, A. Gibb, C. Goodier, P. Bust, M. Song (School of Civil and Building Engineering, Loughborough University, UK)

O8a-2
11:30-11:45
Nanomaterials in construction and demolition waste in switzerland
Ingrid Hincapié, A. Caballero, B. Nowack (EMPA – Swiss Federal Laboratories for Material Science and Technology, Switzerland)

O8a-3
11:45-12:00
Flows of engineered nanomaterials through the recycling process in Switzerland
Alejandro Caballero Guzman, T. Sun, B. Nowack (EMPA, Swiss Federal Laboratories for Materials Science and Technology, Switzerland)

O8a-4
12:00-12:15
Environmental impacts of multiwalled carbon nanotubes (mwcnt) and platinum in fuel cell technology
Dominic Notter, K. Kouravelou, N. Tudela Haberland, (Department of Mobility, Energy and Environment, Swiss Federal Laboratories for Materials Science and Technology, Switzerland)

O8a-5
12:15-12:30
Life cycle based socio-economic assessment combining environmental impact, occupational health risks and health benefits for nanosilver coated door handles
Tom Ligthart, H.Buist, E. Kuijpers, W. Fransman, M. de Weerd (TNO - Climate Air and Sustainability, Netherlands)

12:30-13:30 *Lunch*

ROOM B

(Chair: Bernd Nowack)

O8a-6
14:15-14:30
Lca-integrated human health risk assessment: application in four case studies on enm
Wouter Fransman, H. Buist, E. Kuijpers, E. Zondervan, D. H Brouwer (TNO, Netherlands)

O8a-7
14:30-14:45
Licara nanoscan: evaluating benefits and risks over the life cycle of nanoproducts
Esther Zondervan, D. Brouwer, T. Van Harmelen, D. Notter, R. Hischier, C. Som (Netherlands Organisation for Applied Scientific Research-TNO, Netherlands)

O8a-8
14:45-15:00
Freshwater ecotoxicity characterisation factor for engineered nanoparticles - the case study of nano-titaniumdioxide
Beatrice Salieri, R. Hischier, S. Righi, A. Pasteris, S. Irving Olsen (Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland)

O8a-9 Framework for human health characterization factor calculation of tio2 nanoparticles

15:00-15:15 Martina Pini, A. Maria Ferrari, B. Salieri, R. Hischier, B. Nowack (Department of Engineering Sciences and Methods, University of Modena and Reggio Emilia, Italy)

O8a-10 Toxicity characterization factors for nanomaterials: current developments and limitations

15:15-15:30 Gonzalo Rodriguez-Garcia, B. Zimmermann, M. Baumann, M. Weil (Helmholtz-Institute Ulm for Electrochemical Energy Storage, Germany)

15:30-16:00 *Coffee-break*

Session 9: Regulation and standardization

Thursday 20 November

PETIT SALON

(Chair: Daniel Bernard)

PL9 13:30-13:45 Regulation Perspectives
Daniel Bernard (CEA, Senior Scientific Advisor, NanoSafety Platform, Grenoble, France)

O9a-1 13:45-14:00 Nanomaterials in food – current and future applications and regulatory aspects
Karin Aschberger, S. Gottardo, V. Amenta, M. Arena, H. Bouwmeester, P. Brandhoff, H. Rauscher, R. Schoonjans, M. Vittoria Vettori, R. Peters (IHCP-Nanobiosciences, JRC Ispra, Italy)

O9a-2 14:00-14:15 Classification and Reporting of Nanostructured Silica Materials
Atluri Rambabu, K. A. Jensen (National Research Centre for the Working Environment NRCWE, Denmark)

O9a-3 14:15-14:30 International and European standardization in nanotechnology; How standardization can help industry and regulators in developing safe products?
Jean-Marc Aublant (LNE, France)

O9a-4 14:30-14:45 National nano registers: admissibility under EU law and regulatory uncertainties
Anthony Bochon (Squire Patton Boggs LLP, Brussels)

O9a-5 14:45-15:00 Paving the way from research to standards in the field of nanotechnologies: the nanoSTAIR support and pre-normative work
Benoît Hazebrouck, O. Salvi, B. Caillard, with the participation of QualityNano (EU-VRi European Virtual Institute for Integrated Risk Management. Haus der Wirtschaft, Germany)

O9a-6 15:00-15:15 The nanostair strategy: a new strategic proposal to impulse standardization in nanotechnology research
Jesús Lopez de Ipiña, O. Salvi, B. Hazebrouck, A. Jovanovic, F. Carre, A. Saamanen, D. Brouwer, M. Schmitt , S. Martin (TECNALIA, Spain)

15:15-15:30 Debate Regulation

15:30-16:00 *Coffee-break*

Session 10: Commercial equipment

(Chair: Raphael de Thoury)

Wednesday 19 November

MINATEC AUDITORIUM

O10a-1 Nanosafety platform
16:00-16:15 Fréderic Amblard (Univ. Grenoble Alpes, PNS, CEA, France)

O10a-2 A software infrastructure dedicated to nanosafety
16:15-16:30 Johann Foucher, N. Feltin, A. Delvallée, S. Ducourtieux, F. Piquemal, J.P. Lecailliez (POLLEN Technology, France)

O10a-3 Mini particule sampler for nanosafety
16:30-16:45 Cédric NEVEU (ECOMESURE, France)

