



Mineral and Energy
Economy Research
Institute
Polish Academy of Sciences

International Conference „Circular Economy – Rational Use of Raw Materials”

02-03 July 2019, Raclawice
Hotel Mercure Raclawice Dosłońce Conference & SPA

02 July 2019

Rational use of raw materials, including critical ones

08.00 – 10.00 Registration

10.00 – 10.30 Opening of the conference

- **J. Kulczycka** (IGSMiE PAN), *Opening*
- **K. Galos** (IGSMiE PAN), *Industrial wastes as sources of raw materials in the context of Poland's raw materials needs*

10.30 – 11.15 Plenary session: *Rational resource management at CE – foreign experience*
Moderator: dr hab. inż. **K. Galos**, prof. IGSMiE PAN, prof. dr hab. inż. **A. Janikowski**

- **A. ten Wolde** (Ecopreneur, Holandia), *Bringing Poland to the forefront with a circular economy*
- **F. Chu Chen** (ITRI, Niemcy), *Overview of ITRI Efforts in Circular Economy*
- **R. De Carolis, G. Barberio, C. Brunori, L. Cutaia** (ENEA, Włochy), *Circular economy in Italy: ENEA activities and projects to support the transition*

11.15 – 11.30 Coffee break

11.30 – 13.00 Plenary session: *Circular economy – challenges and suggestions for monitoring the oto-GOZ project*
Moderator: prof. dr hab. **K. Szamałek**, prof. dr hab. **M. Włodarczyk-Makula**

- **M. Burchard-Dziubińska** (UŁ), *The role of economic incentives in the development of a circular economy*
- **Z. Foltynowicz** (UEP), *Is it possible to standardize a circular economy with a standard framework?*
- **I. Ratman-Kłosińska** (IETU), **M. Matejczyk** (IETU), **A. Mauko Pranjic** (DM), **K. Mezga** (DM), *The H2020 CINDERELA project: New circular economy business model for a more sustainable urban construction*
- **E. Dziobek** (IGSMiE), **J. Kulczycka** (AGH), *Financing the operation of enterprises in the circular economy model*
- **M. Ćwiklicki** (UEK), *Circular Economy and Fourth Technology Revolution*
- **P. Kopyciński** (UEK), **J. Głowacki** (UEK), **M. Malinowski** (UR), **Ł. Mamica** (UEK), *Circular economy and sustainable consumption and socio-economic development*
- **E. Kopeć** (Akademia Ignatianum w Krakowie), *The role of research and innovation in circular economy*
- **R. Janikowski** (Akademia Wojsk Lądowych), *From linear economy to circular economy in military forces*
- **K. Guzik** (IGSMiE PAN), **A. Burkowicz** (IGSMiE PAN), *A demand of the EU for the CRM's and a risk of their supplies*

13.00 – 14.00 Lunch break

14.00 – 15.00 **Session Chemistry: Discussion panel**

Moderator: **M. Michniewicz, A. Zalewska (PIPC), A. Krueger (Sieć Badawcza ŁUKASIEWICZ – Instytut Ciężkiej Syntezy Organicznej "Błachownia"), D. Ciechańska (Sieć Badawcza ŁUKASIEWICZ – Instytut Technologii Eksploatacji – Państwowy Instytut Badawczy.), D. Frączak (R&D Manager, Clariter Poland Sp. z o.o.)**



15.00 – 17.00 **Plenary session: Rational and effective resource management**

Moderator: **prof. dr hab. Z. Kowalski, prof. dr hab. M. Burchard-Dziubińska**

- **K. Szamałek (PIG-PIB), K. Zglinicki (PIG-PIB), G. Konopka (UW)**, *Rational development of placer metallic deposits and their post processing wastes utilization*
- **J. Kudelko, H. Wirth (PWr)**, *Rational use of accompanying minerals in mining*
- **K. Pactwa, J. Woźniak (PWr)**, *Possibilities of circular economy of post-mining objects in the area of Walbrzych Hard Coal Basin*
- **E. Lewicka (IGSMiE PAN)**, *Rational use of selected by-products of rock mining in the ceramic industry in Poland*
- **K. Zglinicki (PIG-PIB), K. Szamałek (PIG-PIB), M. Pilaszkiwicz (PIG-PIB), G. Konopka (UW), K. Żyłka (UW)**, *The possibility of mineral recovery – carriers of rare earth elements from sands after processing of cassiterite bearing sediments*
- **P. Falaciński (Politechnika Warszawska), A. Machowska (PW), Z. Kledyński (PW), Ł. Szarek (PW), Ł. Krysiak (PW)**, *Methods of mineral wastes and by-products management implementing circular economy*
- **D. Lewandowski, J. Kozłowski, M. Potempa (IMN Gliwice)**, *Recycling of lithium-ion batteries – a new generation of a chemical direct current sources*
- **K. Pikoń (Politechnika Śląska)**, *New educational model supporting circular economy*

