INTERNATIONAL VDI CONFERENCE 2014
PLASTIC WASTE RECYCLING
Processing and new applications

Renowned speakers will present their results on the following topics:
• Overview on plastic waste management in Europe – Chances and challenges
• EU legislation and economics
• Reducing, reusing, recycling: How plastics behave on different levels of the waste hierarchy
• Innovative sorting technologies
• New business models and applications: From plastic waste to high quality tailor made plastics products

Date and venue:
October 21–22, 2014
Frankfurt, Germany

Conference Chair:
Dr. Michael Scriba, CEO, mtm plastics GmbH,
Niedergebra, Germany
10:00 Registration & welcome coffee

10:30 Chair’s welcome and opening address

I. EU-LEGISLATION AND PLASTIC WASTE MANAGEMENT IN EUROPE

10:40 An European strategy for plastic waste
- The European context
- Challenges for plastic in a circular economy
- Plastic and recycling
- Producer and consumer responsibility
- Outlook

Prof. Dr. jur. Helmut Maurer, Principle Lawyer, Unit A 2 Waste Management and Recycling, European Commission, Brussels, Belgium

11:20 Overview on plastic waste management in Europe – Chances and challenges
- Life cycle considerations
- Plastic waste streams from commercial and municipal collection
- Plastic waste management: Treatment, recycling and recovery
- Waste streams in Germany and Europe

Dr. Ingo Sartorius, Managing Director, Consumer and Environmental Affairs, PlasticsEurope Deutschland e.V., Frankfurt, Germany

12:00 How to increase the plastic recycling targets in Europe: Perspective of a waste management group
- How legislation can support plastics collection, sorting and recycling
- Requirements for the collection and treatment of plastic waste flows
- Requirements for plastic sorters and exporters of tomorrow
- Contribution of plastic converters and OEMs
- Conclusions

Dr. Andreas Kessler, Head of Plastics Project Business Innovation, SITA Benelux + Germany Business Innovation, Grünstadt, Germany

12:40 Lunch

II. REDUCING, REUSING, RECYCLING: HOW PLASTICS BEHAVE ON DIFFERENT LEVELS OF THE WASTE HIERARCHY

14:00 Plastic recycling, upcycling and downcycling – Does it exist at all?
- How does plastic recycling work in practice?
- What is the meaning of upcycling and downcycling?
- Is “closed loop-recycling” the best?
- Definition of high quality

Dr. Herbert Snell, CEO, MultiPet GmbH/Multiport GmbH, Bernburg, Germany

14:40 Plastics Recycling Europe
- Plastics
- Plastics Recycling
- Collection and sorting
- Recycling targets
- Eco design

Dr. Antoon Emans, President, Plastics Recyclers Europe, Brussels, Belgium
15:20 RecyClass – A design-for-recycling tool supporting plastic packaging designers
• What is the general scenario about plastics use and recycling in the EU?
• Why a design-for-recycling tool can help boosting the recycling ratio
• What is RecyClass?
Dott. Paolo Glerean, PET Sheet Sales Director, Aliplast SpA, Ospedaletto di Istrana, Italy

16:00 Networking & coffee break

16:30 Eco-efficiency of plastic waste recycling: Still controversial after 30 years of discussion
• Crude oil consumption for plastics production compared to other sectors (heating, mobility, electricity)
• Greenhouse gas (GHG) assessment of EoL plastics from the packaging sector
• Comparison of GHG savings of EoL plastics and other recyclables (metals, glass, paper)
• Comparison of costs and GHG savings of energetic utilized vs. recycled plastics
• Final comparison of eco-efficiency of thermal treatment and recycling of EoL plastics
Dr.-Ing. Matthias Franke, Scientist, Recycling Management, co-authors: Dipl.-Ing. Katharina Reh; Peter Hense, M.S.c., Fraunhofer UMSICHT, Sulzbach-Rosenberg, Germany

17:10 Landfill mining and Waste to Energy
• Recovery of materials and energy
• Case study: Closing the circle in Belgium
• Plastics in landfills
• Options for valorisation
Dr. Ir. Daneel Geysen, Manager Science & Technology, Group Machiels, Hasselt, Belgium

17:50 End of conference day one

18:30 Get together
At the end of the first conference day we kindly invite you to use the relaxed and informal atmosphere for deepening talks with other participants and speakers.

ABOUT US
The Association of German Engineers (VDI) is one of the largest technical-scientific associations in Europe. Throughout the years, the VDI has successfully expanded its activities nationally and internationally to foster and impart knowledge about technology-related issues. As a financially independent, politically unaffiliated and non-profit organization the VDI is recognized as the key representative of engineers both within the profession and in public.

