

# 6<sup>th</sup> EU-Asia Dialogue on NanoSafety

## CONFERENCE BOOKLET

21<sup>ST</sup> OF JUNE 2023 | BERLIN, GERMANY





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# Welcome Address

## Statement from the BMUV



### Anita Breyer

The safety and sustainability of all chemicals is an important concern for us. This is also true for nanomaterials, which enable innovation but also present us with complex challenges in the areas of safety and sustainability.

To ensure responsible development, use and disposal of nanoscale materials, we need appropriate internationally standardised measurement and testing. These are the basis for sound safety assessments and thus for good risk management and successful innovation.

It is important to the German Environment Ministry that these methods can be used for



regulatory purposes. This is why we are working actively in the OECD processes, funding research projects on developing OECD test guidelines and advocating systematic funding and financing for test development in Europe in the framework of the Malta Initiative.

We know very well that persistence is required to develop these kinds of methods, adapt them to scientific and technological progress and standardise them internationally. International cooperation helps with this and is truly indispensable when it comes to bringing together scientific expertise, practical experience in application and regulatory foresight. The EU-Asia Dialogue combines all of this in a network connecting Europe and Asia. This is a great gift to scientific cooperation and the international harmonisation process.

It is good for us to pay attention as a community and work on solutions together. This is the only way to ensure that precautionary efforts keep pace with innovation.

#### Dr. Anita Breyer

Director-General of Chemical Safety, Emmission Control and Transport at the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

## Statement from the EU NanoSafetyCluster (NSC)

“TRUSTED COLLABORATION ENVIRONMENT IS AN IMPORTANT SUCCESS FACTOR”



Over the past 15 years, the NanoSafety Community has proven to be an asset for the science, research and development ecosystem in Europe and beyond. Driven by the EU NanoSafetyCluster (NSC) and supported by global partners, it was possible to develop a trusted environment of collaboration around the world. In its function as a co-initiator of the INISS-nano initiative, the NSC and more specifically, the colleagues active in EU-funded research projects support this international collaboration with their enthusiasm and engagement.

The core topic of this Dialogue event is “characterization”, a cornerstone in every nano-related scientific or commercial development. Also, the regulatory framework refers to methods and expertise that have been pioneered by NSC projects and related working groups.

Therefore, the NSC community endorses and will continue to support this initiative. Alongside the ongoing update of the NSC-structures, this is the perfect opportunity to further engage and synergistically co-create the ecosystem between INISS-Nano and NSC, and also with other groups that are willing to collaborate.

For the 6<sup>th</sup> Dialogue event, we wish all participants inspiring interaction, productive discussions and a great time in Berlin.

Best regards,

**Éva Valsami-Jones**  
**Flemming Cassee**  
**Andreas Falk**

NSC Coordination Team



Éva Valsami-Jones



Flemming Cassee



Andreas Falk



## Host of the 6<sup>th</sup> EU-Asia Dialogue

### German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, Division - Nanoscale Advanced Materials, OECD Chemicals Policy

The division is in charge of regulatory issues relating to nanomaterials within the framework of European chemicals legislation (REACH Regulation (VO (EG) 1907/2006)) and for the Test Methods Regulation (EU VO 440/2008). The division is also in charge of the Federal Government's NanoDialog – a unique stakeholder dialogue. For advanced materials in the nanoscale range (up to 1,000 nm), the division is working with the higher federal authorities to develop approaches to systematically evaluate them and, if necessary, to minimise risks to the environment and health in a regulatory manner. The division coordinates the interdepartmental contributions to



the OECD chemicals programme. The division is also Head of Delegation for the OECD Chemicals and Biotechnology Committee (CBC) and the OECD Working Party on Manufactured Nanomaterials (WPMN). In addition, the division is responsible for the regulations on Good Laboratory Practice (GLP) at national, European and international level.



**Anke  
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Dr. Anke Jesse (lawyer) is head of the division “Nanoscale Advanced Materials, OECD Chemicals Policy” at the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection in Berlin since December 2008.

Prior to this activity, Dr. Anke Jesse was

- Head of Division “Cabinet and Parliament” at the Federal Ministry for the Environment, Berlin (2008-2005)
- Head of the Representation of North Rhine-Westphalia to the Federation, Berlin (2005-2003)
- Head of Minister’s Office at the Finance Ministry of North Rhine-Westphalia, Düsseldorf (2003-2001)
- Research assistant of the SPD parliamentary group in the state parliament, Düsseldorf (2001-1998)
- Department head in Detmold district government, (Ministry for the Interior of North Rhine-Westphalia), Düsseldorf (1998-1994)
- Head of legal department of the re-established Erfurt University (Ministry for Science and Art, Free State of Thuringia), Erfurt (1994)

Education: Law, University of Bielefeld (1993)



**Laura  
GROSS**

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Laura Gross is policy officer of the division “Nanoscale Advanced Materials, OECD Chemicals Policy” at the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection in Berlin since September 2019.

