

**Technical University of Košice
Faculty of Metallurgy
Institute of Recycling Technologies**

organizes

under the auspices of Minister of Environment of the Slovak Republic

Lászlo Sólymos

under the auspices of Lord Mayor of Kosice City

Richard Raši

under the auspices of Rector of the Technical University of Kosice

Stanislav Kmeť

6th International Conference

QUO V DIS RECYCLING

**on the occasion of the 65th anniversary of the Faculty of Metallurgy and Technical
University of Kosice**

6th– 9th June 2017

Atrium Hotel in Novy Smokovec, High Tatras

Slovak republic

2ND ANNOUNCEMENT



urt.hf.tuke.sk/qvr

PARTNERS AND SPONSORS



MEDIA PARTNERS



AIM OF THE CONFERENCE

The aim of the international conference is to give the opportunity to meet experts in the fields of waste recycling, critical raw materials and metals, recovery, minimization and prevention of waste generation as well as circular economy. The conference focuses mainly on the exchange of knowledge and experience in waste management and handling, waste pre-treatment and processing, recycling and effective utilization of secondary raw materials as well as their theoretical, practical, environmental, economic and legislation aspects. Significant attention is paid to methods for recovery of metals and valuable components from waste.

CONFERENCE SCOPE

- Recycling
- Municipal Solid Waste
- Industrial Waste
- Hazardous Waste
- Wastewater
- Biological Waste
- Critical Raw Materials and Critical Metals
- Sampling and Waste Analysis
- Waste Management and Legislation
- Circular Economy
- Design of Recycling Facilities and Plants
- Software products for recycling
- Other related field

SCIENTIFIC ADVISORY BOARD

- Elena Bodíková (SLOVMAS, a. s., Slovakia)
- Milan Grohol (DG Research & Innovation, European Commission, Belgium)
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- Ľudovít Parilák (ŽP Research and Development Center, Ltd., Slovakia)
- Michaela Ploszeková (Volkswagen Slovakia, a.s., Slovakia)
- Thomas Pretz (RWTH Aachen University, Germany)
- Ľubomír Šooš (Slovak University of Technology in Bratislava, Slovakia)
- Pekka Taskinen (Aalto University, Finland)

CONFERENCE MILESTONES

Conference duration:	6. –9. 6. 2017
Registration (with abstract)	25. 3. 2017
2nd Announcement	10. 4. 2017
Contributions	20. 4. 2017
The payment deadline	15. 5. 2017

OFFICIAL CONFERENCE LANGUAGE

- English, Slovak, Czech
- Simultaneous translation will be provided during the presentations

VENUE

The venue of the conference is situated in the beautiful mountain area The High Tatras, in Novy Smokovec. The conference will be held in the Atrium Hotel in the Novy Smokovec, which is located at the foot Slavkovský štít (peak). Hotels rooms and the restaurant offer a beautiful panoramic view on Tatras peaks or the sunlit Podtatranska kotlina (basin area). Very popular sun-drenched touristic area Hrebienok gives easy accessibility of many tourists' paths and mountain cottages.



ACCOMODATION

Participants orders accommodation individually. Accommodation is pre-reserved directly in the Atrium Hotel.

Atrium Hotel

Address:

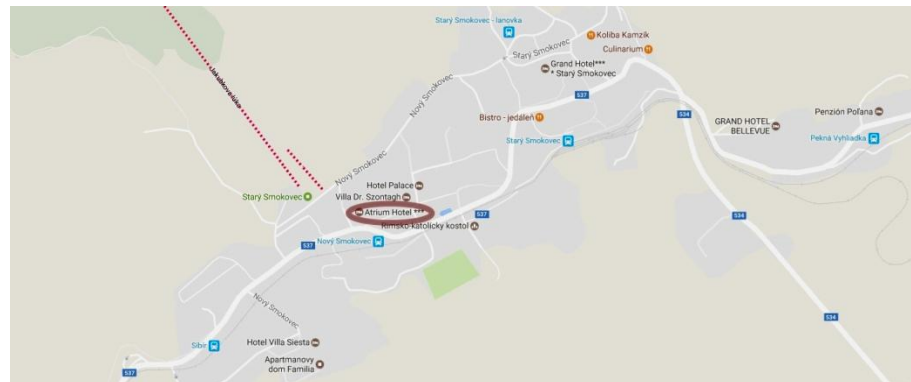
Nový Smokovec 42

Vysoké Tatry 06201

GPS: N 49.137700; E 20.215000

For hotel guests is included in the accommodation price

Wellness and Spa. It is available also the private cinema, wine shop, bowling etc.



