

5th CONFERENCE ON FINAL SINKS - Program

Monday

09:00-09:20 **Welcome note and Opening**

09:20-10:00 **Keynotes**

Paul H. Brunner (Professor emeritus of TU Wien) “Sink – a term to stay?”

Shinichi Sakai (Kyoto University, Japan) “Plastic materials from the point of 3R Plus principle and clean cycles”

10:00-11:00 Session 1 – Recycling and Circularity
Chair: Caroline Roithner (TU Wien)

Tamara Bimesmeier / Karin Gruhler (Leibniz Institute of Ecological Urban and Regional Development - Dresden, Germany) How Much Recycling Makes Sense?

Neill Bartie (Helmholtz Institute Freiberg for Resource Technology - Freiberg, Germany) Metal Interactions And Symbioses: Optimization Of Quality, Quantity And Sustainability

Magdalena Klotz (ETH Zurich - Zurich, Switzerland) Can High Plastic Recycling Rate Targets Be Reached Without Posing A Risk To Human Health?

11:00-11:30 *Coffee break*

11:30-12:50 Session 2 – Recovery of Ashes I
Chair: Dominik Blasenbauer (TU Wien)

Mario Grosso (Politecnico di Milano - Milano, Italy) Assessing The Contribution Of Aluminium Recovery From Waste Incineration Bottom Ash To The EU Recycling Targets

Florian Huber (TU Wien - Wien, Austria) The Effect Of MSWI Bottom Ash Treatment On The Quality Of Secondary Raw Materials

Hiroki Kitamura (National Institute for Environmental Studies - Tsukuba, Japan) The Impact Of Diatomite On Immobilization Of Lead In Municipal Solid Waste Incineration Fly Ash

Ekaterina Korotenko (Institute of Chemical Process Fundamentals of the CAS, v.v.i. - Prague, Czech Republic) Resource Recovery Potential Of MSWI Fly Ash Acid Extraction: A Case Study

12:50-14:00 *Lunch*

14:00-15:20 Session 3 – Waste Management
Chair: Nora Fricko (TU Wien)

Kenichi Nakajima (National Institute for Environmental Studies - Tsukuba, Japan)

Tracing The Ever-Changing Global Supply Chain Of Natural Resources: Used And Unused Extraction Materials Induced By Consumption Of Iron, Copper, And Nickel

Junya Yano (Kyoto University - Kyoto, Japan)

Greenhouse Gas Reduction Potential of Household Waste Prevention Including Single-Use Products

Georg Schiller / Karin Gruhler (Leibniz Institute of Ecological Urban and Regional Development - Dresden, Germany)

Resource-Conserving Waste Recovery And Its Consequences For Recycling And Landfilling

Hsiu-Ching Shih (Academia Sinica - Taipei, Taiwan, R.O.C.)

Assessing Resource Efficiency By The Input-Output Model With The Absorbing Markov Chain

15:20-15:50 *Coffee break*

15:50-16:50 Session 4 – Hazardous Substances, Contaminants
Chair: Florian Huber (TU Wien)

Aleksander Jandric (Institute of Waste Management, University of Natural Resources and Life Sciences Vienna - Vienna, Austria)

Abundance Of Brominated Flame Retardants In Weee Plastics And Their Impact On Recycling Targets

Yong-Chul Jang (Chungnam National University - Daejeon, South Korea)

Occurrence And Substance Flow Analysis Of Polybrominated Diphenyl Ethers (PbDEs) In Waste Materials In South Korea

Stefanie Prenner (University of Natural Resources and Life Sciences - Vienna, Austria)

Engineered Nanomaterials In Plastic Products - A Material Flow Analysis Using The Example Of Carbon Black Containing Tires

16:50 *End*

18:30 SIGHTSEEING TOUR & CONFERENCE DINNER

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Tuesday

09:00-10:20 Session 5 – Material Flow Analysis Chair: Sabine Dworak (TU Wien)

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| Di Dong (Leiden University - Leiden, The Netherlands) | Scenarios For Future Copper Demand And Supply In China |
| Azusa Oita / Kazuyo Matsubae (National Agriculture and Food Research Organization (NARO) - Tsukuba, Japan) | Resource Use, Recycling, And Energy Emissions In Japanese System From Nitrogen Perspective |
| Harald Desing (Empa - St.Gallen, Switzerland) | Material Selection In Product Design Based On Closed Loop Recycling Efficiency |
| Eiji Yamasue (Ritsumeikan University - Kusatsu, Japan) | Resource Paradox Problem Visualized By Total Material Requirement |

10:20-10:50 *Coffee break*

10:50-12:10 Session 6 – Recovery of Ashes II Chair: Therese Schwarzböck (TU Wien)

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| David Laner (University of Kassel - Kassel, Germany) | Waste Incineration Bottom Ash As Construction Material: Building Applications And Impacts On Substance Flows |
| Jonas Mehr (ETH Zurich - Zurich, Switzerland) | Producing Clean Metal Fractions From Dry Incinerator Bottom Ash: What Is The Environmental Benefit? |
| Sabrina Spatari (Technion - Israel Institute of Technology - Haifa, Israel) | Recycling Of Coal Combustion Residues Into Lightweight Aggregates |
| Michal Šyc (Institute of Chemical Process Fundamentals of the CAS, v.v.i. - Prague, Czech Republic) | Incineration Bottom Ash Utilization In The Czech Republic: Current Situation And Perspectives |

12:10-13:30 *Lunch*

13:30-14:50 Session 7 – Policy Chair: Alexej Parchomenko (TU Wien)

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| Tharaka Gunaratne (Linköping University - Linköping, Sweden) | Drivers And Barriers Of Shredder Fines Valorisation |
| Rokuta Inaba (National Institute for Environmental Studies - Tsukuba, Japan) | National Effects Of Integrated Waste Management Measures By Municipalities In Japan |
| Yan-Ting Lai (National Taiwan University - Taipei, Taiwan, R.O.C.) | How To Create The Value Of Secondary Material? |
| Xianlai Zeng (Tsinghua University - Beijing, China) | Urban Mining towards Environmental and Resource Sustainability |

14:50-15:20 *Coffee break*

15:20-16:20 Session 8 – Recycling of C&D Waste Chair: Ulrich Kral (TU Wien)

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| Alessandra Diotti (University of Brescia - Brescia, Italy) | Construction And Demolition Waste As A Renewable Resource For Recycled Aggregates: Analysis Of Italian Case Studies |
| Han Hoang (National Institute for Environmental Studies - Tsukuba, Japan) | Construction Waste In Vietnam: Estimated Amount And Recycling Practices |
| Lucia Rigamonti (Politecnico di Milano - Milano, Italy) | Effectiveness And Efficiency Of Construction And Demolition Waste Recycling In Lombardy: A Life Cycle Based Evaluation |

16:20-16:30 **Farewell**

16:30 **End**