Prior to this activity, Laura Gross was

- Editor-in-chief for [www.nanoportal-bw.de](http://www.nanoportal-bw.de) on behalf of the Ministry for Food, Rural Areas and Consumer Protection, Baden-Württemberg (2019-2012)
- Head of Division “Food, Agriculture, Cosmetics and Nanotechnologies” at the VERBRAUCHER INITIATIVE (NGO for consumer protection), Berlin (2019-2003)

Education: Nutritional Science, University of Bonn (2003)



# PRESENTATIONS



## Ruslinda A. RAHIM

Director of National Nanotechnology Centre (NNC)  
Ministry of Science, Technology & Innovation (MOSTI) MALAYSIA  
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Title of presentation: **“Recap of the 5th EU-Asia Dialogue”**

Dr. Ruslinda binti A. Rahim received a Doctor of Philosophy (PhD) in Nanoscience and Nanoengineering from Waseda University, Japan, in September 2012. She also received M. Eng and B. Eng degrees in Electrical and Electronic Engineering from Muroran Institute of Technology, Japan, in 2007 and 2002, respectively. Currently, she is Director of the National Nanotechnology Centre under the Ministry of Science, Technology and Innovation (MOSTI). Her role in MOSTI is to coordinate Research Development and Technology activities as well as Safety Standards and Regulations related to Nanotechnology and Advanced Materials in Malaysia. Her research interests include Nanoelectronics, Nanostructure devices, Nanosafety, Biosensors, Bioelectronics, DNA and protein detection, Aptamers and surface chemistry on carbon-based materials. She is a Board Member of Malaysia Board of Technologist (MBOT) and Alternate Board of Directors of NanoMalaysia Berhad. Furthermore, she was Malaysia’s contact point for the ASEAN COSTI sub-Committee on Material Science and Technology, OECD Working Party on Manufactured Nanomaterials (WPMN), Executive Committee Member of the Asia Nano Forum (ANF), member of ISO under OECD/TC 229 Nanotechnologies, member of NSC 02/TC 15 Nanotechnologies under Standards Malaysia and secretariat for National Nanotechnology Coordination Committee.



## Helme HELAN

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National Nanotechnology Centre  
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Title of presentation: **“Recap of the 5th EU-Asia Dialogue”**

Mr. Helme has been with the Ministry of Science, Technology and Innovation since 2016. His designation as Principal Assistant Director at the National Nanotechnology Center is specifically to look into the standardization, regulatory and safety of nanomaterials and their products in the local market. He leads a national project on benchmarking the risks of local nano-products. Helme started his career in 1994 as a Research Assistant at the Institute for Medical Research studying epidemiology of filariasis and malaria in selected local communities. He then joined SIRIM the following year, worked on pilot scale-up bioconversion studies for 3 years and spent the next 18 years on toxicology-biocompatibility research while establishing related facilities and providing testing services for the industry.



## Denis KOLTSOV

Chairman of ISO TC229 (Nanotechnologies) &  
Director of BREC Solutions Ltd  
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Title of presentation: “ISO-TC229 - Ideas for ISO-INISS Cooperation”

Dr. Denis Koltsov was born in Moscow in 1976, graduated from Cambridge University in 1998 and obtained his PhD in Nanotechnology in 2003 from the same university. He worked as a research associate at the Cambridge Nanoscience Centre before taking up a lecturing position at Lancaster University in 2005 where he led nanotechnology work and outreach services until 2009. Dr. Koltsov is now running his own nanotechnology consulting practice (BREC Solutions Limited) which focuses on technical, regulatory and standardisation issues in nanotechnology innovation. Dr. Koltsov is the author of several patents, numerous publications and confidential reports to stakeholders. He is a recognised authority in nanotechnology innovation and current market, regulatory and policy trends. Dr. Koltsov is an expert representing industry on BSI, ISO, IEC and CEN expert committees. Dr. Koltsov developed and published a number of international nanotechnology standards and currently is chair of the ISO TC229 (Nanotechnologies). He has conducted a number of industry-led consultations in the nanotechnology sector and reported to relevant regulatory authorities. Dr. Koltsov is a board member on large EU projects such as Nanoharmony, NanoDefine and NanoReg2.



