

# OPMR 2016

Opportunities in Processing of Metal Resources in South East Europe

held in conjunction with the

**5<sup>th</sup> ESEE DIALOGUE**

**Budapest, Hungary**

**28. - 30. November 2016**



**MISKOLCI**  
EGYETEM  
UNIVERSITY OF MISKOLC

**ASMET** 

## TOPICS

Mineral deposits in the ESEE Region: Case studies

Mineralogical characterization of raw materials

The mineral inventory of the ESEE Region

Innovations in Mineral Processing

Mineral Processing Plants in the ESEE Region: Case Studies

Instrumentation and Automation in Mineral Processing



## ORGANIZING COMMITTEE

**Jürgen Antrekowitsch**, Montanuniversitaet Leoben

**Tamas Kekesi**, University of Miskolc

**Alfred Maier**, Regional Innovation Center – ESEE

## SCIENTIFIC COMMITTEE

**Helmut Antrekowitsch**, Montanuniversitaet Leoben

**Frank Melcher**, Montanuniversitaet Leoben

**Helmut Flachberger**, Montanuniversitaet Leoben

**Tamas Kekesi**, University of Miskolc

**Tamas Török**, University of Miskolc

**Ljudmilla Bokanyi**, University of Miskolc

**Fernando Castro**, University of Minho

**Tomáš Havlik**, The Technical University of Košice

**Zdenka Zovko Brodarac**, University of Zagreb

**Ioannis Paspaliaris**, Nat. Technical University of Athens

**Dimitar Petrov**, University of Mining and Geology

**Jürgen Antrekowitsch**, Montanuniversitaet Leoben

**Stefan Steinlechner**, Montanuniversitaet Leoben

## ADDITIONAL INFORMATION

The official language of this conference is English. The length of presentations should not exceed 20 minutes + 5 minutes discussion

# **binder+cö**

we process the future

## OVERVIEW

28<sup>th</sup> NOVEMBER      OPMR 2016 / 5<sup>TH</sup> ESEE DIALOG

	CLC EAST STRATEGY MEETING (ONLY FOR KIC MEMBERS)
15:00 - 18:00	<p style="text-align: center;"><b>BLOCK I</b></p> <ul style="list-style-type: none"> <li>• KAVA call results               <ul style="list-style-type: none"> <li>• Overall view on results on KIC level</li> <li>• Overall view on results from CLC East</li> </ul> </li> <li>• Lessons learned from KAVA Evaluation               <ul style="list-style-type: none"> <li>• Evaluation criteria and improvements of proposals</li> <li>• How to interpret the feedback from HQ to proposals</li> <li>• Recommendations for re-submitting</li> </ul> </li> <li>• Where to go?               <ul style="list-style-type: none"> <li>• Thematic ideas</li> <li>• Industrial involvement</li> </ul> </li> </ul> <p style="text-align: center;"><b>BLOCK II</b></p> <p>Pitch ideas in preparation for the upcoming brokerage event in Berlin (Nov. 14-15, 2016) and the expected KAVA call mid-end of Nov. 2016</p> <p style="text-align: center;"><b>BLOCK III</b></p> <p>Q&amp;A Session</p>

18:30	<p><b>COME TOGETHER</b> (PARTICIPANTS OPMR 2016 / 5<sup>TH</sup> ESEE DIALOG)</p>
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29<sup>th</sup> NOVEMBEROPMR 2016 / 5<sup>th</sup> ESEE DIALOG

	PLENARY
9:00	Welcome
9:15	M. Klein
9:45	F. Melcher
10:15	K. Kubaczki
10:45	COFFEE
11:15	F. Kongoli
11:45	T. Kekesi
12:15	A. Maier
12:45	LUNCH

	METALLURGY	MINERAL PROCESSING
14:00	H. Antrekowitsch	A. Böhm
14:25	B. Kopacek	L. Ilchev
14:50	M. Uchikoshi	P. Angelopoulos
15:15	M. Swartling	E. Balomenos
15:40	F. Costa	T. Wiessler
16:05	COFFEE	COFFEE
16:30	Optional: KIC-Workshop*	Optional: KIC-Workshop*
19:00	DINNER	DINNER

\* The agenda for the KIC-Workshop can be found on page 14

30<sup>th</sup> NOVEMBER

## OPMR 2016

	<b>METALLURGY</b>	<b>MINERAL PROCESSING</b>
9:00		
9:00	A. Franzkowiak	A. Kamali Moaveni
9:25	A. Bhattacharyya	G. Hanke
9:50	K. Reinharter	P. Angelopoulos
10:15	M. Haschke	TBA
10:40	<b>COFFEE</b>	<b>COFFEE</b>
11:00	P. Wollants	P. Angelopoulos, T. Balomenos
11:25	A. Ruh	V. Stoilov
11:50	T. Doppler	W. Bernhart
12:15	<b>LUNCH</b>	<b>LUNCH</b>