O10a-4 Miniature nanoparticle sensors for exposure measurement and tem sampling
16:45-17:00 Martin Fierz, D. Meier, P. Steigmeier and H. Burtscher (Naneos particle solutions gmbh, Switzerland), (University of applied sciences northwestern Switzerland, Switzerland)

O10a-5 NanoBadge
17:00-17:15 Raphel de Thoury (NanoBadge, Alcen)

O10a-6 Nano-scale Optical and Hyperspectral Microscopy
17:15-17:30 Sam Lawrence, Nicolas Gonzalez (CytoViva, Inc, USA ,Schaefer Techniques, Centre d'activité, France)

20:00-23:30 Cocktail Party-Château de Sassenage

Session 11: Risk Management

Thursday 20 November

MINATEC AUDITORIUM

(Chair: Olivier Salvi)

PL11 13:30-14:15
Risk Management for nanomaterials: what are the existing methods and tools?
Olivier Salvi, E. Frejafon, A. Jovanovic, M. Löscher, B. Hazebrouckh (European Virtual Institute for Integrated Risk Management, France)

O11a-1 14:15-14:30
Application of risk assessment approaches on pilot scale process lines using nanomaterials within the SANOWORK project
Jayabalan Thangavelu, A. Janes, B. Debray, G. Fayet (INERIS, France)

O11a-2 14:30-14:45
Strategies, methods and tools for managing nano-risks in construction
Jesús Lopez de Ipiña, C. Vaquero, D. Boutry, M. Pilou, P. Neofytou, E. Jankowska, R. Pina, I.Larraza, S. Fernández, K. Otkallo, A. Pintea, C.Salazar, B. Hargreaves, R. Ciobanu, B. Hazebrouck, H. Stockmann-Juvala, V.Vaananen, D.Y. H. Pui, D. Thompson (TECNALIA, Spain)

O11a-3 14:45-15:00
Nanomaterials at the construction sector – tools and guidelines for occupational health care units
Säämänen Arto, V. Väänänen, T. Kanerva, A.K Viitanen, S. Uuksulainen, H. Stockmann-Juvala (Finnish Institute of Occupational Health, Uimalankatu, Finland)

O11a-4 15:00-15:15
Risk assessment of nanocarbons: use the analytical hierachy process and control banding aproach on safety management of carbon nanomaterials
Lenz e Silva Guilherme, R.Hurt (University of São Paulo – Dept. of Metallurgy & Materials Engineering, Brazil), (Brown University – School of Engineering, Institute for Molecular and Nanoscale Innovation, USA)

O11a-5 15:15-15:30
Field campains of measurement of nanoaerosols: from synthesis of the results to an EHS prevention tool
Catherine Durand, E. Zimmermann, S. Artous, D. Locatelli, P. Nobile, S. Derrough, B.Belleville (Univ. Grenoble Alpes, PNS, CEA, France)

15:30-16:00 *Coffee-break*

MINATEC AUDITORIUM

(Co-chair: Olivier Witschger)

O11a-6 16:00-16:15
A standardized non-instrumental method for tracking workstations concerned with exposure to nano-objects and their aggregates and agglomerates in companies dealing with engineering
Irina Guseva Canu, S. Ducamp, L. Delabre, S. Audignon-Durand, C. Ducros, C. Durand, Y. Iwatsubo, D. Jezewski-Serra, O. Le Bihan, S. Malard, A. Radauceanu, M. Reynier, M. Ricaud, and O. Witschger (French Institute for Health Surveillance, InVS, France)

O11a-7 16:15-16:30
Risk assessment in a research laboratory during sol-gel synthesis of nano-tio2
Francisco Silva, P. Arezes, P. Swuste (Technological Centre for Ceramic and Glass, Portugal), (University of Minho, Portugal), (Delft University of Technology, Nederlands)

O11a-8 16:30-16:45
Announcement on hazardous substances 527 - Manufactured Nanomaterials
Johannes Pelzer, C. Schumacher (Institute of Occupational Safety and Health of the German Social Accident Insurance, IFA, Germany)

O11a-9 16:45-17:00
Qualitative risk assessment during polymer mortar test specimens preparation – methods comparison
Silva Francisco, P. Arezes, P. Swuste, S.P.B. Sousa, M.C.S. Ribeiro, J.S. Baptista (Technological Centre for Ceramic and Glass, Portugal), (School of Engineering, University of Minho, Portugal)

17:00 End of the Conference - Conclusion

Session 12: Nanoresponsible Development

Tuesday 18 November

ROOM C

(Chair: Pieter Van broekhuizen)

O12a-1
14:00-14:20
Stakeholder engagement in nanotechnologies. Dialogue and outreach for responsible research & innovation in nanotechnologies
Pieter Van broekhuizen, H. Krop, A. Farchi (IVAM UvA, Netherlands)

O12a-2
14:20-14:40
Nanoresponsible development: framing a model of innovation market uptake of nano-enabled products
Mariia Ostapchuk, C. Auplat, P. Boucard, J. M. Brignon (PSL, Université Paris-Dauphine, France), (Novancia Business School Paris, France), (INERIS,France)