## Kathrin SCHWIRN

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Title of presentation: “Safe and Sustainable by Design at OECD”

Dr.-Ing. Kathrin Schwirn is research associate at the German Environment Agency, department of chemical safety. Her tasks focus on the environmental safety of nanomaterials and other advanced materials, and making risk assessment tools fit for that purpose. To that end, she has commissioned several projects funded by the German Ministry of Environment to better understand the environmental hazard and fate of nanomaterials and advanced materials as well as to facilitate the development of OECD Test Guideline and Guidance Documents for characterising nanomaterials and for assessing their environmental fate. She is member of the Malta Initiative Board and associated partner of the EU H2020 project NanoHarmony. In Work Package 8.1 on Safe and sustainability by design of chemicals, materials and products of the EU Horizon Europe Project “Partnership for the Assessment of Risks from Chemicals” (PARC) she co-leads the activity on building a knowledge sharing platform and educational materials on safe and sustainable by design. Since 2021, she is chair of the OECD WPMN Steering Group on Advanced Materials that aims to develop a strategic approach to foster regulatory preparedness for safe and sustainable by design of advanced materials.





## Wannee CHINSIRIKUL

President of Asia Nano Forum (ANF) 2022-2023  
Executive Director of National Nanotechnology Center, Thailand

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Title of presentation: **“Characterization Research Efforts in Asian Countries”**

Dr. Wannee Chinsirikul received her BSc (Honours) in Polymer & Textile from Chulalongkorn University, Thailand (1988), MSc in Polymer Science (1992) and PhD in Materials Science and Engineering (1996) from Pennsylvania State University (USA). Her primary areas of research are polymer blends, characterization (thermal analysis), film processing, plastic packaging and biobased materials. Recent contributions in research and policy are related to ‘Circular and Green Economy’.

Dr. Chinsirikul and her team commercialized an innovative product entitled ‘Breathable Film for Tropical Fresh Produce’ and her products have been in the market, modern trade supermarkets in Thailand as well as Thai fresh produce exports. Among twenty national and international S&T awards and honours received, her team won the ‘Outstanding Technologist Award’ in 2005, for the achievement on “Active Packaging Film for Shelf-life Extension of Fresh Fruits and Vegetables”, by the Foundation for the Promotion of Science and Technology under the Patronage of H.M. the King, Thailand. Another patented technology by her team, licensed for industrial manufacturing, was ‘Innovative Drying Process of Natural Rubber via Twin-screw Extrusion’. Dr. Chinsirikul is co-author of two book chapters, and she has published more than 80 papers, and filed 7 Thai patents, 7 petty patents and 9 Trade secrets. She has been keynote/invited speakers at many international conferences and meetings relating to Nanotechnology, Polymer Processing and Packaging Science and Technology. At present, she serves as President of Asia Nano Forum (ANF), President of Nanotechnology Association of Thailand, and executive board member of Faculty of Science and Technology, Thammasat University, Thailand, and a former board member of the International Association of Packaging Research Institutes (IAPRI), 2015-2020.



## Andrea HAASE

Head of Unit Fibre- and Nanotoxicology at the German Federal Institute for Risk Assessment (BfR)  
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Title of presentation: **“German Interagency Working Group on Advanced Materials”**

Dr. Andrea Haase studied biochemistry at the University of Tübingen, obtained a PhD from the University of Heidelberg, finished postgraduate toxicology studies at the University of Leipzig and completed her habilitation in toxicology at the Freie Universität Berlin. Since 2008 she is working at the German Federal Institute for Risk Assessment (BfR) in Berlin, where she is the deputy head of the department “Chemical and Product Safety” and the head of the unit “Fibre- and Nanotoxicology”. She chairs the BfR working group nanotechnology and the German interagency working group on advanced materials. She has published more than 90 scientific publications in the field of applied safety research for nano- and other advanced materials and was involved in more than 10 large research projects such as NanoReg2, GRACIOUS, NanoInformaTIX, InnoMat.Life, HARMLESS or POLYRISK.

The Unit Fibre and Nanotoxicology assesses fibres and substances in nanoform mainly under REACH and CLP. The unit also contributes to the development/ amendment of legal procedures and technical guidance documents for human health risk assessment of nanomaterials and represents the BfR in relevant expert committees such as the ECHA Nanomaterial Expert Group (NMEG) and the OECD Working Party on Manufactured Nanomaterials (WPMN). The unit is actively involved in applied safety research with the overarching aim to develop new approach methodologies (NAMs) for the toxicological assessment of fibres, nano- and other advanced materials and to apply them in tiered testing strategies and/or integrated approaches to testing and assessment (IATAs) for risk assessment and more recently also for Safe-and-Sustainable-by-Design approaches. This also includes the elucidation of toxicity mechanisms, inter alia, by means of sophisticated cell biology (e.g. flow cytometry, confocal microscopy) and ‘omics techniques (e.g. proteomics, metabolomics).



