

# VII International Conference Young Researchers' Innovative Ideas: Science | Start-Ups | Industry

27-28<sup>th</sup> of May 2021

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9:00 – 10:00

## Oral Session I: Circular Economy

Michał Drewniok, Krzysztof Pikoń

<https://us02web.zoom.us/meeting/register/tZMtf-GpajovHdR-FzS4kKkIKWxFBVtz80ve>

1. Y. Maksymiv, *Circular economy concept for the sustainability of the bioeconomy*
2. K. Draguła, *Fungi as a part of circular economy*
3. A. Gobetti, G. Ramorino, G. Cornacchia, M. La Monica, *Innovative reuse of electric arc furnace slag as filler for polymer matrices*
4. G. Safarova, *Cyclor Economics (In case of the Fashion industry and Beauty products)*
5. A. Sulich, *The Circular Economy and the rise of Green Jobs*
6. M. Nowosielski, *Circular economy – case study from Poland*

10:15 – 11:15

## Oral Session II: Circular Economy under patronage of PackAlliance Project

Loredana Incarnato, Cristina Nerín

[https://us02web.zoom.us/meeting/register/tZYrf-qtqzsuGNe3ju\\_tpsprX8Cmukrtcq7l](https://us02web.zoom.us/meeting/register/tZYrf-qtqzsuGNe3ju_tpsprX8Cmukrtcq7l)

1. M. Kozicki, J. Tomaszewska, K. Guzik, *Ceplafib as an example of research project providing novel material solutions compliant with Circular Economy concept*
2. A. Pietrosanto, P. Scarfato, L. Di Maio, L. Incarnato, *Development of biodegradable films for frozen food*
3. R. Ferraioli, L. Incarnato, L. Di Maio, P. Scarfato, *Mechanical recycling of Pulper Waste*
4. Q. Su, P. Vera, J. Salafranca, C. Nerin, *Decontamination Efficiencies of Post-Consumer High-Density Polyethylene Milk Bottles and Prioritization of High Concern Volatile Migrants*
5. I. Hryhoruk, *Modeling of bioenergy impact on food security*

11:30 – 13:00

## Poster Session I: Circular Economy

Ewa Kochańska, Wioletta Bajdur, Marita Hiipakka

<https://us02web.zoom.us/meeting/register/tZcvd-mvrT0pHNRkUcNiBDoe0VRJFAQQwu70>

1. B. Lariane, *Obstacles of Implementation of circular economy in EU*
2. N. Generowicz, F. Tornos, *iTARG3T project as an example of development of Sn-W-Ta-(Li) recovery from secondary sources and sustainable mining from primary sources*
3. N. Generowicz, A. M. Moschovi, Y. Iakovos, *PHEIDIAS project as an innovative step in increasing the recovery of PGMs from automotive catalytic converters*
4. A. Wilińska-Lisowska, M. Ossowska, K. Czerwionka, *The influence of co-fermentation of agri-food waste with primary sludge on biogas production and composition of the liquid fraction of digestate*
5. M. Główska, P. Boberski, J. Wójcik, T. Krawczyk, *Preparation of an innovative bifunctional Cu,Zn/Al<sub>2</sub>O<sub>3</sub> catalyst for the hydrolysis processes*
6. A. Nowaczek, *Proposed indicators for monitoring the circular economy in the chemical industry in Poland*

7. N. Generowicz, G. De Clercq, *Safety analysis of the installation for biofuel production from municipal solid waste as an important aspect of the BioRen project*
8. A. Nowaczek, J. Kulczycka, D. Kalnina, *International cooperation for Rational Use of Raw Materials and Circular Economy under the International Academic Partnership Programme announced by the National Agency for Academic Exchange*
9. A. Nowaczek, J. Kulczycka, *Development of a system of measurement indicators to assess the progress in transformation towards a circular economy and its impact on socio-economic development at the meso (regions) and macroeconomic (national economy) project - oto-GOZ*
10. A. Garlicka, K. Sytek-Szmeichel, K. Umiejewska, J. Walczak, M. Żubrowska-Sudoł, *Enhancement of methane production from maize silage via hydrodynamic disintegration*
11. A. Cassano, J. Mate, T. Fekadu, *Effect of the addition of eggshell powder on the nutritional and physicochemical properties of teff bread or injera*
12. G. Ferrara, P. Harazin, A. Petruccione, *Batteries recycling and environmental passport*
13. M. Zając, K. Dąbrowski, *Possibility of application of membranes in geothermal systems for lithium production*
14. M. Chmielewska, A. Dorosz, A. Generowicz, *Risk analysis of improper waste management in a municipal landfill*
15. A. Dorosz, M. Chmielewska, A. Generowicz, *Possibilities of economic symbiosis by waste management enterprises*
16. M. Sadzikowski, G. Kiesiewicz, *Research on the technology of manufacturing traction accessories based on copper scrap*

