The Future of Research & Innovation in Europe: Defining technology priorities for sustainable growth

SusChem Stakeholder Event 2018

20 June 2018
Thon Hotel Brussels City Center

#suschem2018
WIFI: Thon Hotels Access Code: olav
AGENDA

8:30 – 9:30
Registration

9:30 – 9:40
Welcome and introductions
Vivi Filippousi,
SusChem Secretary & Innovation Manager, Cefic

9:40 – 10:00
Opening speech by SusChem Chairman on the role of SusChem in Horizon Europe
Markus Steilemann,
Chief Executive Officer & Member of the Management Board, Covestro AG

10:00 – 10:20
Keynote speech from the EU Commission on Horizon Europe
Signe Ratso,
Directorate-General for Research & Innovation (DG RTD)

10:20 – 10:30
Introduction to the breakout sessions

10:30 – 11:00
Coffee break and transition into breakout rooms

11:00 – 13:00
Parallel breakout sessions
1. Creating the future with advanced materials: What are your priorities?
   Plenary Room
2. Creating the future with advanced process technologies: What are your priorities?
   Bergen Room

13:00 – 14:00
Lunch

14:00 – 15:00
SusChem National Technology Platform Network

15:00 – 15:30
Summary of the parallel breakout sessions

15:30 – 16:00
Coffee Break

16:00 – 17:15
High-level panel debate: Leveraging the strength of the innovation ecosystem to boost R&I in Europe

17:15 – 17:30
Closing remarks

17:30 – 18:30
Networking cocktail
Vivi Filippousi has recently been appointed as an Innovation Manager at the European Chemical Industry Council (Cefic), where she currently is focusing on Industrial Biotechnology and Biorefining applications. She is also taking over responsibility for the management of the European Technology Platform for Sustainable Chemistry (SusChem), and will contribute to the coordination of its strategy. She will be working closely with the European Commission and other institutions to deliver input from the chemical sector to Research, Development and Innovation.

Vivi completed her EIT Climate-KIC supported PhD in Chemical Engineering at Imperial College London, followed by further postdoctoral research. More specifically, she worked towards the synthesis of bio-based chemicals from lignocellulosic biomass, green catalyst development and the application of continuous flow reactors in biorefinery downstream processes. She has also previously worked in Procter & Gamble (Brussels Innovation Center) as an R&D Product Design manager, delivering a number of innovation and business continuity projects. Vivi’s experience encompasses science startups development (DSV, London), Academia (Sustainable Chemical Technology) and Industry.
Dr. Markus Steilemann has been Chief Executive Officer of Covestro since June 2018. His area of responsibility covers all commercial functions, including the three divisions Polyurethanes, Polycarbonates and Coatings, Adhesives, Specialties. In addition, central areas such as strategy, personnel and communications fall within his remit.

Born in Geilenkirchen, Germany in 1970, Steilemann graduated with a PhD in chemistry from RWTH Aachen University. He began his career with the Bayer Group in 1999. From 2008, Steilemann held various management positions in the Polycarbonates business unit at Bayer MaterialScience, the predecessor company of Covestro. Between 2013 and 2015, Steilemann headed the entire business unit headquartered in China, where he lived for several years.

Steilemann returned to Germany and joined the Covestro Board of Management in 2015 with responsibility for innovation. In addition to this role, he became head of the Polyurethanes business unit in the following year. From 2017 until his appointment as CEO, he was Chief Commercial Officer (CCO), responsible for innovation, marketing and sales.
Signe Ratso is Deputy Director General of DG RTD of the European Commission since 1 March 2018. She is responsible for International Cooperation in Research and Innovation as well as R&I in Industrial Technologies and Transport.

Before joining DG RTD Signe worked in different senior management positions in DG TRADE since 2006. From 2011 to 2018 she was Director for Trade Strategy, Analysis and Market Access and was also in charge of implementation issues as well as industrial sector aspects of the EU trade policy, including energy and access to raw materials. Previously (from 2007 to 2011) she was Director for WTO, legal matters and food-related sectors in DG TRADE. She also covered OECD issues, export credits and export controls of dual use goods. After joining the Commission at the beginning of 2006, she held the post of Principal Adviser in DG TRADE for the first year.

Before joining the Commission, Signe Ratso worked as Deputy Secretary General (from 1994 to 2005) at the Ministry of Economic Affairs and Communications of the Republic of Estonia. In this position she was responsible for all EU-related issues in policy areas including trade and industrial policy, energy, transport, telecommunications, information society, and internal market affairs. During Estonia’s accession negotiations she was responsible for negotiating six economic chapters.