More information about the accommodation options and hotel services can be found at the hotel website: www.atriumhotel.sk and the conference website urt.hf.tuke.sk/qvr. The Atrium hotel is easily accessible from main Road No. 534 by personal or public transport. The Poprad-Tatry railway station is connected with international and national bus station and TEŽ station, from where regular transport services are provided, by buses and trains to the destination Nový Smokovec. The nearest railway station stop (TEŽ Nový Smokovec) is situated only 50 m from the hotel. Bus station (the Stary Smokovec) is about 750 meters from the hotel. International bus lines stops at the station Poprad. The international airport Poprad-Tatry is located only 12 km from the hotel.

Current information about transport and timetable is possible to found at <http://cp.sk/>

CONFERENCE FEES

Conference fee (to 15.5.2017)	296€ (tax incl.)
Conference fee after deadline (15.5.2017)	320€ (tax incl.)
Conference fee for students	150€ (tax incl.)
Cash payment on site	350€ (tax incl.)
Accompanying person	160€ (tax incl.)
Fee for poster	30€ (tax incl.)*
Publishing in the proceedings without personal participation	80€ (tax incl.)

***Printing of the poster will be provided by the organizer.**

Conference fee includes:

- Participant fee
- Meals and refreshment during conference
- Conference materials and proceedings
- Translation
- Technical support of the conference
- Rental of conference rooms

Conference fee does not include accommodation!

Cancellation fee

- Cancellation is possible till 31.5.2017 without charge. Cancellation fee from 31.5.2017 to 4.6.2017 is 80€. No refunds will be given after Sunday, 4.6. 2017.

Payment details

Payment can be made by bank transfer on the bank account specified below. The cash payment will be issued by confirmation. Each conference participant will be issued by an invoice for payment.

Bank account name: Fond R. Kammela, n.f.

IBAN: SK270900000000442301572

SWIFT: GIBASKBX

Bank address: Slovenska sporiteľňa a.s., Bratislava

Please state your name to the payment note.

CONTRIBUTIONS

All accepted papers and posters will be published in reviewed proceedings with ISBN.*

- Templates and instructions are available at conference website: urt.hf.tuke.sk/qvr
- Contributions, e.g. papers (6 pages) and posters (4 pages) with all attachments will be uploaded on-line.
- Selected peer-reviewed conference papers will be published in a special issue of [Recycling](#) – Open Access Journal (ISSN 2313-4321) or in the journal [World of Metallurgy - ERZMETALL](#) (ISSN 1613-2394)
- In case of any questions about contributions, please contact: dusan.orac@tuke.sk

* Contributions will be published in proceedings only after payment of conference fee.

Competitions for the best student's work and best poster will be realized during the conference.

SOCIAL PROGRAM

Tuesday (06th June 2017)

- **19:30** The welcome party (*fee 15 € will be paid on site during the registration*)

Wednesday (07th June 2017)

- **19:00** Awards ceremony for the best student contribution and the best poster
- **19:30** Barbecue party with national folk music

Thursday (08th June 2017)

After finishing of the scientific section (16:30) is free programme.

Possibilities for relax:

- Trip to Hrebienok (**4 km**) (<http://www.vt.sk/en/activities/cableway-trips/hrebienok/>)
- Wine tasting (according to interest; payment on site)
- Cigar tasting (according to interest; payment on site)
- Bowling and other sports activities (<http://www.atriumhotel.sk/bowling-bar.html>)
- Wellness and Spa (free of charge for hotel guests)(<http://www.atriumhotel.sk/wellness-a-spa.html>)

Friday (09th June 2017)

- **11:45** The closing ceremony

Tips for trips after the conference (at own expenses):

- The **Wooden articular church in Kežmarok** is a church in Kežmarok, Slovakia. The church is registered in the UNESCO World Heritage List. (**22km**) (<http://www.muzeum.sk/dostol/default.php?obj=evan&iix=kezmarok>)
- **Kezmarok castle** is the only fully preserved castle in the Spiš region. The first written mention of it is from 1463. (http://www.kezmarok.com/?Kezmarsky_hrad) (**22 km**)
- **Spisska sobota** - Historic Center declared in 1950 an urban conservation area. Square are decorated with Gothic, Renaissance and Baroque burgher houses. (**15 km**)
- **Belianska caves** (<http://www.ssj.sk/en/jaskyna/2-belianska-cave>) (**17 km**)
- **AquaCity poprad** (<http://www.aquacity.sk/>) (**15 km**)

ORGANIZING COMMITTEE**Address:**

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Conference webpage administrator

In the case of any questions, please do not hesitate to contact us.