O12a-3
14:40-15:00
Licara - guideline towards sustainable competitiveness of nanoproducts
Claudia Som, E. Zondervan-van den Beuken, T. van Harmelen, R. Hischier, B. Nowack, I.Hincapie, H. E. Buist, W. Fransman, J. Güttinger (Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland), (TNO, Netherlands), (NANO-CLUSTER BODENSEE, NCB, Switzerland)

O12a-4
15:00-15:20
The ne3ls network's quadruple helix model of innovation towards a responsible development of nanotechnology
Charles-Anica Endo, M.H. Parizeau, C. Emond, C. Beaudry (École de technologie supérieure Montréal, Canada)

O12a-5
15:20-15:40
Socio-economic analysis of a nano-enabled technology: nano-tio2 coatings solar panel efficiency
Pierre Boucard, J.M. Brignon (National Institute for Industrial Environment and Risks, France)

O12a-6
15:40-16:00
Areas of discussion about work, resources for prevention of risks related to nanomaterials
Catherine L'Allain, S. Caroly, E. Drais (Laboratoire LIP, Université de Grenoble INPG, France)

16:00-16:30 *Coffee-break*

16:30-18:30 Debate

Panel-discussions

Tuesday 18 November

ROOM C

(Moderator: Pieter Van broekhuizen)

16:30-17:30 **Responsible development: how to do with nano? Comparison between the application of the principle of precaution in nanomaterials, and the other emerging risks.(Moderator:**
Pieter Van broekhuizen (IVAM UvA, Netherlands), C. Auplat (Novancia Business School Paris, France), J. M. Brignon (PSL, Université Paris-Dauphine, France), Charles-Anica Endo (Ecole de technologie supérieure Montréal, Canada), Claudia Som (Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland), Catherine L'Allain (Laboratoire LIP, Université de Grenoble INPG, France)

(Moderator: Jérôme Rose)

17:30-18:30 **Nanomaterials: risks and benefits for the environment.**
Jérôme Rose (CEREGE, France), Bernd Nowack (EMPA, Switzerland), Wendel Wohlleben (BASF, Germany), Mark Wiesnier (Duke University, CEINT, USA), Derk Brouwer (TNO, Netherlands)

Wednesday 19 November

ROOM B

(Moderator: Claude Emond)

17:00-18:00 **Nanoparticle of Reference or the Reference Protocol: which ones do we need to embrace for a significant progress in Health Risk Assessment? Pros and Cons. (*)**
Claude Emond (BioSimulation Consulting Inc., Newark, DE, USA), Gunnar Johanson (Institute of Environmental Medicine, Karolinska Institutet, Sweden), Olivier Witschger (Aerosol Metrology Laboratory INRS, France), Peter Hoet (Department of Environmental and Insurance Medicine, Katholieke Universiteit Leuven, Belgium), Gunter Oberdorster (School of Medicine and Dentistry, University of Rochester Medical Center, Rochester, NY, US)

Thursday 20 November

PETIT SALON

(Moderator: Daniel Bernard)

15:20-15:40 **Regulation and Standardization**
Moderator: Daniel Bernard (CEA, France), Karin Aschberger (IHCP-Nanobiosciences, Italy), Rambabu Atluri (National Research Centre for the Working Environment, Denmark), Jean-Marc Aublant (LNE, France), Anthony Bochon (Squire Patton Boggs LLP, Brussels), Benoît Hazebrouck (EU-VRi European Virtual Institute for Integrated Risk Management, Germany), Jesús López de Ipiña (TECNALIA, Spain)

(*) P9.4 Reference nanoparticles or reference protocol: what should come first to make significant progress in health risk assessment?

Satellite meetings and workshops

Tuesday 18 November

PETIT SALON

18:30-21:00 **HARMONIZATION MEASUREMENT STRATEGY GROUP MEETING**
5tht Workshop Harmonization Strategy
Open workshop.
Coordinator: Derk H. Brouwer (TNO, NL)

Wednesday 19 November

PETIT SALON

8:00-15:30 **SCAFFOLD**
Closed Workshop
SCAFFOLD is an industrial oriented idea specifically addressed to provide practical, robust, easy-to-use and cost effective solutions for the European construction industry, regarding current uncertainties about occupational exposure to MNMs
Coordinator: Jesús M. Lopez de Ipiña (Fundacíon TECNALIA, Spain)

13:30-18:00 **MARINA- MANAGING RISKS OF NANOMATERIALS**
Open meeting
The MARINA project is a major new European Commission Framework 7 project to develop reference methods for managing the risk of engineered nanoparticles and engineered nanomaterials (ENM).
The aim of MARINA is to develop and validate the Risk Management Methods for Nanomaterials.
Coordinator: Dr Lang Tran (Institute of Occupational Medicine, UK)

Thursday 20 November

PETIT SALON

8:30 12:30 **CHARACTERIZATION GROUP MEETING**
Contact: Chantal Tardif (CEA, PNS, France)

ROOM C

8:30-12:30 **NANODIODE**
Open meeting

NanoDiode establishes an innovative, coordinated program for outreach and
NanoDiode, launched in July 2013 for a period of three years, establishes an innovative, coordinated program for outreach and dialogue throughout Europe so as to support the effective governance of nanotechnologies. The project integrates vital engagement activities along the innovation value chain, at the levels of research policy, research & development (R&D), and the use of nanotechnological innovations throughout society.
Coordinator : Pieter van Broekhuizen, IVAM, Netherlands

Friday 21 November

B2/270
CEA

9:00-15.00 **NANOINDEX**

Closed Workshop.