She has two University degrees. In 1983 she graduated from Tartu University in Estonia as an English philologist and in 1993 in International Trade and International Economics.
Creating the future with advanced materials: what are your priorities?

Advanced material technologies enable breakthrough application development across a wide range of value chains. Innovative products have a significant impact on improving the life quality of citizens and offer solutions to many societal and environmental challenges. In addition, advanced materials open a new horizon of business models, markets and forms of interdisciplinary cooperation.

In this breakout session, you will be inspired by impactful examples in the field of innovative advanced materials development. Three leading experts will give their vision on how the future should look in the following technology areas: Plastics Circularity, Materials for batteries, and materials modelling and functionalities. You will be able to interact with the experts in these fields and provide your input, which will set the basis for the next Materials Strategic Innovation and Research Agenda for Europe.

We will also discuss the extent to which these three areas could contribute to possible missions in the frame of Horizon Europe.

Co-chairs:
- Jens Rieger
  Senior Vice President, Advanced Materials & Systems Research – Technology Innovation, BASF SE
- François Monnet
  Advanced Technologies Director, Solvay

Speakers:
- Betrand Fillon
  General Director of Research, Innovation Plastics Composites (IPC)
- Germán Cabañero Sevillano
  Head Of Strategic Partnering, CIDETEC, Applied Research Center in Energy Storage, Nanomedicine and Surface Engineering
- Jens Rieger
  Senior Vice president, Advanced Materials & Systems Research – Technology Innovation, BASF SE
Jens Rieger received his PhD in 1989 in Theoretical Physics in Germany. The same year he joined the Polymer Physics Department of BASF, where he was involved in R&D projects in the fields of plastics, coatings and paints, foams, cosmetics, pharma formulations, and detergents.

Within BASF he is currently responsible for scouting new technologies in the field of advanced materials and materials systems and for the incubation of new technological approaches. Jens Rieger is a former member of the advisory boards of the journals Advanced Materials (Wiley VCH) and Soft Matter (Roy. Soc. Chem.), and was co-editor of the Physik Journal (Journal of the German Physical Society) from 2008 until 2012. He is author or co-author of more than 100 scientific publications and contributions to books and patents.

In 2005 Jens Rieger was appointed Distinguished Guest Professor at the Changchun Institute of Applied Chemistry (CIAC), Chinese Academy of Sciences. He received the Walther Nernst-Denkmünze of the Deutsche Bunsengesellschaft in 2011.

After graduating from Ecole Polytechnique (Paris) in 1981, François Monnet obtained a PhD in Experimental Nuclear Physics in 1985 (Paris) followed by a Masters degree in Artificial Intelligence (1986 Paris). He worked for four years at Alcatel-Lucent’s corporate laboratories in artificial intelligence, before joining Solvay in 1989 to manage chlorofluorinated production and then take on the role of plant manager in mineral and pharmaceutical chemistry.

Since 2006, François has been developing Solvay's activities in Nanotechnologies and Renewable Based Chemistry, as part of Solvay’s Corporate New Business Development. He is currently the President of ACDV, the French Industrial Association for Plant-Based Chemistry. He is also member of the Board of Directors of A.Spire, the association managing the SPIRE PPP.

He was a Board member of SpecialChem (Paris) and of the Capricorn Cleantech VC fund (Leuven). He is part of the Advisory Board of Sofinnova Green Seed Fund and a member of ANR (French National Research Agency) Advisory Groups on chemistry and materials.
Dr. Bertrand Fillon is currently the General Director of Research of IPC, the French Plastic and Composites Institute. He defines, organises and follows the CTIPC projects portfolio. He is also the head of the scientific committee of the French polymer cluster Plastipolis, he is scientific advisor of the French Polymer Group (GFP) and of the CRITT MDTS in France. He is in the scientific committee of the OE-A (Organic Electronic Association). He is also involved in different European platforms and associations, and in various expert groups at international and national levels.

He has also been in the board of NANOfuture, EMIRI, and 4M amongst others. From 2003 to 2013, he worked at CEA as Vice President of European Affairs. From 1990 to 2003, he worked for Pechiney Packaging as coordinator of the Global Packaging R&D activities and leader of the Pechiney polymer expert group. Before that, Dr Fillon worked for Orkem as a research engineer of polymer extrusion. He has a number of technical publications, books co-authored and also patents in the field of polymer packaging and processes.