17.00 – 17.15 **Coffee break**

17.15 – 18.45 **Plenary session: Rational resource management – practical solutions and challenges in industry – new technologies**

Moderator: **dr hab. W. Bajdur, prof. PCz, prof. dr hab. inż. Z. Foltynowicz**

- **D. Lewicka (AGH), B. Lewicka (TU Berlin)**, *Analysis and management of environmental risk in the context of Environmental Management Systems for agriculture based on ISO 14001:2015*
- **J. Tomaszewska (ITB)**, *Utilization of post-consumer polymeric materials in packaging, automotive and building sectors as an example of the implementation of circular economy concept*
- **R. Kulesza, A. Krasuska, I. Semeniuk, A. Pietruszka, M. Muszyński (Sieć Badawcza Łukasiewicz - ICSO "Błachownia")**, *Plastics in circular economy – removing additives*
- **M. Mrozek (UR)**, *Ecological solutions for the rational use of paper in Polish institutions*
- **J. Sójka-Ledakowicz, E. Sulak, A. Walawska (Sieć badawcza Łukasiewicz)**, *Circular Economy – the key challenge for Textile & Clothing Industry*
- **K. Rosiek (UEK)**, *Water in Urban Areas in Circular Economy*
- **J. Szługaj (IGSMiE PAN)**, *Synthetic gypsum as an important source of gypsum raw materials in Poland*

18.45 **Presentation - Wine in a circular economy**

19.15 **Gala dinner: GRILL**

03 July 2019

Circular economy – methods and good practices

08.00 – 09.00 Registration

09.00 – 11.30 **Plenary session: Energy, raw materials and their use in the context of the implementation of the circular economy**

Moderator: prof. dr hab. K. Szamalek, dr hab. inż. N. Iwaszczuk, prof. AGH

- **A. Nowaczek** (IGSMiE), **A. Generowicz** (PK), *Electrical and electronic waste as an element of circular economy*
- **K. Gębicki** (GeMet), *Recovery of electric and electronic scrap as part of a circular economy*
- **J. Kudelko, H. Wirth** (PWr), *Rational use of accompanying minerals in mining*
- **M. Hordyńska** (PŚI), *Strategy of Cleaner Production at each Circular Economy stage – examples of implementations and effects*
- **P. Strzępek** (AGH), **M. Zasadzińska** (AGH), **A. Mamala** (AGH), *Design and commercialization of new generation of hybrid solar collectors*
- **K. Skiba** (SKOFF Sp. z o.o.), **A. Generowicz** (PK), *Types of light sources and waste from them emerging as an aspect of a circular economy*
- **N. Generowicz** (AGH), *Heat pumps as an example of technology using energy in a circular economy*
- **M. Włodarczyk-Makuła, E. Wiśniowska** (PCz), *Wastewater treatment plants as an element of the circular economy in the agglomeration*
- **B. Bieda** (AGH), **D. Sala** (AGH), **Z. Traczyk** (AGH), *Application of the innovative integrated ECOBIOSSED®-Waste product for the proecological production of the environment bio-compost based on the sewage sludge treatment in the waste water plant in Janów Lubelski*
- **R. Bocianowski** (IGSMiE PAN), **Z. Foltynowicz** (UEP), **A. Lewandowska** (UEP), **M. Muradin** (IGSMiE PAN), *Application of anthropogenic CO₂ for hydraulic fracturing as an example of rational use of materials in circular economy*
- **A. Walawska, J. Sójka-Ledakowicz, J. Lewartowska, Z. Polus** (Sieć badawcza Łukasiewicz), **J. Grzybowska-Pietras** (ATH), *Post-production textile waste in innovative materials for technical applications*
- **J. Zarębska** (UZ), **B. Lewicka** (TU Berlin), *Changes in the waste packaging management and implementation for circular economy – Polish case study*
- **K. Gaska** (PŚI), **A. Generowicz** (PK), *Implementation of the rules of the circular economy on landfills*
- **A. Generowicz** (PK) **W. Wójcik** (EnviProject), **A. Diaz** (Universidad Nacional del Centro de la Provincia de Buenos Aires), *Construction, operation and remediation of landfill under the Polish and Argentine law*
- **A. Generowicz** (PK), **M. Chełkowski** (Krakowska Akademia im. Andrzeja Frycza-Modrzewskiego), *Repair and re-use center as an element of the waste management system*

11.30 – 12.00 Coffee brake

12.00 – 13.00 **Plenary session of the conference: Environmental safety and health protection**

Moderator: dr hab. inż. K. Gaska, dr hab. inż. A. Generowicz

- **E. Wysowska** (Sądeckie Wodociągi Spółka z o.o., AGH), **K. Kudlik** (Sądeckie Wodociągi Spółka z o.o.), **A. Kicińska** (AGH), *Bacteriological health threats to water in home wells in the Nowy Sącz area*
- **M. Zasadzińska** (AGH), *Waste-free technology of wire scrap recycling*
- **A. Czaplicka-Kotas** (AGH), *Energy clusters as a new idea for increasing renewable energy production*
- **W. Kruszelnicka, J. Flizikowski, A. Tomporowski, R. Kasner, A.A. Zubiedy** (Uniwersytet Technologiczno-Przyrodniczy), *Evaluation of emissivity and environmental safety of biomass grinders drive*
- **M. Szyba, N. Iwaszczuk** (AGH), *Social responsibility in the food sector and consumer health*