Exposure to airborne manufactured nanomaterials (MNMs) can best be assessed by measuring the individual exposure in the breathing zone of an individual. The project NanoIndEx will determine personal exposure to MNMs and thoroughly investigate the possibilities of personal monitors and samplers.
Coordinator : Christof Asbach (IUTA, Germany)

Poster Session

Tuesday 18 November

GRAND SALON

Poster Session: 18:00-21:00

P1-1 Single step synthesis of graphene oxide using agricultural sugarcane waste materials
Thirunavukkarasu Somanathan, K. Prasad, A. Sarvanan, V. Mohanakrishna, N. Kiruthika, A. Abilarasu and M. Shanmugam (Vels University, Chennai, India)

P1-2 Formation of silicon nanoclusters in sinx films and their light-emitting properties under the various conditions of deposition and heat treatment
Togambayeva Altynay, F. Komarov, L. Vlasukova, L. Toganbayeva, N. Ankusheva, T. Murat (Al-Farabi Kazakh National University, Republic of Kazakhstan), (Belarusian State University, Republic of Belarus)

P1-3 Nano-encapsulation of short peptides using electrospraying techniques
Rasekh Manoochehr, M. Roldo, E. Barbu, J. Leprince, D. Vaudry, D. Gorecki (School of Pharmacy and Biomedical Sciences, University of Portsmouth, UK)

P2-1 Matpuf: a job-exposure matrix to unintentional nanoscale particles
Sabyne Audignon, A. Lacourt, C. Gramond, S. Ducamp, M. Rinaldo, P. Brochard (Université de Bordeaux, France), (Institut de Veille Sanitaire, France)

P2-2 Proposed structure for information recording of analytical electron microscopy analysis for a nano exposure and contextual information database
Delphine Bard, G. Burdett, M. Mattenklott, J. Pelzer, W. Stöppelmann, C. Schumacher, P. C Tromp, W. Fransman, D. Brouwer, T. Tuomi, T. Kanerva, A. Säämänen, I. Koponen, O. Witschger, I. Koponen, E. Jankowska (HSL, UK), (IFA, Germany), (TNO, Netherlands), (FIOH, Finland) (INRS, France), (NRCWE, Denmark) (CIOP-PIB, Poland)

P2-3 Development of a nano exposure and contextual information database (necid)
Wouter Fransman, J. Pelzer, W. Stöppelmann, D.Brouwer, I. Koponen, D. Bard, O. Witschger, A. Zugasti, E. Jankowska, A. Säämänen, M. Berges (TNO, Netherlands), (IFA, Germany), (NRCWE, Denmark), (HSL, UK), (INRS, France), (INSHT, Spain), (CIOP, Poland), (FIOH, Finland)

P2-4 Detection of carbon nanotubes and carbon nanodiscs on workplace surfaces in a small-scale producer
Maria Hedmer, L. Ludvigsson, C. Isaxon, P. Nilsson, V. Skaug, M. Bohgard, J. H. Pagels, M. E. Messing, and H. Tinnerberg (Occupational and Environmental Medicine, Lund University, Sweden), (Solid State Physics, Lund University, Sweden), (Ergonomics and Aerosol Technology, Lund University, Sweden), (National Institute of Occupational Health, Norway)

P2-5 Development of exposure assessment method with the chamber
Kato Nobuyuki, Y. Koyama, H. Yokoyama, Y. Matsui, M. Yoneda (Kyoto University, JAPAN)

P2-6 Evaluation of Dust in the Working Environment of Toner Handling Plants

Hiroko Kitamura, M. Hasegawa, A. Ogami, T. Myojo (Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan)

P2-7 Exposure assessment of nanoproducts and nanocomposits using chamber method

Matsui Yasuto, N. Kato, Y. Koyama, Y. Shimada, M. Yoneda (Kyoto University, Japan)

P2-8 Exposure assessment of mwcnts in their life cycle

Ono-ogasawara Mariko, M. Takaya, Maromu Yamada (Japan National Institute of Occupational Safety and Health, Japan)

P2-9 Assessing occupational exposure to multi-walled carbon nanotubes: available measurement data, recommended limits and control banding analyses

Anita Radovnikovic, L. Stecca, V. Reina, V. Amenta, K. Aschberger, Stefano Tarantola (IHCP-Chemical Assessment and Testing), (IHCP-Molecular Biology and Genomics), (IHCP-Nanobiosciences, Italy), (Econometrics and Applied Statistics Unit, Italy)

P2-10 An investigation regarding human responses to toner exposure in a toner manufacturing plant

Hasegawa Masayuki, H. Kitamura, A. Ogami, T. Myojo (Institute of Industrial Ecological Sciences, University of Occupational and Environmental Health, Japan)

P2-11 Dispersion state of SiO2 food additiveves in gastrointestinal environment

Retamal Marín Rodrigo Renato, F. Babick, M. Stintz (Technische Universität Dresden, Germany)

P3a-1 Towards an indicator of nanomaterial deposition in the human lung

Dimitrios Bitounis, C. Guibert, V. Forest, D. Boudard, J. Pourchez, J. M. Vergnon, M. Cottier (LINA, France), (Pneumology and Histology-Cytology Departments - Central University Hospital, France)