Germán Cabañero Sevillano is the Head of Strategic Partnerships at CIDETEC the Spanish applied research organisation. He obtained his Material Science Engineering degree at the University of Navarra in 2002. He received an extraordinary award for his Degree only conferred on the best student in the year. After eight years at CEIT, SNIACE, CTC and other leading enterprises, he moved to Fundación CIDETEC in Sept. 2009. He is now leading the Strategic Partnership Unit of CIDETEC. He possesses wide expertise in material science and the development of materials. He has participated in several national and regional research and development projects, including contracts with industry and European Projects (FP7 and H2020). He is co-author of more than 30 articles in international journals.
SESSION 2

Creating the future with advanced process technologies: what are your priorities?

Process Technology developments are crucial to the transition to a more circular, energy efficient and carbon neutral industry. Sustainable process technologies are key to the utilisation of alternative feedstocks and the integration of alternative energy sources in the chemical sector. As a consequence, the development of advanced processes technologies is essential to boost competitiveness and growth in Europe.

This breakout session will start with impulse presentations from three experts on the longer-term potential of the utilisation of electricity in chemical processes; the role of industrial biotechnology; and the expected impact of digital technologies.

The short, mid and long-term process technology priorities will be discussed with the experts for all types of feedstock and energy sources.

You will have the chance to exchange with renowned experts in advanced process technologies and contribute actively with your input to shape the European Research and Innovation Agenda on Chemical Process Technologies and their contribution to possible missions in the context of Horizon Europe.

Co-chairs:
Andreas Förster
Head of the Department for Research Coordination and Conferences, DECHEMA
Joanna Dupont-Inglis
Director of Industrial Biotechnology, EuropaBio

Speakers:
Andreas Kohl
Head of Research Biotechnology, Group Biotechnology (GBIO), Clariant
Tom van Gerven
Professor in Process Intensification at KU Leuven, Belgium
Jane Arnold
Head of Global Process Control Technology, Covestro

Andreas Förster studied chemistry and received his doctorate in physical chemistry from the University of Würzburg in 1997. Since 1997, he has been an employee of DECHEMA, the German Society for Chemical Engineering and Biotechnology, where he heads the Department for Research Coordination and Conferences.

In 2010, he became Head of ProcessNet, the German platform for process engineering, chemical engineering and technical chemistry, jointly supported by DECHEMA and VCI. Dr. Förster has many years of experience in the identification of new trends in chemistry and chemical process engineering, and in the promotion of innovation.

He is coordinator of the National Technology Platform SusChem Germany. He has a broad international network of experts from industry and academia in the field of chemistry and chemical engineering.
Joanna Dupont-Inglis first joined EuropaBio, the European Association of Bioindustries, in February 2009 and in April 2011 was appointed Director of Industrial Biotechnology. Her work within EuropaBio involves developing a more supportive, predictable and coherent EU policy environment for the deployment of industrial biotechnology products and processes within the broader bioeconomy.

EuropaBio seeks an innovation-driven EU research agenda for biobased industries, enabled by industrial biotechnology. Coalition building with other sectors of the circular bioeconomy has been a key area of activity, both in the development of the Biobased Industries Joint Undertaking (BBI JU) and through the European Bioeconomy Alliance.

Joanna also works towards improving understanding of the benefits and solutions provided by industrial biotechnology, as well as promoting it as a key enabler for a more competitive and sustainable bioeconomy. In 2016 Joanna was appointed as chair of the EU Bioeconomy Panel.

Tom van Gerven's expertise is focused on the use of alternative energy forms (ultrasound, light) for chemical processes, in particular crystallisation, extraction and leaching. He is General Coordinator of the MSCA-ITN project "Continuous Sonication and Microwave Reactors (COSMIC)", the EIT-KIC Raw Materials Network-of-Infrastructure "Intensified Flow Separator Infrastructure and Expertise Network (INSPIRE)" and the recently granted SPIRE project "Sonication and Microwave Processing of Material Feedstock (SIMPLIFY)". He has been also involved in several other European projects.