OUR MEDIA PARTNERS

SECOND DAY
III. INNOVATIVE SORTING TECHNOLOGIES

09:00 PET and PO recycling approach
- Definition of the input quality and output expectation for PET and PO
- Main limits of the NIR technology
- Pre-sorting concept based on bottles sorting
- Purification concept based on flakes sorting
Frédéric Durand, Project and Sales Manager, TOMRA Sorting GmbH, Mülheim-Kärlich, Germany

09:40 Higher quality recycling on plastic printed waste
- Elimination of ink from printed plastics
- Low cost process to eliminate ink from printed plastics
- Water based and biodegradable process, no solvent involved
Augustin Lozano, Manager of R&D, Department of R&D, OLAX22, Alfarrasí, Spain

10:20 Bioplastic – A new challenge?
- Regulations of end of life plastics
- Market potential of bioplastics
- Quality versus quantity of recycling
- Biodegradable plastics in waste streams
Nicole Seidl, M.Sc., Manager Industry Affairs, Communication and Governmental Relations, BASF SE, Ludwigshafen, Germany

11:00 Networking & coffee break

11:30 Sorting of plastics – From household waste to granulates
- Plastics and politics in the Netherlands
- Plant design, concept and lay-out KSI Wijster – Plastic sorting plant
- Data and qualities KSI-Wijster
- Challenges for the future
Gert Klein, Commercial Manager, co-author: Berry Bellert, ATTERO b.v., Wijster, the Netherlands

IV. PROCESSING OF PLASTIC WASTE & NEW BUSINESS MODELS

12:10 Case studies: From mixed municipal post-consumer waste to high quality tailor made plastics products
- Mechanical upcycling technology that enables plastic waste a second life
- Closed loop method – Turning impure, mixed municipal plastic waste into high-quality re-compounds
- Sorting technology, mechanical reprocessing methods and special chemical treatment processes
- An economically sound option for supplying high-quality plastic raw material
- Process, protect natural resources and the environment with significant savings in GHG
Asst. Prof. Dr. Manica Ulcnik-Krump, Head of R&D, BU Recycled Resources, co-author: Dirk Mellen, Managing Director, ALBA Recycling GmbH, Berlin, Germany

12:50 Lunch
14:00 Improve material properties: Basics and examples
- Material degradation and resulting properties
- Upgrading of material properties
- Processing and compounding

Prof. Dr.-Ing. Hans-Peter Heim, Head of Department of Thermal Power Engineering, University of Kassel, Germany

14:40 Challenges for plastic recycling processing in PET thermoforming
- Development potential for new capacities
- Difference per country
- Potential sources and markets for recycled materials
- Technical requirements automatic, manual and safety

Casper van den Dungen, Vice President / Managing Director, Plastics Recyclers Europe / Poly Recycling GmbH, Weinfelden, Switzerland

15:20 Conference chair’s closing remarks

15:30 End of conference

EXHIBITION / SPONSORING

If you want to meet with and reach out to the first-rate experts attending this VDI conference and to powerfully present your products and services to the well-informed community of conference participants, please contact:

ANTONIA SCHLEMMER
Project Consultant
Exhibitions & Sponsoring
Phone: +49 211 6214-592
Fax: +49 211 6214-97 592
Email: Schlemmer@vdi.de
International Workshop:
RECYCLING PLASTICS – TECHNOLOGIES, PROPERTIES AND APPLICATION

Date and venue:
October 23, 2014
Frankfurt, Germany

Workshop Chairs:
Dr.-Ing. Martina Lehmann, Managing Director;
Jakob Rzymann, M. Sc., Project Manager; both: MAKSC GmbH (Magdeburger Kunststoff-Service-Center), Barleben, Germany

09:30–16:00 o’clock

- Impact of collection systems on the further recycling of plastics
- Sorting of mixed plastic waste and resulting effects on the design of processing technologies
- Characterization of intermediate products and final output – Specifications and requirement profiles
- Modification of materials with fillers
- Possibilities and limits in the additivation and coloring of recycling materials
- Applications of recycling material – Possibilities and boundaries

Find more information here: www.vdi-international.com/workshopplastics
DIRECTIONS TO THE HOTEL

By plane
From Frankfurt Airport, please take the airport shuttle (Bus Number 2) from the Terminal 1 arrival area. The shuttle departs every 30 minutes between 6:15 am and 11:45 pm. The drive from the airport to the hotel takes approximately 15 minutes.

By public transport
From North and East: Take the A3 and exit at the Raunheim junction and continue towards Raunheim. Exit to Raunheim after 1 kilometer (first exit). On the traffic circle, take the first turn-off toward Raunheim. Follow this street for 800 meters. The hotel is located on the left hand side.

From South: Take the motorway A67 until you can exit on A3 towards Cologne. Follow the directions above.

From West: Take the A60 in the direction of Mainz. Change on to A67 towards Frankfurt until you can exit on A3. Then follow the directions above.