P3a-2 Development and validation of an inhalation system suitable for rodent exposure to nanoaerosols

Frédéric Cosnier, S. Bau, C. Brochard, S. Grossmann, H. Nunge, R. Payet, S. Michaux, O. Witschger, M. Chalansonnet, L. Gaté (INRS, France)

P3a-3 Measuring at relevant concentrations - Radiolabelling as a versatile tool for sensitive nanoparticle detection

Stefan Schymura, H. Hildebrand, M. Dalmiglio, U. Holzwarth, N. Gibson, K. Franke (HZDR, Institute of Resource Ecology, Germany), (JRC, Institute of Health and Consumer Protection, Italy), (HZDR, Institute of Radiopharmacy, Germany)

P3b-1 Quantitative measurement of carbon nanotubes released from their composites by thermal carbon analysis

Ogura Isamu, M. Shigeta, M. Kotake, M. Uejima, K. Honda (National Institute of Advanced Industrial Science and Technology AIST, Japan), (Technology Research Association for Single Wall Carbon Nanotubes, TASC, Japan)

P3b-2 Evaluation of the behaviour of some sulphonylhydrazone and n-acylhydrazone derivatives as drug delivering systems for the treatment of diabetes mellitus type 2 and cancer

Ferreira Fabio Furlan, A. Laura Ibiapino, L. Pires de Figueiredo, F. Nascimento Costa, E.J. Barreiro, L. Moreira Lima, D. Nascimento do Amaral (Center of Natural and Human Sciences, CCNH, Federal University of ABC UFABC, Brazil)

P3c-1 Club nanoMétrologie: A French initiative to improve the reliability of measurements at the nanoscale

Georges Favre, D. Bernard, F. Piquemal, K. Aguir, S. Cassette, J. Carimalo, Y. De Wilde, S. Ducourtieux, N. Feltin, B. Gautier, P. Lambert, A. Levenson, G. Louarn, T. Macé, P.Maillot, J.M. Moschetta (LNE, France)

P3c-2 A combination of optical and electrochemical transduction principles merged in a novel sensorsystem

Julia Widmaier, D. Furin, F. Kolarov, P. Fechner, G. Proll, B. Sethson, G. Gauglitz (University of Tübingen, DE)

P3c-3 Performance on the vortex shaker dustiness test method as a continuous aerosol generator: time variations in particle number concentration and size distribution of aerosolized nano-tio2

Yamada Maromu, M. Takaya, I. Ogura (Japan National Institute of Occupational Safety and Health, Japan)

P4-1 In vitro evaluation of nickel oxide nanoparticle's toxicity

Mahmoud Abudayyak, T. Gurkaynak Altincekic and G. Özhan (Department of Pharmaceutical Toxicology, Istanbul University, Turkey)

P4-2 Nitric oxide-releasing polymeric nanoparticles against trypanosoma cruzi

Ameda Seabra, N.A. Kitice, C.A.C. Lancheros, S.F. Yamada-Ogatta (Universidade Federal de São Paulo, Exact and Earth Sciences Departament, Rua São Nicolau, Brazil)

P4-3 Chronic exposure of mouse to silica or titanium nanoparticules through drinking water results in renal amyloidosis

Anna Bencsik, D. Boudard, M. Leboidre, B. Laurent, N. Sturm, A. Couderc, L. Lakhdar, P.N. Marche, M. Cottier (Unité Maladies Neurodégénératives, Anses, France)

P4-4 In vitro toxicity of nanoceria: effect of coating and stability in biofluids

Jean-François Berret, Ould-Moussa, M. Safi, M.-A. Guedeau-Boudeville, D. Montero and H. Conjeaud (Matière et Systèmes Complexes, UMR 7057 CNRS Université Denis Diderot, France)

P4-5 Mechanisms of TiO2 nanoparticles genotoxicity: impact on DNA repair in, A549 and BEAS-2B Epithelial Pulmonary Cells

Mathilde Biola-Clier, M. Line Jugan, L. Armand, J.C. Gaillard, J. Armengaud, S. Sauvaigo, N. Herlin-Boime, T. Douki, M. Carriere (Université Grenoble-Alpes, INAC, SCIB, LAN, France), (CEA, INAC, SCIB, LAN, France)

P4-6 Deeper penetration of TiO2 nanoparticles in neoplastic vs. normal human oral mucosa models

Eivind Birkeland, V. Konstantinova, M. Ibrahim, M.C. Marthinussen, D.E. Costea, M.R. Cimpan (Faculty of Medicine and Dentistry, University of Bergen, Norway)

P4-7 Metal homeostasis perturbations induced by ZnO nanoparticles in hepatocyte cells

Mireille Chevallet, K. Um, P. Charbonnier, P. Henri Jouneau, E. Mintz and I. Michaud-Soret (LCBM UMR5249 UJF CNRS CEA, France)

P4-8 Role of autophagy in response to titanium dioxide nanoparticles

Vanessa Cohignac, A. Gerdil, N. Herlin, J. Boczkowski, J.C. Pairon, S. Lanone (Inserm, France)

P4-9 Silver nanoparticles cytotoxicity – viability and apoptosis effects to a keratinocyte cell line

Verónica Isabel Correia Bastos, J.Miguel P Ferreira de Oliveira, L. F. Duarte, C. Santos and H. Oliveira (CESAM & Laboratory of Biotechnology and Cytomics, Department of Biology, University of Aveiro, Portugal)

P4-10 The effectof different sizes and doses of nano particle zinc on some oxidative stress parameters in rats

Mina Danesh, M. Hejazi, M. Rezayat, M. Kazem Koohi (IAUPS _ Tehran)

P4-11 E171 food additive and titanium dioxide nanoparticule toxicity on intestine cell models

Marie Dorier, E. Brun, F. Barreau, N. Herlin-Boime, M. Carrière (Université Grenoble Alpes, INAC, SCIB, France, CEA)

P4-12 Is p25 a realistic model to study the toxicity of tio2 in the gastro-intestinal tract?