13.00 – 14.00 Lunch brake

14.00 – 15.15 **Plenary session of the conference: Environmental safety and health protection**

Moderator: dr hab. inż. A. Wojciechowski, dr hab. inż. E. Pietrzyk-Sokulska, em. prof. IGSMiE PAN

- **A. Grodzicka, K. Moraczewska-Majkut, W. Nocoń** (Politechnika Śląska), *Impact of environmental conditions on the effectiveness of training of mine water rescuers*
- **A. Generowicz, W. Wójcik** (PK), *Compost from waste - quality analysis depending on the technological process*
- **K. Gaska, A. Generowicz** (PK), *Control and visualization systems in devices for acquiring and neutralizing landfill biogas in cogeneration units-process optimization*
- **P. Bąłdowska-Witos, J. Flizikowski, A. Tomporowski, R. Kasner** (Uniwersytet Technologiczno-Przyrodniczy), *Evaluation of the effects of shaping of beverage bottles from two types of plastics (PLA and PET)*
- **P. Bąłdowska-Witos, J. Flizikowski, A. Tomporowski, A. Mroziński** (Uniwersytet Technologiczno-Przyrodniczy), *Environmental impact of machines on the PET bottle manufacturing phase*

Simultaneous translation will be provided during the conference.

The conference can be attended by persons who have registered - the application form is available at:
www.konferencja-pan.pl/rejestracja2019/

Scientific Committee

dr hab. Joanna Kulczycka, prof. AGH, IGSMiE PAN – President
dr hab. inż. Wioletta M. Bajdur, prof. PCz
prof. dr hab. Małgorzata Burchard, UŁ, Łódź
prof. dr hab. Stanisław Czaja, UEW
dr Magnus Ericsson, RMG Consulting, prof. Lulea University
prof. dr hab. inż. Zenon Foltynowicz, UEP
dr hab. inż. Krzysztof Galos, prof. IGSMiE PAN
dr hab. Krzysztof Gaska, PŚI
dr hab. inż. Agnieszka Generowicz, prof. PK
prof. dr hab. inż. Monika Hardygóra, PWR
prof. dr hab. Jerzy Hausner, UEK
dr hab. inż. Natalia Iwaszczuk, prof. AGH
prof. dr hab. inż. Ryszard Janikowski, Akademia Wojsk Lądowych, Wrocław
dr Daina Kalniņa, prof. Riga Technical University
dr Viktor Koval, Odessa Institute of Trade and Economics, Kyiv
National University of Trade and Economics

prof. dr hab. inż. Zygmunt Kowalski, IGSMiE PAN
dr hab. Jan Kudelko, prof. PWR
dr hab. Anna Lewandowska, prof. UEP
prof. dr hab. inż. Jerzy Lis, AGH Kraków
prof. Daniel B. Müller, Norwegian University of Science and Technology
prof. dr hab. inż. Eugeniusz Mokrzycki, IGSMiE PAN
dr Sandra Piesik, 3 ideas ltd, visiting prof. The UCL Institute for Global Prosperity
dr hab. inż. Elżbieta Pietrzyk-Sokulska, prof. em. IGSMiE PAN
prof. dr h.c. mult. Markus Reuter Helmholtz-Institute Freiberg for Resource Technology
prof. dr Roberta Salomone, University of Messina
prof. dr hab. inż. Zbigniew Śmieszek, IMN Gliwice
prof. dr hab. inż. Marian Turek, PŚI
prof. dr hab. inż. Krzysztof Warmuziński, ICh PAN Gliwice
prof. dr hab. inż. Maria Włodarczyk-Makuła, PCz

Organizing committee

Agnieszka Nowaczek (IGSMiE PAN) – President
Ewa Dziobek (IGSMiE PAN)
Natalia Generowicz
Marcin Cholewa (IGSMiE PAN)

Contact

Instytut Gospodarki Surowcami Mineralnymi i Energią
Polskiej Akademii Nauk
ul. Wybickiego 7A, 31-261 Kraków; fax. +48 12 632 22 45,
www.konferencja-pan.pl

Additional information is provided by:

Agnieszka Nowaczek, phone 12 617 16 11, e-mail:

anowaczek@meeri.pl;

Marcin Cholewa, phone: 12 617 16 52, e-mail: mcholewa@meeri.pl

Honorary patronage



Witold Kozłowski
Marshal of the Małopolska Province

Partners



KRAJOWY
KLASTER
KLUCZOWY



„Projekt finansowany przez Narodową Agencję Wymiany Akademickiej w ramach Programu Akademickie Partnerstwa Międzynarodowe”