CONFERENCE PROGRAMME

TUESDAY, JUNE 6 TH , 2017			
11 ⁰⁰ – 14 ⁰⁰	Registration		
14 ⁰⁰ – 14 ³⁰	Opening ceremony		
	Invited lectures		
14 ³⁰ – 15 ⁰⁰	Tomáš Havlik	Quo Vadis Recycling	Slovakia
15 ⁰⁰ – 15 ³⁰	Thomas Pretz	Recycling Technology 2017 - the same solution for all EU Memberstates?	Germany
15 ³⁰ – 16 ⁰⁰	Miroslav Strýček	Ministry of Environment of the Slovak Republic - Waste package	Slovakia
16 ⁰⁰ – 16 ³⁰	Jozef Vašina	Recycling of values from WEEE with respect to the End of Waste Criteria EU	Slovakia
16 ³⁰ – 17 ⁰⁰	Jan Dvořák	Analysis of waste composition	Czech Republic
19 ³⁰	Welcome party		

WEDNESDAY, JUNE 7 TH , 2017			
	Invited lectures		
8 ³⁰ - 9 ⁰⁰	Milan Grohol	Critical Raw Materials and recycling	European Commission, Belgium
9 ⁰⁰ – 9 ³⁰	Václav Grúber	Recycling of lanthanide from used Nd-Fe-B permanent magnets	Czech Republic
	Lectures		
9 ³⁰ – 9 ⁵⁰	Fernando Coelho	Hydrocyclone separation of recycled NdFeB magnets	United Kingdom
9 ⁵⁰ – 10 ¹⁰	Andrea Miškuřová	Characterisation of Nd-Fe-B magnets and possibilities for Nd recovery	Slovakia
10 ¹⁰ -10 ³⁰	Coffee break		
	Invited lecture		
10 ³⁰ -10 ⁵⁰	Zdeněk Kunický	Development of recycling of lead-acid batteries in Kovohutě Příbram	Czech Republic
	Lectures		
10 ⁵⁰ – 11 ¹⁰	Heini Elomaa	The effect of redox potential of aqua regia and temperature to Au, Ag, Cu and Fe dissolution from WPCBs	Finland
11 ¹⁰ – 11 ³⁰	Zita Takáčová	Hydrometallurgical recovery of silver from printed circuit board	Slovakia
11 ³⁰ -11 ⁵⁰	Milislav Ranitovic	Technological aspect of sustainable waste printed circuit boards recycling: Experimental verification of integral route for base and precious metals recovery	Serbia
11 ⁵⁰ -12 ⁵⁰	Lunch		
	Invited lecture		
13 ⁰⁰ -13 ³⁰	Michaela Ploszeková	Current challenges and solutions for waste management in automotive industry	Slovakia
	Lectures		
13 ³⁰ -13 ⁵⁰	Lydia Sobotová	Research of chosen acoustic descriptor developed material based on recycled parts of scrap vehicle	Slovakia
13 ⁵⁰ – 14 ¹⁰	Martina Laubertová	Sampling and assaying of WEEE	Slovakia
14 ¹⁰ – 14 ³⁰	Jitka Malcharcziková	Heavy metals in fine grained fractions of E-waste	Czech Republic
14 ³⁰ - 15 ⁰⁰	Coffee break		
	Lectures		
15 ⁰⁰ -15 ²⁰	Dušan Oráč	Tin recovery from tin sludge	Slovakia
15 ²⁰ -15 ⁴⁰	Šárka Václavková	Possibilities of replacing conventional P-fertilizers by P-products based on sewage sludge ash	Czech Republic
16 ⁰⁰ -17 ⁰⁰	Poster section (Poster presentations)		

19 ⁰⁰	Award ceremony
19 ³⁰	Barbecue Party

THURSDAY, JUNE 8 TH , 2017			
	Invited lectures		
8 ³⁰ -9 ⁰⁰	Elena Bodíková	The position and tasks of producer responsibility organizations at the specified waste stream in Slovakia	Slovakia
9 ⁰⁰ – 9 ³⁰	Peter Valent	Disposal with WEEE – present challenges and weak points	Slovakia
	Lectures		
9 ³⁰ – 9 ⁵⁰	Alexis Van Maercke and Eva Tormo	Steel for packaging, model material for a circular economy	Belgium
9 ⁵⁰ – 10 ²⁰	Coffee break		
	Invited lecture		
10 ²⁰ -10 ⁵⁰	Pekka Taskinen	Trace element distributions in black copper smelting	Finland
	Lectures		
10 ⁵⁰ -11 ¹⁰	Tuomas Vielma	Selective recovery of manganese from anode sludge residue by selective reducing leaching	Finland
11 ¹⁰ – 11 ³⁰	Michal Šyc	Resource recovery potential of bottom ash from waste-to-energy in Prague	Czech Republic
11 ³⁰ – 11 ⁵⁰	Alica Mašlejová	Blast furnace slags vitreosity determination	Slovakia
12 ⁰⁰ – 13 ⁰⁰	Lunch		
	Invited lecture		
13 ¹⁵ –13 ⁴⁵	Olof Forsén	Primary Copper Smelter and Refinery as Recycling plant – a Systems Integrated Approach	Finland
	Lectures		
13 ⁴⁵ – 14 ⁰⁵	Liesbeth Horckmans	CHROMIC: New processes to recover metals from stainless steel and ferrochrome slags	Belgium
14 ⁰⁵ – 14 ²⁵	Tomáš Vindt	Model of pilot plant for hydrometallurgical processing of industrial waste: Possibilities of selective zinc recovery from EAF dust	Slovakia
14 ²⁵ - 14 ⁴⁵	Werner Frank	Purified waste water – product for universe	Slovakia
14 ⁴⁵ -15 ¹⁵	Coffee break		
	Invited lecture		
15 ¹⁵ – 15 ⁴⁵	Mari Lundström	Leaching of metals from spent lithium-ion batteries	Finland
	Lectures		
15 ⁴⁵ -16 ⁰⁵	Laszlo Farkas	Introduction of innovative technology and HOMATECH-W™ system for processing of rubber waste	Slovakia
16 ⁰⁵ -16 ²⁵	Luca Ruggenenti	COSMOS Fenix®: a new patented End of Waste technology to produce plastic from hazardous municipal solid waste incinerators fly ashes	Italy
16 ³⁰ – 17 ⁰⁰	Poster section		
18 ³⁰	Dinner		