## Emma STRÖMBERG

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Title of presentation: “IRISS – International SSbD-Ecosystem – Synergies with INISS-nano”

Dr. Emma Strömberg is an associate professor in polymeric materials and she works as a senior researcher at IVL Swedish Environmental Research Institute; the work is focused on solutions for waste management, design for recycling, circular economy, chemicals in products and waste, standardisation and design for safe and sustainable materials. She is currently involved in EU projects on development of novel materials (BioPlastics Europe, TORNADO) and is coordinating an EU-funded project IRISS - The International ecosystem for accelerating the transition to Safe-and-Sustainable-by-design materials, products and processes.

Before joining IVL Swedish Environmental Research Institute, Dr. Strömberg worked as researcher at KTH Royal Institute of Technology in Stockholm. Her main research has been focused on the environmental interactions of polymeric materials, characterisation of material properties of conventional polymers and recyclates, biobased materials and composites as well as prevention of biofouling on polymeric surfaces. Dr. Strömberg holds a PhD in Polymer technology from KTH Royal Institute of Technology.



## Vladimir LOBASKIN

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Title of presentation: “EU-US-Communities of Research – Characterization Initiatives”

Dr. Vladimir Lobaskin is an associate professor in the School of Physics, University College Dublin, National University of Ireland. His main research interests are in the field of physics of soft condensed matter and bionano interactions. His lab develops computational tools for *in silico* characterisation of materials and multiscale modelling methods for biological fluids and nanostructured matter, as well as models for nanomaterials toxicity assessment. He coordinated two research consortia in the field of nanosafety funded by European Commission’s FP7 and Horizon 2020 frameworks and took part in multiple other EU-funded projects on nanosafety and nanoinformatics. He is a co-author of the EU-US Roadmap Nanoinformatics 2030. He is representing the European Union in the EU-US Communities of Research in Nano-EHS, coordinating the Characterisation CoR.



# INISS-NANO ACTION PLAN



## Andreas FALK

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Andreas Falk, MSc, is CEO of BioNanoNet ForschungsGmbH (BNN). He studied medical analytical technologies and business administration at the University of Graz. He has been part of >50 completed/ongoing national and European projects in the thematic fields of (nano-) medicine & nano-safety, innovation and sustainable development. He is active within several national and international working groups: EU NanoSafety Cluster (NSC) coordination team member; co-coordinator of the International Network Initiative on Safe and Sustainable Nanotechnologies (INISS-nano); European Technology Platform Sustainable Chemistry - SusChem (member of NTPs-leader board; coordinator of national technology platform SusChem-AT); member of several COST-Actions; national expert at OECD-WPMN; plenum member of ISO TC229 & CEN TC352; etc. In the field of nano-safety/nanotoxicology and industrial innovation support, he has contributed >100 talks, >30 poster presentations on international scientific conferences, as well as >15 publications. He is involved in shaping the strategies towards implementation of the “safe-and-sustainable-by-design” (SSbD) concepts within the European high-tech ecosystem, and developing the concept for global scientific collaboration.



# BREAKOUT SESSIONS



## Steffi FRIEDRICHS

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### Group 1 - Characterization Items in Standardization

Dr. Steffi Friedrichs has been a leading expert, policy advisor and business representative for emerging technological innovation for nearly 25 years. She is currently the Founder and Director of AcumenIST, an internationally active consultancy that drives the advancement of science- and technology-based innovations through proactive initiatives in the public and private sector. Before joining AcumenIST, Steffi worked for the OECD, where she developed definitions, indicators and impact assessment for biotechnology and nanotechnology, and led two international workshops on genome editing. Steffi has a strong track record in the establishment, development and representation of technology-based companies; she was the Founder and General Director of the Nanotechnology Industry Association (NIA) group, Co-Founder and Member of the Board of Directors of the Chicago Micro- & Nanotechnology Community (CMNC), Director of the Master's Program in Micro- and Nanotechnology at the University of Cambridge, and Lecturer in Inorganic Chemistry and Solid State Chemistry at the University of Oxford.

Steffi has a GBR PhD (DPhil) from the University of Oxford (UK) specializing in nanotechnology and a DiplChem title from the Technische Universität Braunschweig (Germany), as well as a GBR diploma in higher education (DipHE).





