nanoSAFE'23 & NanoSafety Cluster

8th international conference on **Environmental, Health** and **Safety** issues related to **nanomaterials**

Safe and Sustainable by Design advanced materials, products and processes

JUNE 5-9 2023

www.nanosafe.org

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For more information, please visit our **website**.

Contact: **Karolina Polska**

The conference is supported by

EXHIBITORS

LVM'Air is a recognised specialist in air quality measurement and aerosol and gas metrology for research, occupational health and safety and emissions. LVM'AIR is the distributor of TSI (Dust Trak, Portacount, P-Trak and flowmeters) and Cambustion (DMS500, CPMA, AAC)

Stat Peel makes a material-selective particle detection system which uses a high-sensitivity Raman spectrometer and data analytics to monitor potentially harmful contamination to people and facilities. Our easy-to-use system measures employee exposure to airborne particles so companies can use novel materials with safety in mind. Originally designed to monitor CNTs and graphene, the Identifier can also detect respirable crystalline silica, titanium dioxide and other metal oxides, polymers and active pharmaceutical ingredients.

As an industry leader in the design and production of precision instruments, TSI partners with research institutionsand customers around the world to set the standard for measurements relating to aerosol science, health and safety,indoor air quality, air flo , and fluid dynamics. Learn more about our recent innovations in the field of nanotechnology including:

+ Sizing and counting of airborne particles

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+ Aerosols generators and powder dispersers

We are an Open Innovation Test Bed for innovative scale-up of smart lightweight aluminium and polymer-based composite compounds and products to which companies – and more precisely SMEs – can gain access to develop, test and adopt, new lightweight, high performance, multifunctional, safe and environmentally friendly high value materials, components and structures in a cost-effective and sustainable way.

OASIS consists of 11 partners from all over Europe (including research organizations, universities and private companies) who are the facilities and services providers.

FRENCH RESEARCH INSTITUTE

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Global presentation

The French Alternative Energies and Atomic Energy Commission (CEA) is a key player in research, in the service of the State, economy and citizens. CEA provides concrete solutions to their needs in four main areas: energy transition, digital transition, technologies for the medicine of the future, defence and security.
CEA-Liten is a member of « Institut Carnot Énergies du Futur ». Located at CEA Grenoble and INES (Chambéry) centers, it is dedicated to the energy transition. Its activities focus on several key areas : solar energy, network management, batteries storage and hydrogen in order to improve energy efficiency and circular economy approach. CEA-Liten covers a wide range of applications in energy production and distribution, transportation, industrial processes, and environment markets.

KEY FIGURES 2022

Liten possesses twelve technology platforms, a portfolio of more than 1,900 patents, and the knowledge of more than 1,000 scientists, technicians, and support staff.

1000 employees

160 M€ budget

12 platforms

+ 1900 patents in the portfolio

+ 200 Industrial Partners

+ 200 institutional projects

180 PHD students and post-docs

200 publications per year

Table of Contents

Welcome word

Dear Colleagues,

The nanoSAFE conference is organized regularly since 2008. Every two years, this event aims to share the latest research results on health and safety issues related to nanomaterials and beyond. Following the successful outcome of the seven past international conferences on Safe Production and Use of Nanomaterials – nanoSAFE 2008, 2010, 2012, 2014, 2016, 2018, and 2020 – the organizing committee has the pleasure of welcoming you for this eighth edition with some of the most famous experts in the field.

This year, for the first time in its history, the nanoSAFE conference meets the NanoSafety Cluster (NSC) in a new format: **NanoSAFE & NSC joint conference.**

The event aims to enable all attendees to share and discuss the latest R&D results on environmental, health and safety issues related to nanomaterials and advanced materials. With more than 180 scientific communications, the nanoSAFE 2023 and NanoSafety Cluster joint conference is the place to be to discuss Safe and Sustainable by Design (SSbD), Risk Governance, Advanced Materials Characterization, Digitalization of nanosafety or Micro & Nanoplastics, among others.

It is a pleasure to have all of you here with us, putting our efforts as a team and as a community, to implement and put at work the SSbD approach in our society and our future as soon as possible.

We are confident that your active participation in this event will be useful.

Looking forward to meeting you in Grenoble (France) from June 5th to 9th, 2023.

The nanoSAFE '23 & NSC joint conference Organizers

Simon Clavaguera

Head of laboratory at CEA

Andrea Tummino

Project manager at CEA

Cris Rocca

NSC secretary,
Project Manager at UoB

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THANKS TO OUR VOLUNTEERS: S. Jacquinot, Manon Colonna D'Istria, A. Guiot, O. Lebaigue. E. Cor, S. Desousanobre, S. Desrousseaux, H. Fontaine, M. Vayssie, M. Laurent

Programme at a glance

LEGEND

Plenary Lecture
All plenary sessions will be held in Auditorium Platine - Level 1

SSbD Day & Panel Discussions
Auditorium Platine - level 1

Parallel Sessions

Workshops and Trainings

Breaks and social events
Coffee and Lunch Breaks will be served on level 0, in the poster area

Satellite Meetings

Monday 5th June – 2023

11:30 am–2:00 pm	**Registration**	
2:00–2:15 pm	**Opening Ceremony**	
2:15–2:55 pm	**Plenary Lecture: Future-proof Approaches for Risk Governance - Lessons Learned from Nanotechnologies** *Monique Groenewold, RIVM*	
3:00–4:00 pm	**A1L-1: Physic-based in Silico Methods** (4 talks) *Titane 2*	**A1L-2: Risk Governance** (4 talks) *Auditorium Platine*
2:00–6:00 pm	**Sabydoma 2nd legal workshopon SSbD** *Chrome 2*	
4:00–4:30 pm	**Coffee Break**	
4:30–6:00 pm	**A2L-1: Data-driven in Silico Methods** (5 talks) *Titane 2*	**A2L-2: Methods, Tools, & Technologies for SSbD Purposes 1** (5 talks) *Auditorium Platine*
6:00–8:00 pm	**Welcome cocktail**	

Programme at a glance

Tuesday 6th, June – 2023			
9:00–9:40 am	**Plenary: Training Pitches**		
9:45–10:45 am	**B1L-1: In Silico Tools & For Comprehensive Modeling** (4 talks) *Chrome 1*	**B1L-2: Methods, Tools, & Technologies for SSbD Purposes 2** (4 talks) *Auditorium Platine*	
9:45–10:45 am	**Data FAIRness (part 1)** Nina Jeliazkova *Titane 2*		
10:45–11:15 am	**Coffee Break**		
11:15am–12:45pm	**B2L-1: Characterization of Advanced Materials, Including Nano Materials 1** (6 talks) *Chrome 1*	**B2L-2: Methods, Tools, & Technologies for SSbD Purposes 3** (6 talks) *Auditorium Platine*	**B2L-3: Harmonization & Standardization in the Context of Regulation 1** (5 talks) *Chrome 2*
11:15–12:45 am	**Data FAIRness (part 2)** Nina Jeliazkova *Titane 2*		
12:45–2:00 pm	**Lunch Break**		
2:00–2:30 pm	**Plenary Lecture: From regulation to SbD to SSbD: taking up new needs on the design board; from supply to service life to recycling** Georgios Katalagarianakis, EC		
2:45–4:00 pm	**B3L-1: Characterization of Advanced Materials, Including Nano Materials 2** (5 talks) *Auditorium Platine*	**B3L-3: Harmonization & Standardization in the Context of Regulation 2** (4 talks) *Chrome 2*	
2:00–4:00 am	**Data FAIRness (part 3)** **Thomas Exner** *Titane 2*		
4:00–4:30 pm	**Coffee Break**		
4:30–6:30 pm	**Poster Sessions** **B4P-4, B4P-5, B4P-6**	**NSC general Assembly (Open)** *Auditoirium Platine*	
4:30–6:30 pm	**Getting novel methods advancing into regulatory acceptance** **OECD** *Titane 2*		
6:30 pm	**End of the day**		