William Dudefoi, H. Terrisse, B. Humbert, M. Hélène Ropers (INRA, Biopolymères Interactions Assemblages, France)

P4-13 Graphene oxide sheets-based platform for induced pluripotent stem cells culture: toxicity, adherence, growth and application

Nelson Duran, M. Durán, P.F. Andrade, A.C.M. Luzo, W.J. Fávaro (NanoBioss, UNICAMP, Brazil), (Biol. Chem. Lab. UNICAMP, Brazil)

P4-14 Shyntesis, characterization and citotoxicity evaluation of nitric oxide-iron oxide magnetic nanoparticles

Paula Silvia Haddad, T.N. Britos, M.C. Santos, A.B. Seabra, M.V. Palladino, G.Z. Justo (Exact and Earth Sciences Department, Universidade Federal de São Paulo, Brazil)

P4-15 Analytical characterization of silver nanoparticles and proteomic responses in human caco-2 cells after oral ingestion

Hansen Ulf, A. Thuenemann, A. Lampen (Federal Institute for Materials Research and Testing BAM + Unter den Eichen 87, Germany)

P4-16 Hsp70 as an indicator of stress in the cells after contact with nanoparticles

Šárka Hradilová, M. Havrdová, A. Panáček, L. Kvítek, R. Zbořil (Regional Centre of Advanced Technologies and Materials, Faculty of Science, Czech Republic)

P4-17 Prediction of nano-particle permeation through pulmonary alveolar epithelia based on integrated uses of a cell-based in vitro model and a numerical simulation

Kokoro Iwasawa, K. Harano, R. Ogasawara, T. Aoyama, N. Shinohara, G. Zhang, M. Gamo, A. Suwabe, Y. Sakai (Institute of Industrial Science, the University of Tokyo, Japan)

P4-18 Investigation of the potential cytotoxic effects of zinc oxide nanoparticles

Ayşegül Karapınar Mantu, B. Pütün, M. Abudayyak (Özel Cevizlibağ Doğa Anadolu Lisesi, Turkey)

P4-19 Characterization of Copaxone® by Atomic Force Microscopy (AFM) and Dynamic Light Scattering (DLS)

Tatiana Molotsky, R. Krispin, T. Hasson and A. Komlosh (Analytical Development, Discovery & Product development, Global R&D, Teva Pharmaceutical Industries Ltd, Israel)

P4-20 Exposure to manufactured nanoparticles during gestation: impact on the respiratory tract of the offspring in a mouse model

Paul Emmanuel, J. Rose, J. Boczkowski, S. Lanone, C. Delacourt, J.C. Pairon (Inserm U955, faculté de Médecine, France)

P4-21 Chitosan nanoparticles; assessment of internalization and cytotoxicity in vitro
Piña Olmos S, Díaz Torres R., Ramírez Noguera P (Labartorio de Toxicologia celular-Unidad de Investigación Multidisciplinaria, Facultad de Estudios Superiores Cuautitlán, México)

P4-22 What effects have fine particles in the vascular system? an integrated proteomic and metabolomic study on human endothelial cell
Mario Pink, N. Verma, A. Rettenmeier, S. Schmitz-Spanke (Institute and Outpatient Clinic of Occupational, Social and Environmental Medicine, Germany)

P4-23 Cyto and Genotoxicity of AgNP on MG-63 and A549 cell lines
Rosário Fernanda, C. Reis, C. Santos, H. Ovileira (CESAM – Centre for Environmental and Marine studies, University of Aveiro, Portugal), (Laboratory of Biotechnology and Cytomics - Department of Biology, University of Aveiro, Portugal)

P4-24 Toxicological effects of TiO2 nanoparticles: influence of nanoparticles characteristics and cellular models
Gladys Saez, Q. Le Trequesser, G. Devès, P. Barberet, C. Michelet, M.H. Delville, H. Seznec (Université de Bordeaux, Centre Etudes Nucléaires de Bordeaux Gradignan, France), (CNRS, IN2P3, Centre Etudes Nucléaires de Bordeaux Gradignan, France)

P4-25 In vitro evaluation of iron oxyde nanoparticles and titanate nanotubes on a hepatoma cell line : cytotoxicity and genotoxicity
Yasmine Saibi, V. Bellat, I. Séverin, J. Boudon, N. Millot, M.C. Chagnon (Welience, Maison Régionale de L'Innovation / Laboratoire Interdisciplinaire Carnot de Bourgogne, France)

P4-26 In vivo nanotoxicology of hybrid systems based on copolymer/silica nanoparticles/anticancer drug
Camila P. Silveira, A. J. Paula, L. M. Apolinário, W. J. Fávaro, N. Durán (Chemistry Institute, Universidade Estadual de Campinas UNICAMP, Brazil)