## Georges FAVRE

Director of Nanotech Institute at LNE  
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### Group 1 - Characterization Items in Standardization

Dr. Georges Favre is the director of Nanotech Institute at LNE, which carries out R&D activities aimed at validating/evaluating the performances of new measurement technologies and harmonising standard operating procedures (SOPs) in relation to multiple issues (nanomaterial identification, quality control, NOAs emissions assessment, etc.) and properties (size distribution, concentration, stability/dispersibility, dustiness, dopant profile, conductivity, etc.) for different types of nanomaterials (metal oxides, graphene, LNPs, EVs, etc.). as well as services to industry and government. The fields of interest include food, cosmetics, construction, health (medical devices and nanomedicine) and energy. As such he is involved in numerous networks and initiatives dealing with Advanced Materials characterisation/metrology, standardisation, safety and regulation topics. He is the vice-chair for the Advanced Materials area of the European Metrology Network (EMN) on Advanced Manufacturing, the French representative within the VAMAS Steering Committee, co-chair of the AFNOR/X457 French Nanotechnologies Standardisation Committee, head of the French Delegation within CEN/TC 352 Nanotechnologies and ISO/TC 229 Nanotechnologies and member of the French Delegation within the OECD/WPMN (Working Party on Manufactured Nanomaterials). In 2022, he co-created NanoMesureFrance, an non-profit association supported by the French government whose ambition is to strengthen confidence in nanomaterials and associated innovations by bringing together key stakeholders (producers and users of nanomaterials, instrument manufacturers, service providers, laboratories and academic platforms), sharing information and working on harmonisation and validation of the tools and methods needed to characterise key physico-chemical properties of nanomaterials at different stages of their life cycle.



## Patricia FARIAS

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### Group 2 - Industrial Characterization Needs

Dr. Patricia Farias is a full professor at the Federal University of Pernambuco, Recife, Department of Biophysics (CB, UFPE) and a member of the Program of Post-Graduation in Materials Sciences (PGMTR, UFPE) as well as a co-founder of Phornano Holding GmbH, an Austrian nanotech company. Her research focuses on the development of advanced materials, in particular nanomaterials with a focus on their underlying processes including their sustainability. Applications are ranging from biomedicine to energy-related systems. She is currently involved in nanotechnology and nanosafety-related research projects (e. g, DIAGONAL/EU, ANOPSA/FFG) and is the leader of pillar 2 – Support Industrial Understanding – of the International Network Initiative on Safe and Sustainable Nanotechnologies (INISS-nano).





## Pushplata SINGH

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### Group 2 - Industrial Characterization Needs

Dr. Pushplata Singh is a senior scientist (senior fellow) in the TERI-Deakin Nanobiotechnology Centre, The Energy and Resources Institute, India. Her research focuses on nanomaterials development, nano-bio interactions, nano-toxicity & life cycle assessment of nanomaterials. She has been actively involved in developing regulatory guidelines for government approvals for marketing nanoproduct in India. Her research group has developed several new nanomaterials for agriculture and environment purposes. Three nanoproducts for agriculture applications have been developed at commercial scale that have also completed bio-efficacy testing at a massive scale at 25 different locations in India. She has been significantly contributing towards major nano-research and network projects "Centre of Excellence for Advanced Research in Agricultural Nanotechnology (CEARAN) and "DBT-TDNBC-DEAKIN Research Network Across continents for learning and innovation" (DTD-RNA) funded by the Department of Biotechnology, Government of India. She is also leading two nanotoxicity assessment projects by using *in vitro* and *in silico* prediction approaches. Her research group is actively publishing peer-reviewed research articles on development of novel nanomaterials, and toxicity & life cycle assessment of engineered nanomaterials.



## Gottlieb Georg LINDNER

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### Group 2 - Industrial Characterization Needs

Dr. Gottlieb Georg Lindner works in the RD&I department of Evonik Operations GmbH, concentrating on products of the Business Line Smart Materials, where he focuses on high-performance oxides, in particular on synthetic amorphous silicon dioxide (SAS). As the coordinator for standardization and committee work, close cooperation with Evonik's product safety and regulatory affairs departments is essential.

As Humboldt fellow he spent 2 years in Japan prior to his engagement in industry and was involved in many corporate projects in the Asia-Pacific region, including another stay in Japan for about half a year and almost two years in China.

He is chair of the DIN Committee Nanotechnologies and board member of the DIN Standards Committee Materials Testing as well as a member of the Coordination Group Nanomaterials of the German Chemical Industry Association (VCI).

Furthermore, at the ISO/TC 229 Nanotechnologies he acts as project leader for the 'ISO 80004-1 Core Terms / Nanotechnologies' and as expert in several other projects. The latter also applies to CEN/TC 352 Nanotechnologies and ISO/TC 24 / SC4 Particle Characterization.

At the OECD/WPMN (BIAC) he is active within the steering groups on Advanced Materials (AdMa) & Safer Innovation Approach, among others.

Within the European H2020 project NanoHarmony he is deeply involved in such topics as toxicokinetics, intestinal fate and dynamic dissolution. In the H2020 project NanoPAT using methods such as PDW, an attempt is being made to investigate the very genesis of SAS nanoparticles.