FRIDAY, JUNE 9 TH , 2017			
	Invited lecture		
9 ⁰⁰ -9 ³⁰	Ľudovít Kolláth	Contribution to projecting of sorting line for municipal waste	Slovakia
	Lectures		
9 ³⁰ – 9 ⁵⁰	Annamarie Velič	CURAPROX Goes green – responsible management of waste from products	Slovakia
9 ⁵⁰ – 10 ¹⁰	Pavel Hudák	Use of X-ray spectrometer for waste classification	Czech Republic
10 ¹⁰ -10 ⁴⁰	Coffee break		
10 ⁴⁰ -11 ⁰⁰	Jozef Víglaský	Selected types of waste and its material and energetic valorization	Slovakia
11 ⁰⁰ -11 ²⁰	Hedviga Horváthová	Regeneration of waste water from hydrometallurgical processing of EAF dust	Slovakia
11 ²⁰ -11 ⁴⁰	Marianna Dorková	Utilization of microwave supported destruction in elemental analysis of EAF dust by use of HR-CS FAAS	Slovakia
11 ⁴⁵	Closing ceremony		
12 ⁰⁰ – 13 ⁰⁰	Lunch		

Poster section			
1.	Katarína Blašková	Processing of hard zinc from zinc galvanizing process	Slovakia
2.	Mária Heželová	Electrochemical procedures for zinc recovery from solutions	Slovakia
3.	Ján Jaščišák	Recycling of valuable metals from WEEE	Slovakia
4.	Olívia Kačalová	Recovery of indium from LCD displays	Slovakia
5.	Jakub Klimko	Recovery of gold from WEEE	Slovakia
6.	Patrik Kuruc	Hydrometallurgical recovery of chromium from slags	Slovakia
7.	Vladislava Mičková	Preparation of E-waste samples for solution analysis of metals	Slovakia
8.	Viola Möebis	Mechanical Conditioning of Fine Grain Automotive Shredder Residue for Hydrometallurgical Utilization	Germany
9.	Martina Orefice	High-temperature leaching with the ionic liquid [Hbet][Tf2N] for the recovery of metal values from NdFeB magnets	Belgium
10.	Ľubomír Pikna	Electrometallurgy of chromium	Slovakia
11.	Jana Pirošková	Overview of processing of industrial waste with lead content	Slovakia
12.	Dagmar Remeteiová	The possibilities for treatment of alkaline waste water after neutral leaching of EAF dust	Slovakia
13.	Luca Ruggenti	COSMOS Fenix®: a new patented End of Waste technology to produce plastic from hazardous municipal solid waste incinerators fly ashes	Slovakia
14.	Silvia Ružičková	Modern methods for ammonia removal from industrial waste waters	Slovakia
15.	Simona Sobeková Folťová	Samarium/cobalt separation by solvent extraction with ionic liquids	Belgium
16.	Jarmila Trpčevská	Termo-mechanické spracovanie zinkových sterov	Slovakia
17.	Peter Turek	Study of dehydration of zinc sulfate heptahydrate	Slovakia
Commercial presentations			
1.	Róbert Cibula	Pragolab, s.r.o.	Slovakia
2.	Jan Dvořák	BAS – Rudice, spol.s r.o.	Czech Republic
3.	Laszlo Farkas	Introduction of innovative technology and HOMATECH-W™ system for processing of rubber waste	Slovakia
4.	Pavel Hudák	Use of X-ray spectrometer for waste classification	Czech republic
5.	Zuzana Kováčová	Shimadzu – Excellence in Science	Slovakia
6.	Jaroslav Smejkal	Panalytical	Czech republic

Programme change restricted and reported currently by organizers!