	<b>METALLURGY</b>	<b>MINERAL PROCESSING</b>
13:30	A. Kumar	L. Bokanyi
13:55	C. Benigni	K. Shinoda
14:20	A. Franzkowiak	A. Cerchier
14:45	S. Steinacker	
15:10	<b>FAREWELL</b>	<b>FAREWELL</b>

## DETAILED PROGRAMM

29<sup>th</sup> NOVEMBER

PLENARY

Time	Topic
9:00	<b>Welcome</b>
9:15	<b>Opportunities for collaboration within KIC EIT RawMaterials</b> <i>M. Klein</i> <i>EIT RawMaterials Eastern Co-Location Centre</i>
9:45	<b>Economic geology of the Eastern and South-eastern European (ESEE) region</b> <i>F. Melcher</i> <i>Montanuniversitaet Leoben, Austria</i>
10:15	<b>KIC EIT RawMaterials – Strategy, Focal Points, Funding Opportunities in CEE and ESEE</b> <i>K. Kubaczki</i> <i>EIT RawMaterials Eastern Co-Location Centre</i>
10:45	<b>COFFEE</b>
11:15	<b>Energy saving and modern process control and automation</b> <i>F. Kongoli</i> <i>FLOGEN Technologies Inc., Canada/USA</i>
11:45	<b>Novel methods of extracting pure metals by the application of chloride hydro-electrometallurgy</b> <i>T. Kekesi</i> <i>University of Miskolc, Hungary</i>
12:15	<b>The Role of East- and South- East Europe in the Knowledge &amp; Innovation Community (KIC) EIT RawMaterials</b> <i>A. Maier</i> <i>Montanuniversitaet Leoben, Austria</i>
12:45	<b>LUNCH</b>

29<sup>th</sup> NOVEMBER

METALLURGY

Time	Topic
14:00	<p><b>The importance of metal recycling for the sustainability in the metallurgical industry</b></p> <p><i>H. Antrekowitsch</i>  <i>Montanuniversitaet Leoben, Austria</i></p>
14:25	<p><b>Mobile hydrometallurgy to recover rare and precious metals from WEEE</b></p> <p><i>B. Kopacek</i>  <i>ISL-Kopacek KG, Austria</i></p>
14:50	<p><b>The behaviour of copper electrodes in chloride systems facilitating an environmentally friendly extraction of the pure metal from aqueous solutions</b></p> <p><i>M. Uchikoshi, et al.</i>  <i>Tohoku University, Japan</i></p>
15:15	<p><b>ARCFUME: Metal recycling and slag cleaning</b></p> <p><i>M. Swartling, et al.</i>  <i>SCANARC Plasma Technologies AB, Sweden</i></p>
15:40	<p><b>Metal Recovery from Sludges and Slurries via vacuum distillation</b></p> <p><i>F. Costa</i>  <i>Destimet Green Services GmbH, Germany</i></p>
16:05	<b>COFFEE</b>
16:30 - 18:00	<p>OPTIONAL: <b>WORKSHOP</b> *</p> <p><i>W. Schatzmann</i>  <i>W. Jauk</i></p>
19:00	<b>DINNER</b>

\* The agenda for the KIC-Workshop can be found on page 14

29<sup>th</sup> NOVEMBER

MINERAL PROCESSING

Time	Topic
14:00	<p><b>Recent research activities of the Chair of Mineral Processing in the field of processing primary and secondary metal resources</b></p> <p><i>A. Böhm</i>  <i>Montanuniversitaet Leoben, Austria</i></p>
14:25	<p><b>The inventory of “mineral waste” from mining, concentration and metallurgy- means to expand the raw material base of the republic of Bulgaria</b></p> <p><i>L. Ilchev</i>  <i>Private, Bulgaria</i></p>
14:50	<p><b>Microwave oxidizing roasting of a sulphidic Au rich concentrate</b></p> <p><i>P. Angelopoulos, et al.</i>  <i>School of Mining and Metallurgical Engineering, Greece</i></p>
15:15	<p><b>Current and alternative routes in the production of Rare Earth Elements</b></p> <p><i>E. Balomenos, et al.</i>  <i>NTUA, Greece</i></p>
15:40	<p><b>Development and demonstration of excellent processing technologies for mineral resources from laboratory to industrial scale.</b></p> <p><i>T. Wiessler</i>  <i>ARP Aufbereitung, Recycling und Prüftechnik GesmbH, Austria</i></p>
16:05	<b>COFFEE</b>
16:30 - 18:00	<p>OPTIONAL: <b>WORKSHOP</b> *</p> <p><i>W. Schatzmann</i>  <i>W. Jauk</i></p>
19:00	<b>DINNER</b>