## Jörg RADNIK

Senior Scientist at the Federal Institute for Material Research and Testing  
Bundesanstalt für Materialforschung und -prüfung (BAM)  
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### Group 3 - Characterization Facilities and Infrastructures

Dr. Jörg Radnik is senior scientist at the Federal Institute for Material Research and Testing, Berlin in the Division 6.1 “Surface analysis and Interfacial Chemistry” and working in the competence centre nano@BAM. His research focuses on the chemical analysis of nanostructured materials. He is currently involved in different nanosafety-related research projects (e. g. Nano-SolveIt, ACCORDs) and in metrological projects (e. g. ISO-G-Scope). Furthermore, he is member of the Surface Analysis Working group of the consultative committee for amount of substance: metrology in chemistry and biology (CCQM) of the Bureau International des Poids et Mesure (BIPM) and one of the German representatives in the Versailles Project on Advanced Materials and Standards (VAMAS). In these functions, he leads different projects to enhance the accuracy and conformity of chemical methods in the field of nanomaterials. Furthermore, he is official delegate of the Deutsches Institut für Normung (DIN) in the technical committees for Surface Analytics and Nanotechnologies.



## Pavadee AUNGKAVATTANA

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### Group 3 - Characterization Facilities and Infrastructures

Dr. Pavadee Aungkavattana is a deputy executive director at the National Nanotechnology Center, National Science and Technology Development Agency (NSTDA), Thailand Science Park, Pathumthani, Thailand. She graduated with a PhD in Material Science and Engineering (Ceramic Option) from Pennsylvania State University, PA, USA in 1996. Her background is electro-ceramics and thin films. Her research focuses on ceramic processing and fabrication methods including slip-casting, tape-casting, and extrusions. Her expertise covers new materials for energy applications i.e., molten carbonate fuel cells and solid oxide fuel cells.

#### Selected Research Topics

- 1-3 kW Tubular SOFC Stack for Household Distributed Generator
- Development of Ceramic Membrane for Micro- and Ultra-filtration and Zeolite Membrane for Ethanol Separation
- Development of Honeycomb Ceramic Catalysts for Practical Fuels for SOFC Applications
- Construction of a 50-Watt Electric Generator fuel Cell Using Ethanol
- Development of Solid Oxide Fuel Cell as a Stationary Power Generator





## Ineke MALSCH

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### Group 4 - Societal and Ethical Considerations – Policy Framework for Characterization

Dr. Ineke Malsch is the director of Malsch TechnoValuation, a consultancy in technology and society. She graduated in Physics and holds a PhD in Philosophy. Her thesis was on international multistakeholder governance of nanotechnology. Under the tradename EthicSchool, she offers training in Responsible Innovation. In the EU-funded project RiskGONE she is responsible for ethics including the development and testing of guidelines and online tools supporting ethical impact assessment as part of the Risk Governance framework for nanomaterials. In the International Networking Initiative on Safe and Sustainable Nanotechnologies (INISS-nano), she leads the pillar on “International collaboration on ethical and societal aspects of nanotechnology”.



## Waluree THONGKAM

Senior Technical Officer and Acting Manager of Nano-Safety  
Alliance Section (NSA)  
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### Group 4 - Societal and Ethical Considerations – Policy Framework for Characterization

Dr. Waluree Thongkam is senior technical officer and acting manager of Nano-Safety Section (NSA) at National Nanotechnology Center (NANOTEC). Her work is related to nano-safety. She supports Thailand National Nanosafety and Ethics Strategic Plan and develops strategies: Push for policy development, knowledge management and industry engagement on nanosafety issues. She is currently working on the implementation of a variety of organizations, including regulators, government organizations, federations, industries, and entrepreneurs. She is also working with the Thai Standard Institute (TISI) to develop national standards on nanotechnology. She reports activities, such as seminars, training sessions, and conferences on nanotechnology standards and nanosafety. She is NANOTEC’s representative for nanotechnology

# CLOSING



## Eric A. J. BLEEKER

Scientific Officer  
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### Group 4 - Societal and Ethical Considerations – Policy Framework for Characterization

Dr. Eric Bleeker is a senior scientist at the National Institute of Public Health and the Environment (RIVM) in the Netherlands. He has a PhD in ecotoxicology and previously worked as a post-doc researcher in ecotoxicology for about 8 years. For the last 15 years he has been working on risk assessment of chemicals with a focus on nanomaterials, mainly focused on the European chemicals legislation REACH. His work on nanomaterials involves a broad range of topics. Dr. Bleeker provides policy advice and support, both on a national level (to several Dutch ministries), as well as on international levels (e. g. in adaptations of the REACH Regulation or the EU Recommendation on the definition of nanomaterials, and by representing the Netherlands in ECHA's NanoMaterials Expert Group and in the OECD Working Party on Manufactured Nanomaterials). He also contributes to guidance and test guidelines for nanomaterials (e. g. REACH Guidance at ECHA, OECD Test Guidelines and Guidance Documents). Furthermore, he has been and still is participating in several EU research projects that support risk assessment of nanomaterials (e. g. GRACIOUS, Gov4Nano, and NanoHarmony), which included advancing grouping approaches, test guideline developments, and governance. Currently, he expands his activities towards more advanced materials (e. g. in OECD-WPMN and the EU project MACRAMÉ).