Programme at a glance

Wednesday 7th, June – 2023		
8:45–9:25 am	**Plenary Lecture: EC JRC: SSbD framework for advanced materials** Hubert Rauscher, JRC	
9:30–10:30 am	**C1L-1: Micro & Nano-plastics Pollution 1** (3 talks) *Chrome 1*	**C1L-2: Commonalities of the SSbD Paradigm in Innovation** (4 talks) *Chrome 2*
9:30–10:30 am	**SSbD Day** **H2020 CSA projects outcomes** **HE SSbD CSA Project mapping results part 1** *Auditorium Platine*	
10:30–11:00 am	**Coffee Break**	
11:00am–12:30pm	**Poster sessions** **C2P-4, C2P5**	**C3L-1: Micro & Nanoplastics Pollution 2** (3 talks) *Chrome 1*
11:00am–12:30pm	**HE SSbD CSA Project mapping results part 2** **H2020 SbD/SSbD projects by topics** **NMBP 15-16** *Auditorium Platine*	
12:30–2:00 pm	**Lunch Break**	
2:00–2:25 pm	**Plenary Lecture: AMI 2030 - paving the way for an United European Systemic Change for People, Planet and Prosperity** Lars Montelius, Lund University, Sweden	
2:30–4:00 pm	**C4L-1: Risk As-sessment & Risk Ma-nagement** (5 talks) *Chrome 2*	**Special session organised by the Early Ca-reer Scientists of the NSC** **Invited talk : Josiane Lafleur** *Chrome 1*
2:30–4:00 am	**HE SbD Policy Project SPINE** **HE Project - PARC** **HE SSbD CSA Project - IRISS** **HE SSbD by topics** *Auditorium Platine*	
4:00–4:20 pm	**Coffee Break**	
4:20–5:20 pm	**SSbD industrial perspective—panel discussion (chair:** Martin Himly, PLUS) *Auditorium Platine*	
5:20–6:30 pm	**Poster Sessions** **C5P-4, C5P-5, C5P-6**	**OECD WPMN** **Panel discussion– Collaboration and Align-ment towards SSbD (Chair:** Andreas Falk, BNN) **Wrap up** *Auditorium Platine*
6:30 pm	**End of the day**	
8:00–11 pm	**Gala dinner**	

Programme at a glance

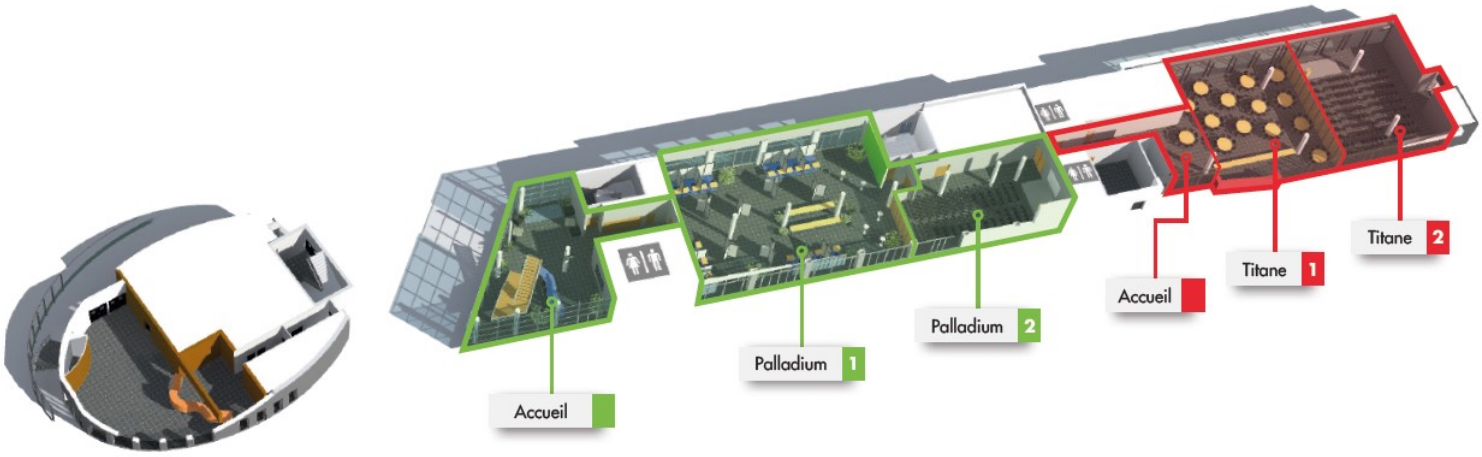
Thursday 8th, June – 2023			
9:00–9:40 am	**Plenary Lecture: OECD Test Guidelines for Nanomaterials: Progress and future support of TG development by the Malta Initiative and NanoHarmony** *Elisabeth Heunisch, BAUA*		
9:45–10:45 am	**D1L-1: Implementation of the SSbD Concept in Case Studies 1** (4 talks) *Chrome 1*	**D1L-2: Methods, Tools, & Technologies for SSbD Purposes 4** (3 talks) *Auditorium Platine*	**NMBP-16 Ambassors Meeting (Closed)** *Chrome 2*
9:45–10:45 am	**Stakeholder perception on SSbD, part I** Claire Mays *Titane 2*		
10:45–11:15 am	**Coffee Break**		
11:15 am–12:30 pm	**D2L-1: Implementation of the SSbD Concept in Case Studies 2** (5 talks) *Chrome 1*	**D2L-2: Methods, Tools, & Technologies for SSbD Purposes 5** (5 talks) *Auditorium Platine*	**NMBP-16 Ambassors Meeting (Closed)** *Chrome 2*
11:15 am–12:30 pm	**Stakeholder perception on SSbD, Part II** Claire Mays *Titane 2*		
12:30–2:00 pm	**Lunch Break**		
2:00–3:40 pm	**D3L-1: Implementation of the SSbD Concept in Case Studies 2** (6 talks) *Titane 2*	**D3L-2: Methods, Tools, & Technologies for SSbD Purposes 5** (6 talks) *Auditorium Platine*	**D3L-3: Characterization of Advanced Materials, Including Nano Materials 3** (5 papers) *Chrome 2*
3:40–4:00 pm	**Conclusions** *Auditorium Platine*		
2:00–4:00 am	**ASINA meeting (Closed)** *Chrome 1*		
4:00–4:30 pm	**Coffee Break**		
4:30–6:00 pm	**SABYDOMA General Assembly (closed)** *Chrome 2*	**ASINA Meeting (closed)** *Chrome 1*	
6:00 pm	**End of the day**		

Friday 9th June – 2023

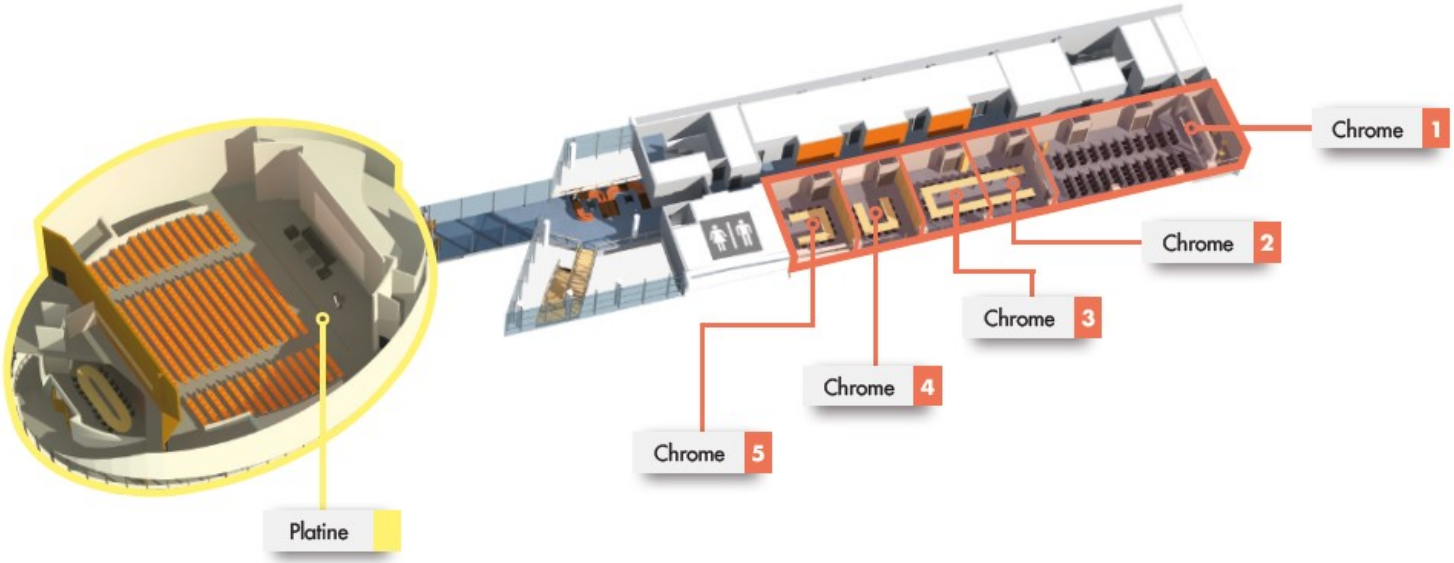
9:00–12:30AM	**SABYDOMA General Assembly (closed)** *Chrome 2*	**ASINA Meeting (closed)** *Chrome 1*
End of the 2023 nanoSAFE & NSC joint conference		

VENUE MAP

LEVEL O



LEVEL 1



Sessions by topics

Physical-based, Data driven, and tools for in Silico Methods (A1L-1, A2L-1, B1L-1)

Monday 5th	3:00–4:00 pm	Parallel Session	Titane 2	A1L-1
Monday 5th	4:30–6:00 pm	Parallel Session	Titane 2	A2L-1
Tuesday 6th	9:45–10:45 am	Parallel Session	Chrome 1	B1L-1

Risk Governance and Risk Management (A1L-2, C4L-1)