P4-27 Screening platform for human health impact from inhalation of airborne nanoparticles
Sandra Verstraelen, E. Frijns, I. Nelissen (Flemish Institute for Technological Research, Environmental Risk and Health Unit, Belgium)

P4-28 Construction of a database on nanotoxicity from peer reviewed publications: data curation and implementation of ontology
Hanne Vriens, D. Mertens, T. Wittenberger, P. Hoet (KU Leuven, Faculty of Medicine, Department of Public Health and Primary Care, Belgium)

P4-29 Binding and uptake mechanisms of charged gold nanoparticles in immune cells
Mirjam Zimmermann, M. Boyles, A. Duschl (University of Salzburg, Department of Molecular Biology)

P4-30 The "New" old Dose concept for nanoparticles risk assessment
Myrtill Simkó, D. Nosske, Wolfgang G. Kreyling (Austrian Institute of Technology GmbH, Health and Environment Department,, Austria)

P4-31 Toxicity of pesticides and nanomaterials to neutrophils cells
Yubing Pu, B. Laratte, R.S. Marks, R. E. Ionescu (Laboratoire de Nanotechnologie et d'Instrumentation Optique, Institut Charles Delaunay, Université de Technologie de Troyes, France)

P5-1 Interactions and toxicology of silver nanoparticles in aquatic ecosystems
Ester Artells, C. Levard, J. Issartel, M. Auffan, A. Thiéry (IMBE UMR-CNRS Université d'Avignon, France)

P5-2 Size-dependent toxicity of barium titanate to chlorella vulgaris
Roberta Brayner, H. C. Polonini, H. M. Brandão, N. R. B. Raposo, M. Antônio, F. Brandão, L. Mouton, A. Couté, C. Yéprémian, Y. Sivry (Interfaces, Traitements, Organisation et Dynamique des Systèmes ITODYS, Université Paris Diderot, France)

P5-3 Silver nanoparticle toxicity to pseudomonas putida monospecies biofilms under flow conditions
Florian Mallevre, T. F. Fernandes, T. J. Aspray (School of Life Sciences, NanoSafety Research Group, Heriot-Watt University, UK)

P5-4 Carbon nanotubes enhanced the lead toxicity on the freshwater fish: histopathological effects in the gills
Diego Stéfani T. Martinez, J. Campos-Garcia, K. F. O. Rezende, J. R. M. C. Silva, O. L. Alves and E. Barbieri (LNNano - Brazilian Nanotechnology National Laboratory, CNPEM - Center on Research in Energy and Materials, Brazil)

P5-5 Fate and behavior of silver nanoparticles in simple and complex matrices
André Nogowski, R. Renato Retamal Marín, M. Stintz (TU Dresden, Institute of Process Engineering and Environmental Technology, Research Group Mechanical Process Engineering, Germany)

P5-6 Lichens as biomonitors of cnt aerossols: a possibility?
Camila de Oliveira Viana, A. Pinheiro Santos, L.O. Ladeira, A. Correa Junior (Departamento de Microbiologia, Universidade Federal de Minas Gerais, Brasil)

P5-7 Fate and transport of engineered nanoparticles along the exposure pathway wastewater – sludge – plant
Heike Hildebrand, S. Schymura, P. Schneider, T. Lange, T. Fricke, K. Ziegler, K. Franke (Helmholtz-Zentrum Dresden-Rossendorf, Germany)

P5-8 Nanomaterials as potentially safer alternative to flame retardants of concern – a comparative hazard assessment
Karin Aschberger, V. Amenta, A. Christou, J. Muller, Laia Q. Pesudo, A. Radovnikovic, L. Stecca, A. A Stec (IHCP-Nanobiosciences, Italy)

P5-9 Chronic contamination of aquatic mesocosms by ceo2 nanoparticles with different surface properties
Marie Tella, M. Auffan, A. Thiéry, C. Santaella, L. Brousset, E. Morel, C. Pailles, J. Issartel, W. Achouak, B. Angeletti P. Chaurand, J. Rose, Mark R. Wiesner, J-Y Bottero (CNRS, Aix-Marseille Université, CEREGE UM34, UMR 7330, Aix en Provence, France)

P5-10 Ecotoxicology study of main nanofillers used in packaging materials
Eva Araque, C. Fito, O. Andreu-Sánchez (Packaging, Transport & Logistics Research Institute, Spain)

P5-11 Interaction of carbon nanotube and cellulose nanofiber with algal cells klebsormidium flaccidum
M. M. Pereira, L. Mouton, C. Yéprémian, A. Couté, J. Lo, J. M. Marconcini, L.O. Ladeira, N. RB Raposo, H. M. Brandão and Roberta Brayner (UFJF, Brazil)

P6-1 Evaluation of the influence of nano-objects in the reaction to fire properties of construction products exposed to accidental fire
Aitor Barrio Ulanga, C. Vaquero Moralejo, JL. De Ipiña, *(TECNALIA R&I, C/Geldo, Spain)*

P6-2 Technologies to simulate the release of engineered nanomaterials (enms) from polymeric nanocomposites due to mechanical processes
Ainhoa Egizabal, M. Blázquez, I. Unzueta, C. Elizetxea (TECNALIA Research and Innovation, Spain)