 Federal Ministry  
Republic of Austria  
Climate Action, Environment,  
Energy, Mobility,  
Innovation and Technology

## Alexander POGÁNY

Alexander Pogány has a master's in Microbiology and worked for about 3 years at Baxter Bioscience as validation expert in the Quality Control. Since 2004 he has been working as senior expert in national and international research policy in the area of Key Enabling Technologies (Nanotechnology, Materials research and production). This includes the coordination of several research programmes. He is Austrian Delegate for the Horizon Europe Cluster 4 programme, the Working Party BNCT (Bio, Nano and Converging Technologies) and WPMN (Manufactured Nanomaterials) of the OECD, and of Mirror Groups in several European Technology Platforms.

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# 6<sup>th</sup> EU-Asia Dialogue on Nanosafety

“The role of characterization and how it is addressed in INISS-nano”

📅 21 June 2023

📍 Physikalisch-Technische Bundesanstalt (PTB) - Hermann-von-Helmholtz-Bau, Abbestraße 2-12, 10587 Berlin, Germany

🕒 10:00 - 17:00 CEST

## Agenda

moderated by Andreas FALK (BNN)

### Welcome Address

- 10:00** Tobias SCHAEFFTER, Head of the Berlin PTB Institute, Germany  
**10:10** Anita BREYER, Head of Directorate General C, Federal Ministry for the Environment, Germany  
**10:20** Wannee CHINSIRIKUL, NANOTEC, Thailand, President of ANF

### Group Photo

### Presentations

- 10:30** Keynote 1: “Recap of the 5<sup>th</sup> EU-Asia Dialogue”  
Ruslinda A. RAHM & Helme HELAN, NNC-MOSTI, Malaysia  
**10:40** Keynote 2: “ISO-TC229 - Ideas for ISO-INISS Cooperation”  
Denis KOLTISOV, BREC solutions, UK – chair of ISO TC 229  
**10:50** Keynote 3: “Safe and Sustainable by Design at OECD”  
Kathrin SCHWIRN, UBA, Germany  
**11:00** Keynote 4: “Characterization Research Efforts in Asian Countries”  
Wannee CHINSIRIKUL, NANOTEC, Thailand  
**11:10** Keynote 5: “German Interagency Working Group on Advanced Materials”  
Andrea HAASE, BfR, Germany  
**11:20** Keynote 7: “IRISS – International SSbD-Ecosystem – Synergies with INISS-nano”  
Emma STRÖMBERG, IVL, Sweden, Coordinator of IRISS-Project  
**11:30** Keynote 8: “EU-US-Communities of Research – Characterization Initiatives”  
Vladimir LOBASKIN, UCD, Ireland – EU-Co-Chair  
**12:15** Lunch Break

**13:15** Guided Tour

**14:00** INISS-nano Action Plan

The Role of INISS-nano Action Plans for Global Collaboration  
Andreas FALK, BNN, Austria – INISS-nano Co-Coordinator

**14:10**

### Breakout Session

Goal: to identify concrete actions that can be initiated by INISS-nano

- Group 1 Characterization Items in Standardization  
Chair: Steffi FRIEDRICHS  
Rapporteur: Georges FAVRE
- Group 2 Industrial Characterization Needs  
Chair: Patricia FARIAS, Pushplata SINGH  
Rapporteur: Gottlieb LINDNER
- Group 3 Characterization Facilities and Infrastructures  
Chair: Jörg RADNIK  
Rapporteur: Pavadee AUNGKAVATTANA
- Group 4 Societal and Ethical Considerations –  
Policy Framework for Characterization  
Chair: Ineke MALSCH, Waluree THONGKAM  
Rapporteur: Eric BLEEKER

**15:30** Break

Presentations (each group has 5 min to present & 5 min for Q&A)

- 16:00** Group 1. Georges FAVRE  
**16:10** Group 2. Gottlieb LINDNER  
**16:20** Group 3. Pavadee AUNGKAVATTANA  
**16:30** Group 4. Eric BLEEKER