Monday 5th	2:00–2:55 pm	Plenary Session	Auditorium Platine	
Monday 5th	3:00–4:00 pm	Parallel Session	Auditorium Platine	A1L-2
Wednesday 7th	2:30 pm - 4:00 pm	Parallel Session	Chrome 2	C4L-1

Methods and tools for SSbD purposes (A2L-2, B1L-2, B2L-2, D1L-2, D2L-2, D3L-2)

Monday 5th	4:30–6:00 pm	Parallel Session	Auditorium Platine	A2L-2
Tuesday 6th	9:45–10:45 am	Parallel Session	Auditorium Platine	B1L-2
Tuesday 6th	11:15 am - 12:45 pm	Parallel Session	Auditorium Platine	B2L-2
Thursday 8th	9:45–10:45 am	Parallel Session	Auditorium Platine	D1L-2
Thursday 8th	11:45 am–12:30 pm	Parallel Session	Auditorium Platine	D2L-2
Thursday 8th	2:00–4:00 pm	Parallel Session	Auditorium Platine	D3L-2

Sessions by topics

Characterization of Advanced materials, including Nano materials (B2L-1, B3L-1, D3L-3)

Tuesday 6th	9:45–10:45 am	Parallel Session	Chrome 1	B2L-1
Tuesday 6th	2:45–4:00 pm	Parallel Session	Auditorium Platine	B3L-1
Thursday 8th	2:00–3:30 am	Parallel Session	Chrome 2	D3L-3

Harmonization and Standardization in the Context of regulations (B2L-3, B3L-3)

Tuesday 6th	11:15 am–12:45 pm	Parallel Session	Chrome 2	B2L-3
Tuesday 6th	2:45 am–4:00 pm	Parallel Session	Chrome 2	B3L-3

Micro and Nano plastic pollutions (C1L-1, C3L-1)

Wednesday 7th	9:30–10:30 pm	Parallel Session	Chrome 1	C1L-1
Wednesday 7th	11:00 am–12:30 pm	Parallel Session	Chrome 1	C3L-1

Commonalities of the SSbD Paradigm in Innovation (C1L-2)

Wednesday 7th	9:30–10:30 pm	Parallel Session	Chrome 2	C1L-2

Implementation of SSbD Concept in case studies (D1L-1, D2L-1, D3L-1)

Thursday 8th	9:00–9:40 am	Plenary Session	Auditorium Platine	
Thursday 8th	9:45–10:45 am	Parallel Session	Chrome 1	D1L-1
Thursday 8th	11:15 am–12:30 pm	Parallel Session	Chrome 1	D2L-1
Thursday 8th	2:00–3:40 pm	Parallel Session	Titane 2	D3L-1

Invited Speakers

Monique GROENEWOLD

RIVM, Netherland

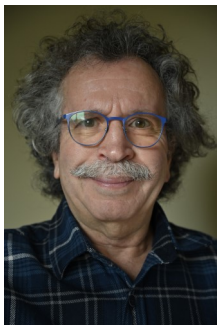
Monique Groenewold, works for the Dutch institute for Public Health and Environment (RIVM) as a senior policy advisor and coordinator since 2011. She studied Biomedical Sciences, specialisation toxicology, started her career as a practicing occupational hygienist and held various positions in the international research and policy field of safety of chemicals including senior project manager, product manager, team manager an policy officer in both private and (semi)-public organisations. She coordinated EC research project Gov4Nano 'Risk Governance – meeting the needs for Nanotechnology' (2019-2023). As a coordinator, she shaped collaboration between the 80 partners of the NMBP13 projects which resulted in significant synergy and an effective and efficient approach for risk governance of nano & advanced materials in co-creation with key stakeholders aiming to support the implementation of chemical strategy for sustainability. As Head of Knowledge and Information Centre on Risks of Nanotechnology (since 2011) she is responsible for providing independent and reliable information for policy makers and the general public on human health and environmental risks of nanotechnology. As head of the Dutch Delegation, chair of the OECD Working Party on Manufactured Nanomaterials and board member of the Malta Initiative she is committed to harmonisation and standardization and helps initiate research projects to update or develop new OECD Test Guidelines.

Lars MONTELIUS

Lund Univeristy, Sweden

Prof. Em. Lars Montelius was the Director–General of the International Iberian Nanotechnology Laboratory (www.inl.int) between 2014-2022. During this time INL activities five-folded including an increase from being about 80 employees to more than 400. He is Professor Emeritus at Lund University, Sweden and his +30 years of work in nanotechnology have centered around development of Nanotechnology and Advanced Materials. Lars Montelius is the founder & funder of several Swedish nano-tech companies, Co-Chair of the Steering Group of the Advanced Materials Initiative (AMI 2030) and he is a board member of the Malta Initiative and the European Technology Platform EuMat. He has been President of the IUVSTA, Director for Øresund University & Øresund Science Region, a cross-border cooperation between eleven universities and three regional authorities of two countries in the Øresund Region and Chair of the Swedish Technical Standardization Committee on Nanotechnology.

Invited Speakers



Georgios KATALAGARIANAKIS

European Commission, Belgium

Georgios Katalagarianakis graduated as mining and metallurgy engineer from the National Technical University of Athens in 1976. He obtained a diploma on mechanical engineering from the University of Thessaloniki in 1989 and a PhD degree from the Imperial College of Science, Technology and Medicine in 1998.

He has worked in the underground mining industry and the mineral resources authority of Greece before joining the European Commission in 1989 as administrator. He has been responsible for European research in the fields of mining and metallurgy, recycling, construction and maintenance of buildings and civil infrastructure, tunneling, industrial safety and ergonomics, as well as for research in the area of nanotechnology safety. He retired in 2019.

Elisabeth HEUNISCH

BAUA, Germany

Dr. Elisabeth Heunisch (née Zillner) is a scientist at the Federal Institute for Occupational Safety and Health (BAuA) in Germany with a background in Physical Chemistry. She has a PhD in Chemistry obtained at the Free University Berlin for her work at the Helmholtz-Zentrum Berlin on charge separation in quantum dot layers. Her work is dedicated towards the safety of nano- and advanced materials, with a strong focus on occupational safety towards fibrous aerosols. She is co-leading the EU-funded project NanoHarmony and co-chairing the Malta Initiative, both dedicated to support the development of OECD Test Guidelines for nanomaterials. She is involved in several further research projects that support risk assessment of nano- and advanced materials (Gov4Nano, MACRAMÉ) and contributes to the OECD Test Guideline for dustiness testing of nanomaterials and the WPMN Guidance on Release Tests for Nanomaterials.

Invited Speakers

Josiane P. LAFLEUR

Invisible light labs, AT

Josiane P. Lafleur holds a doctorate degree in chemistry from McGill University (Canada). She worked for several years in research and academia, first as a postdoctoral fellow at the Technical University of Denmark and then as an Assistant Professor at the University of Copenhagen (Denmark). In 2018, she decided to take the plunge and co-founded the TU Wien (Austria) spin-off Invisible-Light Labs GmbH. With their innovative nanomechanical infrared sensing technology, Invisible-Light Labs proposes a radically new tool for the sampling and characterization of difficult to analyze nanoparticles such as ultrafine airborne nanopollutants and nanoplastics. Josiane will share Invisible-Light Labs' experience in translating academic research to market and recount the hardships and obstacles they faced along the way.

Hubert RAUSCHER

Joint Reserach Cenetr, EC

Dr. Hubert Rauscher is project leader for safe and sustainable advanced materials and senior scientist at the European Commission's (EC) Joint Research Centre (JRC), where he started to work on nanomaterials and nanosafety in 2005. He did postdoctoral research on physico-chemical properties of nanomaterials at the Universities of Wisconsin-Madison (USA) and, as a Lecturer, at the University Ulm (Germany). At the JRC Hubert leads the activities on the EC's nanomaterial definition, provides scientific support to make EU legislation fit for advanced materials including nanomaterials and works with international fora such as the OECD's Working Party on Manufactured Nanomaterials. Current focus of the activities is the JRC framework for safe and sustainable by design (SSbD) chemicals and materials, the scientific basis of the EC Recommendation on SSbD and its implementation.

Eva VALSAMI-JONES

University of Birmingham, United Kingdom

Eugenia (Éva) Valsami-Jones (PhD) is a Professor of Environmental Nanoscience at the University of Birmingham. She holds a degree in Earth Sciences from the University of Athens and a PhD in Geochemistry from the University of Newcastle-upon-Tyne. Her research focuses on nanoscale processes in the environment and within biota. She has pioneered the development of traceable stable-isotope labelled nanomaterials and has studied the development of analytical solutions for the improvement in speed and quality of identification of nanoscale objects in complex matrices. She is currently working on understanding the effects of ageing on nanoplastics, developing nanoscale fertilisers and applying safe and sustainable by design approaches to the development of novel advanced materials. She was the Mineralogical Society's Distinguished Lecturer for 2015 and the Distinguished Guest Lecturer and Medalist of the Royal Society of Chemistry for 2015. She is currently a Royal Society Wolfson Fellow. She is a member of the coordination team of the European Commission's Nanosafety Cluster and has participated in several EU funded projects and coordinated projects ACEnano, NanoMILE, ModNanoTox and NanoReTox.