He is Chairman of the EFCE Working Party on Process Intensification since 2013 and Vice-President of the European Society of Sonochemistry since 2018. He also serves as a member of the Expert Panel Chemical Engineering and Material Science for the Flemish Science Fund (FWO).
Andreas Kohl is the Head of Research Biotechnology, Group Biotechnology (GBIO), at Clariant in Planegg, Germany. He has been in this role since 2015. He joined Clariant in 2011 as a Manager of Renewable Chemicals and became the Head of Department for Enzyme Research and Development. From 2005 to 2007, he worked as a Post-Doctoral Researcher at Karolinska Institutet, MBB, Stockholm, Sweden. Andreas has a background in Chemistry and a Ph.D. in Biochemistry from the University of Zürich.

Jane Arnold is the Head of Global Process Control Technology at Covestro since October 2017. Her responsibilities include all systems, instrumentation and electrical power that run Covestro production facilities at over 30 sites globally. Her major focus is to improve Digitalisation in Manufacturing with a goal of developing a cognitive digital plant. Covestro is among the world’s largest polymer companies.

Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life.

Jane has a degree in Mathematics and has over 25 years of experience in Process Control Technology. She started with Bayer MaterialScience in 2005 at their Baytown, Texas facility. There she moved to various levels of technical and management positions. Bayer MaterialScience became Covestro in 2015. Arnold relocated to the Covestro Headquarters in Leverkusen Germany in 2017.
HOW CAN MY NTP BE REPRESENTED IN HORIZON EUROPE?

One of the key priorities for SusChem is to strengthen its network of national platforms by ensuring that their stakeholder engagement efforts fully benefit from the entire innovation ecosystem across countries brought together within the European platform.

In this session, Suschem NTP representatives will participate in a panel discussion to share their successful strategies and achievements in stakeholder engagement. The panel will also reflect on how to maximise their impact on the national scene. The second part of the discussion will focus on the future and how to strengthen the role of the NTPs within the next EU innovation framework, Horizon Europe.

The session, moderated by the SusChem NTP Chair, Susanne Coles, will also be a great opportunity to present the new platforms recently approved by the SusChem board in 2018.
The proposal for the next Multiannual Financial Framework (MFF), recently published by the European Commission, recommends an increase in funding for Horizon Europe and sends a clear signal that innovation is as an important priority for Europe.

Innovation is essential for the EU to build a low carbon, circular and digital economy and to continue generating jobs and attracting investment. This year’s panel discussion will bring together senior players from the chemical industry, academia, research technology organisations (RTOs), SMEs and EU institutions to address common innovation challenges, debate the priorities crucial to maintaining Europe’s leading role in the global innovation race, and how the proposed structure of Horizon Europe will mobilise our innovation ecosystem to develop fast-to-market solutions.

1. The importance, balance and role of a strong technology-oriented programme on Key Enabling Technologies in Horizon Europe;
2. The purpose and impact of SusChem’s innovation ecosystem players in Horizon Europe;
3. The contribution of the chemical and biotechnology sectors to sustainable growth;
4. The opportunities to accelerate sustainable chemistry innovation and deliver real impact.
We will seek answers to questions including:

- From what we know about the structure of Horizon Europe, what can we do better than Horizon 2020?
- What are our expectations and the expectations from the Commission for the chemical and biotech sectors in Horizon Europe?
- What are our short, mid and long-term priorities and needs?
- How can stakeholders be represented in shaping Horizon Europe?

Marco Mensink is Director General of Cefic, the European chemical industry Council, since May 2016. With members adding over 550 billion Euro to the EU economy annually, Cefic is the largest industry sector representation of its kind in Brussels. As part of this role, Mr. Mensink shapes the strategy and direction of the European chemical industry, uniting more than 22 national federations, 8 associate federations and 650 members and affiliates from all over Europe.

A Dutch national, he is a seasoned public affairs professional, who has lived and worked in Brussels since 2006. He has an extensive network of contacts within European institutions and the wider Brussels sphere, and is active in several European Commission High Level Groups. Before joining Cefic, Mr Mensink was Director General of the Confederation of European Paper Industries (CEPI), representing the sector both at European and global level.

Starting his career at Ernst & Young Management Consulting, he worked for six years in environmental management and due diligence projects. He then worked for six years at the Royal Netherlands’ Paper and Board Association, also representing the Dutch industry in Brussels. Marco Mensink holds a Master of Science Degree in Forestry and Business Management from the Agricultural University of Wageningen in the Netherlands. Born in 1968, he is married and has three children.
Since 2010, Olaf Wachsen is the Head of Group Process Technology at Clariant - Group Technology & Innovation. In 1996, he started his career at Hoechst AG and moved in 1999 to Clariant. His industrial carrier is always linked with chemical engineering and operations topics covering R&D, innovation management, sales, investment projects and plant management on a global level. His mission is to bring innovation to scale and having the best and innovative technologies in place in order to ensure best plant performance combined with priorities in sustainability and environment.