By car
From Frankfurt central station: Take the S8/S9 in the direction of Wiesbaden and disembark at Raunheim Bahnhof. Walk back parallel to the train tracks (Karstrasse) on the same side as the exit, and the hotel will be on your right-hand side after 700 meters.

TERMS AND CONDITIONS

Registration: Registrations for conference attendance must be made in writing. Confirmation of your registration and the associated invoice will be mailed to you. Please do not pay your conference attendance fee until you have received our invoice and its invoice number to be stated for transfer. German VAT directives apply. Please state your VAT-ID with your registration.

Conference venue:
NH Frankfurt Rhein-Main
Kelsterbacher Str. 19–21
65479 Raunheim, Frankfurt, Germany
Phone: +49 61 429900
Email: nhrheinmain@nh-hotels.com
Website: http://www.nh-hotels.com

Hotel room reservation:
A limited number of rooms has been reserved for the benefit of the conference participants at the NH Frankfurt Rhein-Main, Phone: +49 61 429900, Email: nhrheinmain@nh-hotels.com, Website: http://www.nh-hotels.com

Please refer to “VDI Conference”. For more hotels: www.vdi-wissensforum.de/hrs

VDI Wissensforum service package: The conference package includes the conference documents (online), beverages during breaks, lunch and the get together on October 21, 2014. The workshop package includes the documents (online), beverages during breaks and lunch.

Conference attendance conditions and terms: By way of your registration you accept the conference attendance conditions and terms of VDI Wissensforum GmbH as binding. Any cancellation of your registration must be made in writing. We will charge you only an administrative fee of € 50.00 plus German VAT if you cancel your registration earlier than 14 days ahead of the conference date. Any cancellation that reaches us after this deadline will entail the conference attendance fee as stated in our invoice to be charged in full. The date of the post office stamp of your written cancellation will be the decisive criterion. In that case, we will gladly mail you the conference documents on request. Subject to agreement, you may name a substitute participant. Individual parts and sections of conferences and seminars cannot be booked. You will be informed without delay if an event has to be cancelled for unforeseeable reasons. In that instance, you will be entitled only to a refund of your conference attendance fee if already paid. We reserve the right to exchange speakers and/or change the program sequence in exceptional cases. In any case, the liability of VDI Wissensforum GmbH is restricted exclusively to the conference attendance fee.

Data protection: VDI Wissensforum GmbH captures and processes the address data of conference participants for their own corporate advertising purposes, enabling renowned companies and institutes to reach out to participants by way of information and offers within their own marketing activities. We have outsourced in part the technical implementation of data processing to external service providers. If you do not want to receive any information and offers in the future, you may contradict the use of your personal data by us or any third parties for advertising purposes. In that case, kindly notify us of your contradiction by using the email wissensforum@vdi.de or any other of the contact options.

REGISTRATION
INTERNATIONAL VDI CONFERENCE 2014
PLASTIC WASTE RECYCLING
Processing and new applications

Please choose your price category

<table>
<thead>
<tr>
<th>PARTICIPATION FEE + VAT</th>
<th>PERSONAL VDI MEMBERS + VAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>VDI-Conference 21.–22.10.2014 (06KO965014) € 1.390</td>
<td>VDI-Conference 21.–22.10.2014 (06KO965014) € 1.290</td>
</tr>
<tr>
<td>University Staff Members VDI-Conference 21.–22.10.2014 (06KO965014) € 695</td>
<td></td>
</tr>
<tr>
<td>Workshop 23.10.2014 (06ST965001) € 810</td>
<td>Workshop 23.10.2014 (06ST965001) € 710</td>
</tr>
<tr>
<td>Package Price € 1.900</td>
<td>Package Price € 1.800</td>
</tr>
</tbody>
</table>

please tick the boxes above

I am interested in sponsoring and/or exhibition

VDI membership no. Title
First Name Last Name
Department
Phone Fax
Email
Company(Institute VAT-ID
Street
ZIP Code, City
Please state your invoice address if this differs from the address given

Participants with an invoice address outside of Austria, Germany and Switzerland are kindly requested to pay by credit card:

- Visa
- Mastercard
- American Express

Card holder
Card no.
Valid until (MM/Y) Security Code

DATE YOUR SIGNATURE

Participants with an invoice address outside of Austria, Germany and Switzerland are kindly requested to pay by credit card:

- Visa
- Mastercard
- American Express

Card holder
Card no.
Valid until (MM/Y) Security Code

DATE YOUR SIGNATURE

Participants with an invoice address outside of Austria, Germany and Switzerland are kindly requested to pay by credit card:

- Visa
- Mastercard
- American Express

Card holder
Card no.
Valid until (MM/Y) Security Code

DATE YOUR SIGNATURE

Participants with an invoice address outside of Austria, Germany and Switzerland are kindly requested to pay by credit card:

- Visa
- Mastercard
- American Express

Card holder
Card no.
Valid until (MM/Y) Security Code

DATE YOUR SIGNATURE