Daily Program & Plenaries

Monday 5 June, 2023

2:00 – 2:15 pm	***Opening Ceremony*** **Chair:** Simon CLAVAGUERA**,** CEA, FR
2:15 – 2:55 pm	**Plenary: Future-proof Approaches for Risk Governance - Lessons Learned from Nanotechnologies** **Monique Groenewold, RIVM** **Auditorium Platine**
3:00 – 4:00 pm	**Parallel Sessions (see details in the next page)**
4:00 – 4:30 pm	**Coffee Break**
4:30 – 6:00 pm	**Parallel Sessions (see details in the next page)**
6:00 – 8:00 pm	**Welcome Cocktail**

A1L-1: Physic-based in Silico Methods (4 talks)

3:00 – 4:00 pm

Titane 2

Chairs: Antreas Afantitis, Tomasz Puzyn

4019
3:00 – 3:15 pm

First Principles Characterization of Bio-Nano Interface for Predictive Nanosafety Asessment

Alexander Lyubartsev, Stockholm University, Sweden

4060
3:15 – 3:30 pm

Polymetallic Ce/Zr Mixed Ceramic Nanocatalyst: In Silico Characterization and Toxicological Risk Assessment

Sara Rozas, University of Burgos, Spain

4063
3:30 – 3:45 pm

Zinc Oxide Nanoparticles: In Silico Characterization and Toxicological Risk Assessment

Nuria Aguilar, University of Burgos, Spain

4101
3:45 – 4:00 pm

Field Testing of Low-Cost Particle Sensors for Inline Monitoring of Nanomanufacturing Processes, in Digital Twin Applications

Jesus M. Lopez de Ipiña, Tecnalia, Spain

A1L-2: Session Risk Governance (4 talks)

3:00 – 4:00 pm

Auditorium Platine

Chairs: Monique Groenewold, Flemming Cassee

4062
3:00 – 3:15 pm

Silver Nanoparticles Induced Cytotoxicity on Human Alveolar Adenocarcinoma Cells by Inhibiting the Ubiquitin Proteasome System

Bashiru Ibrahim, University of Birmingham

4045
3:15 – 3:30 pm

TRAAC Framework and Online Tool for Regulatory Acceptance and Wider Usability of Tools and Methods for Safe Innovation and Sustainability of Manufactured Nanomaterials

Blanca Suarez Merino, Temasol, Switzerland

4116
3:30 – 3:45 pm

RiskGONE - Science-Based Risk Governance of Nano-Technology

Elisa Moschini, LIST, Luxemburg

4161
3:45 – 4:00 pm

Enhanced Governance for Emerging Technologies: Merging TRL and Safety-by-Design

Dalila Antunes, Factor Social-ISCSP, Universidade de Lisboa, Portugal

A2L-1: Data-driven in Silico Methods (5 talks)

4:30 – 6:00 pm

Titane 2

Chairs: Antreas Afantitis, Tomasz Puzyn

4070
4:30 – 4:45 pm
Evolution of the nano-QSAR Paradigm
Tomasz Puzyn, University of Gdansk, Poland

4018
4:45 – 5:00 pm
Data-Driven Identification of Predictive Variables for Engineered Nanoparticles Aggregation in Freshwater-Like Systems
Ntsikelelo Yalezo, Univeristy of Pretoria, South Africa

4064
5:00 – 5:15 pm
A Similarity Asseessment Method for Grouping Multi-Component Nanomaterials
Alex Zabeo, GreenDecision SrL, Italy

4069
5:15 – 5:30 pm
The Semantic Landscape: An Ever Growing, Publicly Available Overview of Nanosafety Knowledge
Jeaphianne van Rijin, Maastricht University, Netherlands

4081
5:30 – 5:45 pm
Machine Learning-Assisted Nanoparticle Synthesis and Nanotoxicity Predictions
Ceyda Oksel Karakus, Izmir Institute of Technology, Turkey

A2L-2: Methods, Tools, & Technologies for SSbD Purposes 1 (5 talks)

4:30 – 6:00 pm

Auditorium Platine

Chairs: Simon Clavaguera, Cecile Philippot

4030
4:30 – 4:45 pm
Study of Titanium Dioxide Nanoparticles Diffusion Through the Skin and Decontamination In Vitro
Guillaume Phan, IRSN, France

4057
4:45 – 5:00 pm
Lung Single Cell Transcriptomics to Guide the Development of AOP Anchored Cell-Based Assays in Response to Nanomaterial Exposure
Linayong Han, Helmholtz Zentrum München, Germany

4090
5:00 – 5:15 pm
DNA Damage Assessment via High Throughput P53-Binding Protein 1 Foci Counting as a New Approach Methodology for Genotoxicity Testing
Maelle Fontaine, CEA, France

4091
5:15 – 5:30 pm
An AOP-Oriented Testing Strategy for the Assessment of Silver Nanoparticle Toxicity to Human Intestinal Cells, After In Vitro Simulated Digestion
Ozge Kose, CEA, France

4095
5:30 – 5:45 pm
Use of Realistic Advanced In Vitro Methods for Safety Assessment of MCNMs/HARNs
Elisa Moschini, LIST, Luxemburg

Daily Program & Plenaries

Tuesday 6 June, 2023

9:00 – 9:40 am	Plenary: Training Pitches Auditorium Platine
9:45 – 10:45 pm	Parallel Sessions (see details in the next page)
10:45 – 11:15 pm	Coffee Break
11:15 – 12:45 pm	Parallel Sessions (see details in the next page)
12:45 – 2:00 pm	Lunch Break
2:00 – 2:30 pm	Plenary: From regulation to SbD to SSbD: Taking up new needs on the design board; from supply to service life to recycling Georgios Katalagarianakis Auditorium Platine
2:45 – 4:00 pm	Parallel Sessions (see details in the next page)
4:00 – 4:30 pm	Coffee Break
4:30 – 6:30 pm	Parallel Sessions (see details in the next page)
6:30 pm	End of the day

B1L-1: In Silico Tools & For Comprehensive Modeling (4 talks)

9:45 – 10:45 am

Chrome 1

Chairs: Antreas Afantitis, Tomasz Puzyn

4097
9:45 – 10:00 am

The SUNSHINE e-Infrastructure

Alex Zabeo, GreenDecision srl, Italy

4134
10:00 – 10:15 am

The NanoInformaTIX Platform

Alex Zabeo, GreenDecision srl, Italy

4128
10:15 – 10:30 am

Material Flow Modelling of Graphene-Based Products in Europe from 2004 to 2030

Hyunjoo Hong, Empa, Singapore

4145
10:30 – 10;45 am

In Vivo Validation of Animal-Free Prediction of Chronic Inflammation After Nanomaterial Inhalation

Janez Štrancar, Infinite Biotech, Slovenia

B1L-2: Methods, Tools, & Technologies for SSbD Purposes 2 (4 talks)

9:45 – 10:45 am

Auditorium Platine

Chairs: Andrew Nelson, Andreas Falk

4181
9:45 – 10:00 am

Effect of Titanium Dioxide Nanoparticles on Oral and Lung Cells and 3D Oral Mucosa Model

Victoria Xenaki, University of Bergen, Norway

4124
10::00 – 10:15 am

Comparison Abiotic-Biotic Tests for Assessment Pro-Oxidative Potential on Nanoparticles

Lara Faccani, CNR-ISSMC, Italy

4131
10:15 – 10:30 am

Finding Optimal Methods for Testing Pro-Inflammatory Potential of SiO2 Nanomaterials Within a SbD Hazard Testing Strategy

Nienke Ruijter, RIVM, Netherlands

4121
10:30 – 10;45 am

In Vitro Evaluation of the Safety of Bio-Silica Nanoparticles Used as Nanofiller for the Production of Sustainable PUR Foams

Rossella Daniela Bengalli, University of Milano Bicocca, Italy

B2L-1: Characterization of Advanced Materials, Including Nano Materials 1 (6 talks)

11:15 am – 12:45 pm

Chrome 1

Chairs: Miguel Banares, Cris Rocca

4038
11:15 – 11:30 am

Biosynthesis, Characterization and Citotoxicty Activity of Copper Oxide Nanoparticles Obtained by Essential Oils

Amedea Barozzi Seabra, Federal University of ABC, Brazil

4144
11:30 – 11:45 am

Structural Characterization and Cytotoxic Evaluation of Parent Compound-Covered Superparamagneitc Iron Oxide Nanoparticles

Fabio Furlan Fereira, Faculty of Medicine of ABC (FMABC), Brazil

4079
11:45 – 12:00 pm

Antioxidant Action of L-Cysteine Anchored on the Surface of Magnetite Nanoparticles