**16:40** Closing

### Wrap-up – Announcement of 7<sup>th</sup> EU-Asia Dialogue

Alexander POGÁNY, Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, Austria  
Wannee CHINSIRIKUL, NANOTEC, Thailand, President of ANF

**17:00** Dinner Invitation

Anke JESSE and Laura GROSS, Federal Ministry for the Environment, Germany



# Participants list

Last name	First name	Organization
ADHOLEYA	Alok	ICRIER
A RAHIIM	Ruslinda	National Nanotechnology Centre, Ministry of Science, Technology and Innovation
AUNGKAVATTANA	Pavadee	National Nanotechnology Center
BANIYA	Nishchal	Bagmati UNESCO Club
BARHEINE	Andy	Merck Electronics KGaA
BLEEKER	Eric	Dutch National Institute for Public Health and the Environment (RIVM)
BOCHON	Anthony	ULB
BOSSE	Harald	PTB
BREYER	Anita	German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection
CHINSIRIKUL	Wanee	National Nanotechnology Center/Executive Director
COBA	Sebastian	University of Basque country and Borealis
DEMM	Eberhard	Université Grenoble Alpes
DIDERICH	Bob	OECD
EKAMORNTHANAKUL	Wipaporn	NANOTEC/NSTDA
EXNER	Thomas	Seven Past Nine GmbH
FALK	Andreas	BioNanoNet Forschungsgesellschaft mbH
FARIAS	Patricia	Phornano Holding GmbH/Federal University of Pernambuco UFPE
FAVRE	Georges	LNE
FRIEDRICH	Steffi	AcumenIST SPRL
GHAZI-KHANSARI	Mahmoud	TUMS
GHANBARI	Hossein	
GHAZI-KHANSARI	Mahmoud	TUMS
GONZALEZ	Mar	OECD
GROSS	Laura	German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection
GULUMIAN	Mary	School of Pathology, Molecular Medicine and Haematology, University of the Witwatersrand
HAASE	Andrea	German Federal Institute for Risk Assessment (BfR)
HELAN	Helme	National Nanotechnology Centre, Ministry of Science, Technology and Innovation
HEUNISCH	Elisabeth	BAuA
INDARAPRASIRT	Ramjitti	Member of Nanosafety Network for Industry and Nantechnology Association of Thailand
JESSE	Anke	German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection

Last name	First name	Organization
KELLY	Sean	Nanotechnology Industries Association
KHARRAZI	Sharmin	TUMS
KOLTSOV	Denis	BREC Solutions
KUHLBUSCH	Thomas	BAuA
LINDNER	Gottlieb Georg	Evonik Operations GmbH
LOBASKIN	Vladimir	University College Dublin
MALSCH	Ineke	Malsch TechnoValuation / EthicSchool
NELSON	Andrew	University of Leeds
OPOKU	Richmond Steven	Cleva Technologies Ltd
PATERMANN	Anne-Kathrin	German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection
PAVLICEK	Anna	Austrian Academy of Sciences
POGANY	Alexander	BMK
POHL	Anna	BAuA
POUYPOUY	Hassan	Iran Nanotechnology Innovation Council
RADNIK	Jörg	Bundesanstalt für Materialforschung und -prüfung (BAM)
RAMMELT	Andreas	German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection
RAUSCHER	Hubert	European Commission Joint Research Centre
RIEGO SINTES	Juan	Euroocean Commission Joint Research Centre
ROCCA	Cris	University of Birmingham
SCHÄFFTER	Tobias	Physik.-Techn. Bundesanstalt, Instituts Berlin & Leiter der Abteilung Medizinphysik & metrologische Informationstechnik
SCHMIDT	Eberhard	University of Wuppertal, Institute of Particle Technology
SCHWIRN	Kathrin	German Environment Agency (Umweltbundesamt, UBA)
SCOUTEN	Jon	Uni Potsdam
SEMBENE	Omar	Gambia Social Work Institute
SHARMA	Monita	PETA Science Consortium International
SINGH	Pushplata	TERI
STINGL	Andreas	Phornano Holding GmbH 4n
STRÖMBERG	Emma	IVL
TABATABAEI	Nasrollah	Tehran University of Medical Sciences
THONGKAM	Waluree	NANOTEC
TIWARI	Janak Raj	Society Development and Environment Protection
USCHMANN	Edda	ideeninsel, freie Journalistin
USMANI	Shirin	German Federal Institute for Risk Assessment (BfR)
VAN KERCKHOVE	Gunther	OCSiAI Group
VENTURINI	Chiara	Nanotechnology Industries Association (NIA)
WEHRHOFF	Siegfried	DVP, Freie Presse
ZAINAL	Halila	Ministry of Science, Technology & Innovation