P6-3 Nanoparticle release quantification during low and high energetic dry dispersing of nanostructured powders
Daniel Göhler, M. Stintz (Research Group Mechanical Process Engineering, Institute of Process Engineering, Technische Universität Dresden, Germany)

P6-4 Characterization of nanoparticulate emissions from the incineration of wastes containing manufactured nanomaterials
Olivier Le Bihan, D.T. Tran, G. Ounoughene, D. Venditti, S. Durecu, A. Joubert, E. Fiani, T. Meunier, B. Debray, L. Le Coq (INERIS, France)

P6-5 Behavior and fate of halloysite nanotubes (hnts) when incinerating pa6/hnts nanocomposite
G. Ounoughene, O. Le Bihan, C. Chivas-Joly, C. Motzkus, C. Longuet, B. Debray, A. Joubert, J-M. Lopez-Cuesta, L. Le Coq (LUNAM, Ecole des Mines de Nantes, GEPEA, CNRS, France), (C2MA, Ecole des Mines d'Alès, France), (ADEME, France)

P6-6 Study of nanoparticles due to the emission of polyurethane foam in real condition of use
Eric Zimmermann, H. Fontaine, D. Locatelli, S. Cetre, P. Charléty (Univ. Grenoble Alpes, PNS, CEA, France)

P6-7 Dustiness of bulk nanomaterial powders using the vortex shaker method
Olivier Witschger, S. Bau, R. Payet, B. Bianchi, K. Nzambangoye
INRS, France)

P7-1 Recommendations for a nanosafe production of nano-device involved in inflammatory disorders treatment
Christophe Bressot, N. Shandilya, O. Le Bihan, O. Aguerre-Chariol (INERIS, France)

P7-2 Safety by molecular Design: NANO CuO as case study
L. Viale, A.L. Costa (ISTEC – CNR, Italy)

P7-3 Effectiveness of n95 disposable particulate respirators and fpp3 half mask respirators against target nms for the pigment and inks industry
Carlos Fito, E. de la Cruz, C. Sanchis (Instituto Tecnológico del Embalaje, Transporte y Logística, Spain)

P8 Human toxicity and freshwater ecotoxicity characterisation factors for engineered nanoparticles : toward a spatial differentation
Beatrice Salieri, R. Hischier, S. Righi, A. Pasteris, S. Irving Olsen, (Empa, Swiss Federal Laboratories for Materials Science and Technology, Switzerland)

P9-1 Development of a technical specification: guidelines for the management and disposal of waste from the manufacturing and processing of manufactured nano-objects
Delphine Bard, D. Koltsov, R. Hawkins (HSL, UK)

P9-2 Grouping of nanomaterial by health, safety & environmental characteristics
Christian Schumacher, J. Pelzer (Institute of Occupational Safety and Health of the German Social Accident Insurance IFA, Germany)

P9-3 CEN/TC 352/WG3/PG3 protocols for determining the explosivity and flammability of powders containing nano-objects (for transport, handling and storage)
Julien Porcher, A. Vignes, B. Debray, A. Janès, D. Carson, E. Frejafon, J. Bouillard (INERIS, France)

P9-4 Reference nanoparticles or reference protocol: what should come first to make significant progress in health risk assessment?
Claude Emond, G. Johanson, O. Witschger, P. Hoet, and G. Oberdorster (BioSimulation Consulting Inc, USA)

P11-1 Human risk assessment and its application to nanotechnology: a challenge for the assessor
Claude Emond, L. Multigner (University of Montreal, Department of Environmental and Occupational Health, Canada), (BioSimulation Consulting Inc, United States)

P11-2 Life nanorisk – best practices, effectiveness, prevention and protection measures for risk control posed by engineered nanomaterials
Evelien Frijns, P. Berghmans, C. Fito, E. de la Cruz, G. Boulougouris, M. Santamaria, S. Padovani, F. Marcori, S. Priante, P. Beltran, E. Santamaria, M. Perez, J. Perez, J. Gomez, P. Caceres (VITO NV, Flemish Institute for Technological Research, Belgium)

P11-3 REACHnano Tool: a new web based toolkit to support the chemical safety assessment of nanomaterials
George Boulougouris, C. Fito, J. de Dios Diaz (Instituto Tecnológico del Embalaje, Transporte y Logística, Spain)

P12-1 Regulation and innovation dynamics for nanoresponsible development: the case of the french code de l'environnement, l 523-1 to l 523-5
Claire Auplat, S. Ben Slimane (Novancia Business School Paris, France)

P12-2 The DaNa2.0 Knowledge Base Nanomaterials – Communicating Current Nanosafety Research
Clarissa Marquardt, Harald F. Krug, D. Kuehnel, F. Paul, C. Steinbach, K. Nau (Karlsruhe Institute of Technology, Germany)

P12-3 Nanotechnology regulation: multilateral initiatives for a responsible and beneficial development of nanoproducts
Pedro Canisio Binsfeld (Brazilian Health Surveillance Agency, ANVISA, Brazil)

P12-4 Class action litigation for skin cancer by sunscreens
Thomas Prevenslik (QED Radiations, China)

P12-5 Omnt, a strategic watch organization
Emma Richet, S. Berger (OMNT, Campus Minatec CEA, France)