Paula Haddad, Federal University of Sao Paulo, Brazil

4065
12:00 – 12;15 pm

Polyvinylpyrrolidone (PvP) Interaction with Biomembrane-Like Layers

Andrew Nelson, University of Leeds, United Kingdom

4114
12:15 – 12:30 pm

Synthesis and Characterization of Fibroin-Containing Layered Double Hydroxide Microneedles as Drug-Delivery Systems

Fabio Furlan Fereira, Faculty of Medicine of ABC (FMABC), Brazil

4015
12:30 – 12:45 pm

Accounting for Constituent Particle Polydispersion in the Identification of Nanomaterial Powders Based on Their Volume Specific Surface Area

Sebastien Bau, INRS, France

B2L-2: Methods, Tools, & Technologies for SSbD Purposes 2 (6 talks)

11:15 am – 12:55 pm

Auditorium Platine

Chairs: Andreas Falk, Araceli Jimenez Sanchez

4073
11:15 – 11:30 am

SAbyNA SbD Guidance Platform: Guiding Industry to Design and Develop Safer Nanomaterials and Nano-Enabled Products

Socorro Vázquez-Campos, LEITAT, Spain

4008
11:30 – 11:45 am

Better Early Than Never: Incorporating Sustainability, Risk and Safety Assessment in the Early Stages of the Development of Nanomaterials

Konstantina-Roxani Chatzipanagiotou, IRES, Belgium

4098
11:45 am– 12:00 pm

Guidance on Safe-and-Sustainable-and-Recyclable-by-Design Plastics: First Step Towards Operationalising, with Health, Environmental Impact and Cost Assessments

Stepahnie Desrousseaux, CEA, France

4036
12:00 – 12:15 pm

Harmless Decision Support System for SSbD

Wouter Fransman, TNO, Netherlands

4054
12:15 – 12:30 pm

The PARC Toolbox to Operationalize the SSbD Concept for Chemicals and Materials

Bernd Nowack, Empa, Switzerland

4067
12:30 – 12:45 pm

A Network of Causal Relationships Linking the Chemistry of a Nanomaterial to Their Toxicology

Jeaphianne van Rijin, Maastricht University, Netherlands

B2L-3: Harmonization & Standardization in the Context of Regulation 1 (5 talks)

11:15 am – 12:45 pm

Chrome 2

Chairs: Elisabeth Heunisch, Flemming Cassee

4009
11:15 – 11:30 am

Canada's Approach Towards Assessment of Manufactured Nanomaterials in Commerce Under the Canadian Environmental Protection Act, 1999

Yi Zhang, Health Canada, Canada

4026
11:30 – 11:45 am

Towards Harmonisation of Testing of Nanomaterials for EU Regulatory Requirements on Chemical Safety – A Proposal for Further Actions

Eric Bleeker, RIVM, Netherlands

4148
11:45 – 12:00 pm

Nanomaterials in Consumer Products: Identification and Assessment Challenges

Sean Kelly, NIA, Belgium

4047
12:00 – 12:15 pm

Release Tests Applicable to Nanomaterials – A New OECD Guidance Facilitating the Choice of Appropriate Release Tests

Anna Pohl, BAuA, germany

4182
12:15 – 12:30 pm

MACRAMÉ: Advanced Characterisation Methodologies to Assess and Predict the Health and Environmental Risks of Advanced Materials

Steffi Friedrichs , AcumenIST, Belgium

B3L-1: Characterization of Advanced Materials, Including Nano Materials 2 (5 talks)

2:45 – 4:00 pm

Auditorium Platine

Chairs: Miguel Banares, Cris Rocca

4108
2:45 – 3:00 pm

Investigations on the Usability of Low-Cost PM Sensors for Monitoring NOAA Concentrations in Workplaces

Christof Asbach, IUTA, Germany

4044
3:00 – 3:15 pm

Dustiness of High Aspect Ratio (Nano)Materials – Harmonisation of Test Methods Towards an OECD Test Guideline

Anna Pohl, BAuA, Germany

4017
3:15 – 3:30 pm

Nanostructured Biogenic Amorphous Silicas Versus Nanostructured Synthetic Amorphous Silicas – Comparison by SEM, TEM and Specific Surface Area

Gottileb G. Lindner, Evonik Operations GmbH, Germany

4025
3:30 – 3;45 pm

Complementary Analysis of Sterilized Nanoparticles with SEM/EDS and XPS/HAXPES

Xenia Knigge, BAM, Germany

4159
3:45 – 4:00 pm

NMR: An Underrated Speciation Tool for the Safe by Design of Advanced Materials

Armand Masion, CNRS, France

B3L-3: Harmonization & Standardization in the Context of Regulation 2 (4 talks)

2:45 – 4:00 pm

Chrome 2

Chairs: Monique Groenewold, Elisabeth Heunisch

4014
2:45 – 3:00 pm

Reliable Chemical Characterization Protocols for Industrial Graphene-Related Materials

Jörg Radnik, BAM, Germany

4035
3:00 – 3:15 pm

Some Open Questions in Understanding and Predicting Nanomaterial Dissolution

Frederick Klaessig, Pennsylvania Bio Nano Systems, United States

4168
3:15 – 3:30 pm

Development and Documentation of an Atmosphere-Temperature-pH-Controlled Stirred Batch Reactor Approach for Standard Testing of Solubility and Dissolution Rate in Waters and Biological Simulant Fluids

Keld Astrup Jensen, National Research Centre for the Working Environment, Denmark

4072
3:30 – 3;45 pm

In Nanotool: A Control Banding Based Approach to Manage the Risk of Occupational Exposure to Incidental Nanomaterials in Metal Additive Manufacturing

Francisco Silva, Centro Tecnológico da Cerâmica e do Vidro, Portugal

Daily Program & Plenaries

Wednesday 7 June, 2023

8:45 – 9:25 am	Plenary: SSbD framework for advanced materials Hubert Rauscher, EC Auditorium Platine
9:30 – 10:30 pm	Parallel Sessions (see details in the next page)
10:30 – 11:00 pm	Coffee Break
11:00 – 12:30 pm	Parallel Sessions (see details in the next page)
12:30 – 2:00 pm	Lunch Break
2:00 – 2:25 pm	Plenary: AMI 2030 - paving the way for an United European Systemic Change for People, Planet and Prosperity Lars Montelius, Lund University, Sweden Auditorium Platine
2:30 – 4:00 pm	Parallel Sessions (see details in the next page)
2:30 – 4:00 pm	Special session organized by the Early career Scientists of the NSC: Josiane Lafleur
4:00 – 4:20 pm	Coffee Break
6:30 pm	End of the day
8:00 – 11:00 pm	Gala dinner

C1L-1: Micro & Nanoplastics Pollution 1 (3 talks)

9:30 – 10:15 am

Chrome 1

Chairs: Mark Morrison, Lesley Tobin

4085
9:30 – 9:45 am

Toxicity Evaluation of Micro- and Nano Plastic Particules, with Co-Exposure to Metal Ions on Human Intestinal Models

Vérane Bard, CEA, France

4094
9:45 – 10:00 am

Toxicity of Polycaprolactone and Polystyrene Nanoparticles, Aged in Environmental Conditions, Towards Intestinal Cells

Maeva Boulée, CEA, France

4089
10:00 – 10:15 am

Lessons Learned from Nano-EHS Applied to Assess the Fate of Plastic Particles in the Environment

Mark Wiesner, Duke University, United States

C1L-2: Commonalities of the SSbD Paradigm in Innovation (4 talks)

9:30 – 10:30 am

Chrome 2

Chairs: Martin Himly, Anthony Bochon

4011
9:30 – 9:45 am

Facilitation of Safe-by-Design Understanting and Uptake

Josephine Steck, CEA, France

4123
9:45 – 10:00 am

Environmental Life Cycle Assessment Applied to Medical Devices

Lisa Pizzol, GreenDecision Srl, Italy

4165
10:15 – 10:30 am

Surface Engineering Strategy to Reach a Safer and More Permorming Profile of TiO2-NPs as Sunscreen UV Filters

Elena Cesa, AMBROSIALAB, Italy

C3L-1: Micro & Nanoplastics Pollution 2 (3 talks)

11:00 am – 11:45 pm

Chrome 1

Chairs: Mark Morrison, Lesley Tobin

4150
11:00 –11:15 am

Gastrointestinal Digestion and Colonic Fermentation of Polylactic Acid (PLA) Biodegradable Microplastics and its Interplay with Gut Microbiota

Miguel A. Bañares, CSIC, Spain

4049
11:15 – 11:30 am

Particle Shape and Intrinsic Cellular Variability Shape the Responses of Macrophages to Polystyrene Nano and Micro Particles
Thierry Rabilloud, LCBM, France

4135
11:30 – 11:45 am

Evaluation of Interactions Between Nano- and Micro-Plastics with Nutrients and Their Potential Effects on Nutrient Homeostasis

Marta Micheletto, ECSIN-European Center for the Sustainable Impact of Nanotechnology / EcamRicert SRL, Italy