\* The agenda for the KIC-Workshop can be found on page 14

30<sup>th</sup> NOVEMBER

METALLURGY

Time	Topic
9:00	<p><b>RHI's exceptional service cycle for nonferrous environment</b></p> <p><i>A. Franzkowiak, et al.</i> RHI AG, Austria</p>
9:25	<p><b>Reduction of Iron-ore Fines using "SYNGAS" from Lean-grade Coal</b></p> <p><i>A. Bhattacharyya, et al.</i> Montanuniversitaet Leoben, Austria</p>
9:50	<p><b>Contribution of arsenic to wear of basic bricks in copper smelting furnaces</b></p> <p><i>K. Reinharter, et al.</i> RHI AG, Austria</p>
10:15	<p><b>Extraction of critical technology elements and radionuclides from phosphogypsum tailings</b></p> <p><i>M. Haschke, et al.</i> DMT GmbH &amp; Co. KG , Germany</p>
10:40	<b>COFFEE</b>
11:00	<p><b>Metal recovery from BOF steel slag by carbo-thermic reduction</b></p> <p><i>P. Wollants</i> KU Leuven, Belgium</p>
11:25	<p><b>Waelz Process for the Recycling of Zinc Containing Residues</b></p> <p><i>A. Ruh</i> Befesa Steel R&amp;D S.L.U., Spain</p>
11:50	<p><b>Influence of Ca on the oxidation behaviour of AlMg-alloys</b></p> <p><i>T. Doppler, et al.</i> Montanuniversitaet Leoben, Austria</p>
12:15	<b>LUNCH</b>

30<sup>th</sup> NOVEMBER

MINERAL PROCESSING

Time	Topic
9:00	<b>Assessment of the LD-Slag separability</b> <i>A. Kamali Moaveni, et al.</i> Montanuniversitaet Leoben, Austria
9:25	<b>Characterisation of by-products of the lead and zinc industry</b> <i>G. Hanke, et al.</i> Montanuniversitaet Leoben, Austria
9:50	<b>Thermal decomposition kinetics of greek diasporic bauxite</b> <i>P. Angelopoulos</i> NTUA, Greece
10:15	<b>KIC and Mineral Processing - Examples</b> <i>N.N</i>
10:40	<b>COFFEE</b>
11:00	<b>Valorisation of Extractive Industries Wastes</b> <i>P. Angelopoulos, T. Balomenos, et al.</i> NTUA, Greece
11:25	<b>The influence of ball mill speed level on technological parameters and energy consumption in the second grinding stage of copper slag processing at Aurubis-Bulgaria</b> <i>V. Stoilov, et al.</i> Aurubis Bulgaria, Bulgaria
11:50	<b>The treatment of complex copper ores by flotation - potentials for improvements</b> <i>W. Bernhart</i> Ingenieurbüro für Bergwesen und Verfahrenstechnik, Austria
12:15	<b>LUNCH</b>

30<sup>th</sup> NOVEMBER

METALLURGY

Time	Topic
13:30	<b>Doing it Right Every time- Producing Low Phosphorous Steel in LD converter</b> <i>A. Kumar, et al.</i> <i>TATA STEEL LTD, India</i>
13:55	<b>Halides-Associated problems during the zinc production process</b> <i>C. Benigni, et al.</i> <i>Montanuniversitaet Leoben, Austria</i>
14:20	<b>RHI's possibilities for copper- and wire-producing applications</b> <i>A. Franzkowiak et al.</i> <i>RHI AG, Austria</i>
14:45	<b>Treatment of Residues from the Copper Industry a New Approach for Electric Furnace Slag</b> <i>S. Steinacker, et al.</i> <i>Montanuniversitaet Leoben, Austria</i>
15:10	<b>End of Conference</b>

30<sup>th</sup> NOVEMBER

MINERAL PROCESSING

Time	Topic
13:30	<b>Metals recycling from e-wastes, CriticEI project achievements</b> <i>L. Bokanyi, et al.</i> <i>University of Miskolc, Hungary</i>
13:55	<b>Local Structure Analysis using high temperature <i>in situ</i> XAS of halide molten salts for Ta recovery by electrolytic process</b> <i>K. Shinoda, et al.</i> <i>Tohoku University, Japan</i>
14:20	<b>Green hydrometallurgy recovery of metals from WEEE in the form of nanoparticles</b> <i>A. Cerchier, et al.</i> <i>University of Padova, Italy</i>
15:10	<b>End of Conference</b>

## KIC-WORKSHOP AGENDA

- Involvement of Montanuniversitaet Leoben at EIT RawMaterials
- RIC ESEE – Regional Innovation Centre for East & South East Europe
- Market Breakdown
- Focus on ESEE & its potential
- Our offer to market – Core business areas & Objectives
- Market developments & Project Idea Pipeline
- First results & experiences
- Challenges to attract industry
- Discussion on customer's needs & expectations



## REGISTRATION

28<sup>th</sup> November from 14:00 to 18:30

29<sup>th</sup> November from 8:00

## VENUE

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