Since 2016, he is an A.SPIRE Board Member. Before that he was a member of the Innovation SIG. His motivation is to discover innovation needs for process industry and drive things forward. Furthermore, since 2015, he is the Deputy Head of the Dechema Expert Group on Reaction Engineering whose intention is to shape chemical engineering research topics and change in education of scientists and engineers.

Olaf Wachsen was born 1967 in Berlin and studied chemistry and a PhD in Polymerisation Reaction Engineering at the TU Berlin. He is married and has one daughter.

Peter Dröll is in charge of Industrial technologies in the European Commission’s Research and Innovation Department. In this capacity, he oversees the optimal integration of Research and Innovation in the design and implementation of relevant EU policies that contribute to Europe’s industrial and technological leadership.

His previous positions in the European Commission include financial control of the Joint Research Centre, enforcement of EU environmental legislation, accession negotiations with Poland and coordination of the environment negotiations with all accession countries, Innovation Policy and European Research Area Policy. He was a Cabinet member of Enlargement Commissioner Günter Verheugen and Head of Cabinet of the Science and Research Commissioner Janez Potočnik.

Peter is a lawyer by training with a doctorate degree in German constitutional law and European law. Before joining the European Commission in 1991, Peter worked as a lawyer in Germany.
Ferdi Schüth studied Chemistry and Law in Münster. He received his doctorate in Chemistry in 1988 and passed the First State Exam in Law in 1989. In 1995, he became Professor of Chemistry at the University in Frankfurt. Since 1998 he has been Director of the Max-Planck-Institut für Kohlenforschung (Mülheim an der Ruhr) and since 2014 Vice-President of the Max-Planck-Society (Munich).

Ferdi Schüth has received several awards including the Award of the Stifterverband der Deutschen Wissenschaft, Gottfried-Wilhelm-Leibniz-Award, Wöhler-Award and Hamburger Wissenschaft-Award. He is member of numerous editorial boards, editor of “Chemistry of Materials”, member of several committees, including Dechema, DFG, the selection committee of the German Future Award, Professor h.c. at the Dalian University (China) and is founder of the hte AG.

His research fields comprise energy, biomass conversion, crystallization processes, synthesis of catalyst materials, catalysis, zeolites, ordered mesoporous materials and hydrogen storage materials.

He is married and father of two daughters.

Kateřina Šebková (read Katerzina Shebkovaa) has a degree and PhD in chemistry (graduate of Institute of Chemical Technology in Prague and Université Louis Pasteur-Centre National de Recherches Scientifiques in Strasbourg, France). She worked as a chemical expert and negotiator for the Czech Ministry of Environment in chemicals management, in particular on mercury and persistent organic pollutants, at the EU and the United Nations level for eight years. She joined the Research Centre for Toxic Compounds in the Environment (RECETOX) of the Faculty of Science at the Masaryk University in Brno, Czech Republic in 2012.

Currently, she is director of the National Centre of Toxic Compounds and of the Stockholm Convention Regional Centre for capacity building and the Transfer of Technology, two bodies that are hosted by RECETOX. Her work comprises cooperation with Czech and international stakeholders, teaching, training and support policy-science communication and application of science in practice. She also works with international organisations such as UN Environment, World Health Organization, UNIDO, UNDP and the Secretariats of the multilateral environmental agreements protecting human health and environment as consultant, trainer and chairperson. She is also member of a number of expert bodies under global chemical agreements.
Martin Stephan joined CARBIOS in early 2017 as the company was entering a new phase of its development, having successfully achieved a five-year and multi-million collaborative R&D programme and moving to industrialisation.

Prior to joining CARBIOS, Martin Stephan held several senior international positions at Du Pont de Nemours, Chemours and at the chemical branch of the French Oil and Gas major, Total. He worked in France, Germany, Italy and in Switzerland, where he is currently resident.

Martin Stephan holds a Master in Business Economics from L’Ecole des Hautes Etudes Commerciales de Paris (HEC) and a BA in Economics from Paris II University.

The 2018 SusChem Brokerage Event will be held on 23 October 2018, at Hotel Le Plaza, in Brussels.

More information coming soon at suschem.org

WE LOOK FORWARD TO MEETING YOU THERE.
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