C4L-1: Risk Assessment & Risk Management (5 talks)

2:30 – 4:00 pm

Chrome 2

Chairs: Elisabeth Heunisch, Monique Groenewold

4084
2:30 – 2:45 pm

Guidance on Safe-and-Sustainable-and-Recyclable-by-Design Plastics: Co-Creating Towards Impact-Driven Innovations in Plastics

Sebastien Artous, CEA, France

4076
2:45 – 3:00 pm

Nanosafety Management on Whole Value Chain of Metal Additive Manufacturing - LPFB Case Study

Cecile Philippot, CEA, France

4012
3:00 – 3:15 pm

Advances in Employing Nanosafety Standards in Nanomaterial Research

Spyridon Damilos, IRES, Belgium

4005
3:15 – 3:30 pm

Exploring Oxidative Stress and DNA Damage in Professional Welders Exposed to Welding Fumes

Bernadette Quémerais, University of Alberta, Canada

4006
3:30 – 3:45 pm

A Portal Supporting Risk Governance of Nano- and Advanced Materials

Wouter Fransman, TNO, Netherlands

Special Session by NSC Early Career Scientist, Invited talk

Josiane P. Lafleur, Invisible-Light Labs GmbH, Austria

2:30 am – 4:00 pm

Chrome 1

SSbD Day

Wednesday 7 June, 2023 –Auditorium Platine

8:45 – 9:25 am	**Plenary: SSbD framework for advanced materials** **Hubert Rauscher, EC** **Auditorium Platine**
9:30–10:30 am	**Horizon2020 CSA projects outcomes** **Horizon Europe SSbD CSA Project mapping results part 1**
10:30–11:00 am	**Coffee Break**
11:00 am–12:30 am	**Horizon Europe SSbD CSA Project mapping results part 2** **H2020 SbD/SSbD projects by topics NMBP 15-16**
12:30–2:00 pm	**Lunch Break**
2:00 – 2:20 pm	**Plenary: AMI 2030 - paving the way for an United European Systemic Change for People, Planet and Prosperity** **Lars Montelius**
2:20–4:00 pm	**Horizon Europe SbD Policy Project** **SPINE** **Horizon Europe Project - PARC** **Horizon Europe SSbD CSA Project - IRISS** **Horizon Europe SSbD by topics**
4:00–4:20 pm	**Coffee Break**
4:20–5:20 pm	**Panel discussion: Industrial perspective and applicability of the SSbD Framework** **Chair:** Martin Himly
5:20–5:30 pm	**Coffee Break**
5:30–5:40 pm	**OECD WPMN—SSIA: Overview of the Safe and Sustainable Innovation approach**
5:40–6:40 pm	**Panel discussion: Collaboration and alignement towards SSbD** **Chair:** Andreas Falk
6:40 pm	**End of the Day**
8:00–11:00 pm	**Gala dinner**

Horizon2020 CSA projects outcomes

9:30–10:00 am

9:30–9:40 am

Welcome to the SSbD Day: perceptions around SSbD

Eva Valsami-Jones, University of Birmingham, United Kingdom

9:40–10:00 am

H2020 - CSA Projects - NanoFabNet & SUSNANOFAB: Securing the Future for sustainable Nanofabrication in Europe

Steffi Friedrichs, ACUMENIST, Belgium

Simon Clavaguera, CEA, France

The **NanoFabNet Hub** represents a network of micro- & nanotechnology professionals born as a result of the 2.5 year H2020 CSA (G.A. no: 886171), whose objective was to create a strong international hub for sustainable high-tech innovation, whose structure, business model, detailed strategies and action plans are designed, agreed and carried by its international stakeholders, in order to yield a self-sustaining collaboration platform. The Hub aims provides a one-stop-shop for all matters and concerns pertaining to sustainable high-tech innovation and its successful incorporation into the complex, large-scale high-value industries by bringing together governmental and academic laboratories with large industries and SMEs.

SUSNANOFAB project is a 3-year H2020 CSA (G.A. no: 882506) whose main objective was to tackle key nanofabrication issues of the whole value chain, facilitating interactions among stakeholders thus enabling all pre-competitive conditions for a successful market uptake of nanofabricated products and solutions in a sustainable way. This is mainly reached via a structured road-mapping methodology and involving relevant external experts in Coordination Groups. At operational level, the project provided an access point to easy and affordable services, infrastructures and knowledge for the EU stakeholders, by means of a Digital Platform which hosted a repository of best practices & protocols, trainings, brokerage services and other key enabling ongoing initiatives.

NanoFabNet & **SUSNANOFAB** had joined forces to perform concerted actions and initiatives such as a Joint Networking & Brokerage Event (which took place last July) and the definition of a joint whitepaper for a sustainable nanofabrication.

HE SSbD CSA Project

IRISS – SSbD mapping results overview

10:00 am –11:30 pm

IRISS – SSbD mapping results overview Session: 10:00-12:30

The objective of this session is to provide a general overview about the mapping activities carried out in IRISS Project. Prof. Bernd Nowak from EMPA, will first describe main challenges of the IRISS Project, explaining in detail, the mapping activities carried out in safe by design and circular economy. After the break, Dr. Amaya Igartua from TEKNIKER will describe the mapping activities carried out in sustainable by design and lifecycle assessment, and finally Christina Apel, will describe the skills availability, skills gaps and training activities foreseen within IRISS Project.

10:00–10:30 am

HE SSbD CSA Project

IRISS – SSbD mapping results overview (part 1)

Bernd Nowak, Empa, Switzerland

Introduction of the IRISS project (5 min)

SbD for chemicals and materials (10 min)

Circularity (10 min)

Q&A (5 min)

SSbD Day

Wednesday 7 June, 2023 –Auditorium Platine

Horizon Europe SSbD CSA Project mapping results part 2

H2020 SbD/SSbD projects by topics NMBP 15-16

11:00 am–12:30 pm

11:00–11:30 am

HE SSbD CSA

IRISS – SSbD mapping results overview (part 2)

SSbD and LCA of chemicals and materials (15 min)

Amaya Igartua, TEKNIKER, Spain

Skills and Training needs (10 min)

Christina Apel, Leuphana University, Germany

Q&A (5 min)

11:30 am – 12:30 pm

H2020 NMBP 15-16: From SbD towards SSbD implementation around nanomaterials

Chairs: Andrew Nelson, Anna Costa/ Lisa Bregoli and Carlos Fito

11:30 am – 12:00 pm

NMBP15:

Introduction – Andrew Nelson

SAbyDOMA – Matt Jellicoe

SAbyNA – Apostolos Salmatonidis

ASiNA – Anna Costa / Lisa Bergoli;

SbD4Nano – Carlos Fito

Discussion and Q&A

End

12:00 –12:30 pm

NMBP16:

HARMLESS – Wouter Fransman

DIAGONAL – Carlos Rumbo

SUNSHINE – Vicky Stone

Ambassadors concept – Vicki Stone

SSbD Day

Wednesday 7 June, 2023 –Auditorium Platine

Horizon Europe SbD Policy Project SPINE

Horizon Europe Project - PARC

Horizon Europe SSbD CSA Project - IRISS

Horizon Europe SSbD by topics

OECD WPMN (SSIA)

2:20–5:40 pm

2:20–2:40 pm

SPINE. The Safe-and-Sustainable-by-Design Policy International Network

Maria Luisa Fernandez Cruz, CSIC

2:40–3:00pm

PARC: SSbD activities in PARC

Bernd Nowak, EMPA, Switzerland

3:00–3:20pm

IRISS WP2-3: SSbD Gaps & supportive Roadmap

Christina Apel, Leuphana University, Germany

Cris Rocca, University of Birmingham, United Kingdom

3:20–4:00 pm

SSbD HE Projects by TOPICS: overview (methodologies + tools + case studies)

RESILIENCE 01-11: SSbD for novel advanced plastic materials (SURPASS, REPURPOSE, REDONDO, ESTELLA)

DIG EMERGING 01-35: (MACRAME, ACCORDs, POTENTIAL, nanoPASS, iCare)

Industrial perspective and applicability of the SSbD framework

4:20–5:20pm

Chair: Martin Hinly, PLUS, Austria

Description: This panel discussion focuses on the industrial perspective of implementation and applicability of the SSbD framework published by the Joint Research Cebter (JRC) of the European Commission. The discussion will revolve around the following topics:

Panelists: Hubert Rauscher – **JRC**, Catherine Colin – **IPC (Packaging VC)**, Dmitri Petrovykh – INL **(Electronics VC)**, Amaya Igartua, **Green SME**, Sean Kelly – **NIA**, Blanca Suarez – **TEMAS**, Gunther Van Kerckhove – **OCSIAL**

5:30–5:40pm	**OECD WPMN: SSIA overview** *Araceli Sanchez, INSST, Spain*

Collaboration and Alignment towards SSbD

5:40–6:20pm

Chair: Andreas Falk, BNN, Austria

Description: This panel discussion focuses on inter-projects collaborations and alignement to support Industries and SMEs in developing SSbD. The discussion will revolve around the following topics:

Panelists: Araceli Sanchez – **OECD**, Eva Valsami-Jones – **NSC**, Amaya Igurtua – **IRISS**, Bernd Nowack – **PARC**, Hubert Rauscher – **JRC**, Lars Montelius – **AMI2030**, Maria Luisa Fernandez – **SPINE**, Elisabeth Heunisch – **Malta Initiative**

Wrap-up session

6:20–6:30 pm

6:20–6:30 pm	**Do you now what SSbD is now?** *Eva Valsami-Jones, University of Birmingham, United Kingdom*

Daily Program & Plenaries

Thursday 8 June, 2023

9:00–9:40 am	**Plenary Lecture: OECD Test Guidelines for Nanomaterials: Progress and future support of TG development by the Malta Initiative and NanoHarmony** *Elisabeth Heunisch, BAUA*
9:45– 10:45 am	**Parallel Sessions (see details in the next page)**
10:45 – 11:15 am	**Coffee Break**
11:15 am– 12:30 pm	**Parallel Sessions (see details in the next page)**
12:30 – 2:00 pm	**Lunch Break**
2:00 – 3:40 pm	**Parallel Sessions (see details in the next page)**
3:40 – 4:00 pm	**Conclusion and closing remarks** **Simon Clavaguera, CEA** **Auditorium Platine**
4:00 – 4:30 pm	**Coffee Break**
6:00 pm	**End of the day**

D1L-1: Implementation of the SSbD Concept in Case Studies (4 talks)

9:45 – 10:45 am

Chrome 1

Chairs: Anna Costa

4093
9:45 – 10:00 am

The Benefits of Coordinating Interdisciplinary Case Studies and Moving Towards a Product Oriented SDB Approach

Armand Masion, CNRS, France

4120
10:00 – 10:15 am

Practical Guidance to a Holistic Safe and Sustainable by Design (SSbD) Approach for Advanced Materials

Lisa Pizzol, GreenDecision srl, Italy

4157
10:15 – 10:30 am

Chalenges in Implementation of the SSbD Concept in New Lightweight Nano-Enabled Materials – Cellular Lightweight Concrete Materials Case Study

Ana Rita Alberto, ISQ/UNL/ENSP, Portugal

4172
10:30 – 10:45 am

Implementation of Design Strategies to Reach the Desired SSbD Performance Attributes: Functional Textile Coatings Case Study

Andrea Brigliadori, CNR-ISSMC, Italy

D1L-2: Methods, Tools, & Technologies for SSbD Purposes 4 (3 talks)

9:45 – 10:30 am

Auditorium Platine

Chairs: Andrew Nelson, Araceli Jimenez Sanchez

4171
9:45 – 10:00 am

Design Strategies Supporting the Development of Antiviral Nano-Ag-Based Materials Under a SSbD Approach

Magds Blosi, CNR-ISSMC, Italy

4083
10:00 – 10:15 am

Hazard Strategy for Nanomaterials and Nano-Enabled Products as Part of a Safe-and-Sustainable-by-Design Approach

Mattew Boyles, RIVM, Netherlands

4002
10:15 – 10:30 am

Data-Driven Quantitative Intrinsic Hazard Criteria for Nanoproduct Development in a Safe-by-Design Paradigm: A Case Study of Silver Nanoforms

Irini Furxhi , Transgero LtD, Ireland

D2L-1: Implementation of the SSbD Concept in Case Studies 2 (5 talks)

11:15 am – 12:30 pm

Chrome 1

Chairs: Anna Costa

4013
11:15 – 11:30 am

Prevention-Trough-Design in Graphene Production Processes
Fabio Boccuni, INAIL, Italy

4105
11:30 – 11:45 am

Safer by Design Approach to Support Innovation: A Practical Case Study with Microplastics
Mickael Cregut, Solvay, France

4020
11:45 am – 12:00 pm

Algorithmic Self-Optimisation of Non-Toxic Spherical Silver Nanoparticles
Matt Jellicoe, University of Leeds, United Kingdom

4037
12:00 – 12:15 pm

Antimicrobial Activity of Eco-Friendly CuO Nanoparticles: Promising Applications Against Multidrug-Resistant Neisseria Gonorrhoeae
Amedea Barozzi Saebra, Federal University of ABC, Brazil

4103
12:15 – 12:30 pm

Safer by Design Approach to Support Innovation: A Practical Case Study with Nanomaterials
Mickael Cregut, Solvay, France

D2L-2: Methods, Tools, & Technologies for SSbD Purposes 5 (5 talks)

11:15 am – 12:30 pm

Auditorium Platine

Chairs: Andrew Nelson, Araceli Jimenez Sanchez

4166
11:15 – 11:30 am

ASINA-AS: A Quantitative Based Decision Support Tool for Multi-ptimal Safe and Sustainable by Design Solutions

Massimo Perrucca, Project HUB-360, Italy

4153
11:30 – 11:45 am

Safe and Sustainable Nanomaterial Design Through Accelerated Wear Testing Coupled with High-Throughput Screening

William Stokes, University of Leeds, United Kingdom

4052
11:45 am – 12:00 pm

Developing Soil Species Sensitivity Distributions for Nanomaterials - Considering Nanomaterial Forms and Experimental Conditions

Sarah Roberts, UKCEH, United Kingdom

4092
12:00 – 12:15 pm

An Integrated Approach to Testing and Assessment to Support Grouping of Nanomaterials in Aquatic Systems and Identification of Relevant Nanoforms as a Target for Safe(R)-by-Design

Richard Cross, UKCEH, United Kingdom

4102
12:15 – 12:30 pm

Metals in Exhaled Breath Condensates of Welders

Bernadette Quémerais, University of Alberta, Canada

D3L-1: Implementation of the SSbD Concept in Case Studies 3 (6 talks)

2:00 – 3:30 pm

Titane 2

Chairs: Apostolos Salmatonidis, Sebastien Artous

4122
2:00 – 2:15 pm

Sunshine Industrial Case Study: SSbD Alternatives as Anti-Stick Coatings of Aluminium Trays and Moulds for Bakery Applications

Ilaria Zanoni, CNR-ISSMC, Italy

4056
2:15 – 2:30 pm

Emissions Characterization from Different Commercial 3D-Printers Using NEP Filaments – A SAbyNA Case Study

Apostolos Salmatonidis, LEITAT, Spain

4099
2:30 – 2:45 pm

Combining Physicochemical Characteristics, Ecotoxicity and Functionality Data to Select Safe(R) Nanoforms in Paint – SAbyNA Project

Elise Morel, UKCEH, United Kingdom

4096
2:45 – 3:00 pm

Application of Safe-by-Design Approaches in Nanotechnology Supply Chains – Cases Studies Experiments and Field Measurements

Sebastien Artous, CEA, France

4173
3:00 – 3:15 pm

SURPASS: Demonstration of Innovative Technologies Towards More Safe, Sustainable and Recyclable Polymeric Materials

Anna Maria Cristadoro, BASF PU, Germany

4080
3:15 – 3:30 pm

Exposure Risk Assessment Case Study - Advanced (Nano)Materials in Direct Chill Casting Laboratory and Industrial Lines

Joao Laranjeira, ISQ - Instituto de Soldadura e Qualidade, Portugal

D3L-2: Implementation of the SSbD Concept in Case Studies 3 (6 talks)

2:00 – 3:30 pm

Auditorium Platine

Chairs: Andrew Nelson, Carlos Fito

4082
2:00 – 2:15 pm

The Role of Nanomaterial Surface Chemistry in Safe-by-Design Approach

Mustafa Culha, SUNUM / Augusta University, Turkey

4169
2:15 – 2:30 pm

A Multimodal Approach to Quantify Surface Functional Groups on Nanomaterials for Safe and Sustainable by Design Approaches

Isabella Tavernaro, BAM, Germany

4021
2:30 – 2:45 pm

Safe-by-Design Strategies for Nanoforms and Nano-Enabled Products to Be Integrated in the SAbyNA Guidance Platform

Virginia Cazzagon, LEITAT, Spain

4137
2:45 – 3:00 pm

A Local Optimization Approach to Discover Novel Safe-by-Design Nanomaterials

Effie Marcoulaki, NCSR DEMOKRITOS, Greece

4104
3:00 – 3:15 pm

Accomplishing SSbD at Production Through the Safety by Process Control Concept

Philip Doganis, National Technical University of Athens, Greece

4136
3:15 – 3:30 pm

Socio-Economic Life Cycle-Based Framework for Safe and Sustainable by Design of Advanced Materials

Stella Stoycheva, Yordas group, Germany

D3L-3: Characterization of Advanced Materials, Including Nano Materials 3 (5 talks)

2:00 – 3:15 pm

Chrome 2

Chairs: Miguel Bañares, Eva Valsami-Jones

4146
2:00 – 2:15 pm

Automated Sampling Device to Study the Dynamic Solubility of Inorganic Nanomaterials

Ralph A. Sperling, Fraunhofer IMM, Germany

4151
2:15 – 2:30 pm

Catalytically Grouping Reactivity to Fundamentally Understand Toxicity of Nanomaterials

Miguel Bañares, CSIC, Spain

4022
2:30 – 2:45 pm

Combination of ZnO-Cisplatin NPs and Nitric Oxide for Chemotherapeutic Efficacy Improvement

Joana Pieretti, Federal University of ABC, Brazil

4058
2:45 – 3:00 pm

Synthesis and Characterisation of a Graphene Oxide-Gold Nanohybrid for Use As Test Material

Eva Valsami-jones, University of Birmingham, United Kingdom

4027
3:00 – 3:15 pm

Characterizing Environmental Behavior of Nanomaterials Using Radiolabeling Approaches

Stefan Schymura, Helmholtz-Zentrum Dresden-Rossendorf, Germany

Poster Sessions

Posters will remain on display for the whole event –

Lunch breaks will be occasions to display your posters

	Level 0		
Tuesday Jun 6th, 2023 16:30-18:30	**B4P-4 Methods, Tools, & Technologies for SSbD Purposes 7** (18 papers) Chr: Sylvie Motellier, Olivier Lebaigue	**B4P-5 Methods, Tools, & Technologies for SSbD Purposes 8** (11 papers) Chr: Sebastien Artous, Herve Fontaine	**B4P-6 Transferability & Acceptability of the Concept of SSbD** (2 papers) Chr: Carlos Fito, Claire Mays
Wednesday Jun 7th, 2023 11:00-12:30	**C2P-4 Harmonization & Standardization in the Context of Regulation 3** (8 papers) Chr: Elisabeth Heunisch, Cecile Philippot	**C2P-5 Characterization of Advanced Materials, Including Nano Materials 4** (17 papers) Chr: Bastien Pellegrin, Sonia DeSousaNobre	
Wednesday Jun 7th, 2023 17:20-18:30	**C5P-4 Implementation of the SSbD Concept in Case Studies 4** (4 papers) Chr: Joséphine Steck, Arthur Roussey	**C5P-5 Modelling, Digitalization of Nanosafety & Data Management** (10 papers) Chr: Tassos Papadiamantis, Joséphine Steck	**C5P-6 Micro & Nanoplastics Pollution 3** (5 papers) Chr: Bastien Pellegrin, Sylvie Motellier

Trainings and Workshops

The 2023 nanoSAFE & NanoSafety Cluster Work group A (WG-A) brings three exclusive training sessions.

WG-A focuses on cross-linking the running projects around nanomaterials, advanced materials, nanomedicine, and microplastics. This year, WG-A offers educational sessions and trainings on specific tools:

- **Data FAIRness, a practical perspective handled to researcher, two parts:** *Nina Jeliazkova* (Ideaconsult, BG) will offer a hands-on session on the design of FAIR data templates for upload to the eNanomapper database.
- **FAIR Data and Model provision:** *Thomas Exner and Martin Himly* (Paris Lodron Universität Salzburg) will give practical insight into FAIR Implementation Profiles (also known as FIPs) and the instance mapping tool which helps to depict and design complex experimental workflows and link them to data repositories.
- **Getting novel methods advancing into regulatory acceptance** (Offered by a team of the NanoHarmony project): *Anna Pohl* (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA), *Elise Morel* (UKCEH), *Eric Bleeker* (RIVM), and *Sean Kelly* (NIA) will give useful insights on the harmonisation and standardisation bodies, advantages of OECD Test Guidelines, the OECD structure and processes, and the Mutual Acceptance of Data.
- **Stakeholder perspective on SSbD, two parts:** Claire Mays will offer an interactive workshop on stakeholder perception in SSbD. This is of relevance as per definition SSbD shall incorporate the views and aspirations from diverse stakeholder groups into decision-making for better sustainable industrial innovation in the future. This workshop engages fresh worldwide data from the SAbyNA Responsible Research and Innovation survey. Come debate SSbD through the lens of values, norms, gender, and disciplines, in the lab and on the factory floor!

Data FAIRness (part I): Nina Jeliazkova (Ideaconsult, BG)
9:45–10:45 am

Data FAIRness (part II): Nina Jeliazkova (Ideaconsult, BG)
11:15 am–12:45 pm

Tuesday, June 6

FAIR Data and Model provision: Thomas Exner and Martin Himly (PLUS)
2:00–4:00 pm

Tuesday, June 6

Getting novel methods advancing into regulatory acceptance: Anna Pohl (BAuA), Elise Morel (UKCEH), Eric Bleeker (RIVM), and Sean Kelly (NIA)
4:00–6:30 pm

Tuesday, June 6

Interactive workshop
Stakeholder perspective on SSbD (part I): Claire Mays (Symlog, FR)
9:45–10:45 am

Stakeholder perspective on SSbD (part II): Claire Mays (Symlog, FR)
11:15 am–12:30 pm

Thursday, June 8

Satellite Meetings

Safe by Design for Nano – Consortium Meeting (CLOSED)

Monday, June 5, 2023
10:00 am–1:00 pm
2:00–4:00 pm
4:30–6:00 pm
Chrome 2

Restricted to SbD4Nano partners

Sabydoma – 2nd legal workshop (OPEN)

Monday, June 5, 2023
2:00–4:00 pm
4:30–6:00 pm
Chrome 1

Open to all participants

NanoSafety Cluster – General Assembly (OPEN, Hybrid)

Tuesday, June 6, 2023
4:30–6:30 pm
Auditorium Platine – link to Zoom
Open to all participants

NMBP-15-16 Ambassadors – Meeting (CLOSED)

Thursday, June 8, 2023
9:45–10:45 am
11:15 am–12:30 pm
Chrome 2

Restricted to NMBP-15-16 ambassadors

Satellite Meetings

Asina – Consortium Meeting (CLOSED)

Thursday, June 8, 2023
2:00–4:00 pm
4:30–6:00 pm

Friday, June 9, 2023
9:00 am–12:30 pm
Chrome 1

Restricted to Asina partners

Sabydoma – Consortium Meeting (CLOSED)

Thursday, June 8, 2023
4:30–6:00 pm

Friday, June 9, 2023
9:00 am–12:30 pm
Chrome 2

Restricted to Sabydoma partners

Practical Information

The **8th International Conference on Health and Safety Issues for a socially responsible approach to nanomaterials** will be held in Grenoble, France from June 5th to 9th, 2023.

This year, for the first time in its history, the nanoSAFE conference meets the NanoSafety Cluster in a new format: NanoSAFE & NanoSafety Cluster.

LOCATION

Maison MINATEC
Parvis Louis Néel
38054 Grenoble Cedex 9

DURATION

Start : Monday June 5, 2023, 11:30 am
End : Friday June 9, 2023, 12:30 pm

CHECK-IN & BADGES

Check-in starts on Monday **June 5**, 2023 at **11:30 a.m**. Upon chek-in, you will receive your personal badge. The certificate of participation has already been printed on the back of your badge. Please, **keep your badge visible** troughout the whole conference and social events.

POSTERS, COFFEE & LUNCH BREAKS

Posters will remain on display for the whole event on level 0. Lunch breaks will also be occasions to display your posters

- All posters must be set up on Monday June 5
- Presenters must take their posters down by 6:00 pm on Thursday

You will find the material to install your poster at the reception desk of the conference.

Lunch and coffee breaks will be served on Level 0, at the exhibitors areas.

INTERNET ACCESS

Access to secure Wi-fi network will be granted during the entire event. Log-in credentials will be distributed at check-in.

ELECTRONIC BOOK OF ABSTRACTS

Fot this edition, the Organizing and Scientific Committess have opted for a eco-friendly and more sustainable solution. Differently than the previous editions, the book of abstract and other material will not be loaded on a USB stick. Your badge contains a QR code through which you can easily access the book of abstract and the program.

Practical Information

GALA DINNER

We are happy to have you back for this new NANOSAFE 2023 edition! This time, we will take you to a high place of Grenoble life, "Les halles"

The Halles Sainte-Claire is a historic monument located in Grenoble in the department of Isère, in the region Auvergne-Rhône-Alpes.

The building dates from the late nineteenth century, is located in the historic center of the city. It was registered as a historical monument on May 23, 2007. Its architect is Hector Riondel.

This covered market is located on Place Sainte-Claire in the heart of the old city center of Grenoble, in the immediate vicinity of the tourist office, not far from the pedestrian zone, the Notre-Dame de Grenoble Cathedral and the remains of the Roman walls of Grenoble. The site is still used to host an active public market.

Photo credit : IMAE

This year, the Gala dinner will be a unique experience: a gastronomic walkabout among the market stands, with 100% local food prepared by the stand owners (and many surprises!)

Photo credit : IMAE

By tramway
The Gala dinner will take place on Wednesday 7th at 20:00 at Les Halles Sainte-Claire, Place Sainte-Claire, Grenoble.
Tramway line B - Tram stop "Sainte-Claire Les Halles