**13:30 – 15:00****Oral Session III: Environmental Protection**

Anna Czaplicka, Krzysztof Galos, Zygmunt Kowalski

<https://us02web.zoom.us/join/zoom-join?meeting=1330-1500>

1. A. Szymaszek, B. Samojedon, M. Motak, M. Saramok, M. Inger, K. Antoniuk-Jurak, *Natural zeolite as a precursor of the catalyst for the reduction of nitrogen oxides from tail gases in a nitric acid plant*
2. D. Kabey Mwinen, *Chemical Reactions in High-Temperature Water Using Mathematics and Physics Concepts*
3. D. Bury, D. Ścieżyńska, M. Krupa, P. Prabhu, J. Bogacki, P. Marcinowski, *Zero-Valent Iron, Hematite and Magnetite as Co-Catalysts in Advanced Oxidation Processes Application for Cosmetic*
4. K. Masztalerz, F. Bąk, J. Drozdowski, E. Klejman, M. Osial, *SamplAir – stratospheric sensing of air pollution*
5. E. Kozikowska, M. Sobczyk, *A proprietary application engaging Polish businesses and individuals to take action towards green transformation*
6. A. Kasztelewicz, M. Tyszer, M. Czubernat, *MOOC education as a key tool in gaining sustainable development. The Erasmus+ Project experience.*
7. K. Kucukgoz, M. Trzaskowska, *Probiotic-Based Non-Dairy Innovative Food As Future Foods*
8. A. Szulc-Wrońska, B. Tomaszewska, *Low-temperature geothermal systems – a case study for Rabka-Zdrój*

**15:00 – 16:00****Poster Session II: Environmental Protection**

Agnieszka Generowicz, Dariusz Sala

<https://us02web.zoom.us/join/zoom-join?meeting=1500-1600>

1. A. Gronba-Chyła, A. Generowicz, *The impact of salinity of street cleaning waste on the natural environment and municipal infrastructure*
2. U. Semak, *Bioindication by the degree of leaves damage of woody plants*
3. M. Zaborowska, K. Bernat, M. Zielińska, *Co-existence of activated sludge and biofilm in sequencing batch reactors (SBRs) improved biological treatment of leachate from aerobic stabilization of organic municipal solid waste*
4. W. Urbańska, M. Osial, *Challenges in waste management in the context of the COVID-19 pandemic*
5. M. Osial, P. Hejduk, W. Urbańska, M. Warczak, *Green composite based on organic core and magnetic shell for wastewater treatment*
6. W. Borowska, O. Zając, *Biofilm vs activated sludge as a better environment for growth of nitrifying bacteria in the IFAS-MBSBBR*
7. K. Furtak, A. Gałązka, A. Wolińska, *Can soil microorganisms support plants under hydrological events?*
8. P. Boberski, K. Torchała, J. Wójcik, M. Główska, N. Kuźnik, *The use of natural polymers in coated fertilizers*
9. S. Rotar, *The UN Sustainable Development Goals: Sweden's Results In Achieving SDG 9: "Innovation And Infrastructure"*

# 28<sup>th</sup> of May 2021

## 9:00 – 10:00

### Oral Session IV: Energy Industry and Management of Mineral Resources

Krzysztof Gaska, Katerina Adam, Andrzej Wojciechowski

<https://us02web.zoom.us/meeting/register/tZcoce-rqDkjEtVV21SyC63kQp41p2oWs6QX>

1. O. Tęcza, *Analysis of the possibility of using the heat generated in an installation*
2. I. Zięcik, *Concentrated solar radiation as a solution for improving the performance of flexible photovoltaic cells*
3. A. Jarosz, *Microgrid DC*
4. R. Rumin, A. Kutyla, M. Szyba, J. Blaut, Y. Mazur, *Use Of Simulation Tools For The Parametric Calculation Of A Biogas Plant*
5. A. Bąk, K. Pławecka, *The use of phase change materials in geopolymers – literature review*
6. M. Abramowicz, W. Urbańska, M. Osial, *Metal oxide-based magnetorheological fluid – synthesis and characterization*

## 10:00 – 12:00

### Oral Session V: Mechanics, mechatronics and nanotechnologies

Maria Richert, Muammer Kaya, Beata Dubiel

<https://us02web.zoom.us/meeting/register/tZ0kdeivqD4jG9NS1OU-suiZ9-Fkm4xJg2nz>

1. K. Skibińska, K. Kolczyk-Siedlecka, D. Kutyla, A. Jędraczk, B. Leszczyńska-Madej, M. Marzec, P. Żabiński, *Electrocatalytic properties of Co conical structured electrode produced by one-step and two-step method*
2. M. Kopeć, *A highly efficient 'FAST' hot stamping process for complex shaped panel components from titanium alloys*
3. V. Zhironkin, *Determination of loads on deflecting pedals of a push-the-bit rotary steerable system*
4. A. Zwoliński, L. Jaworska, T. Skrzekut, P. Noga, G. Boczkal, P. Pałka, M. Podsiadło, *The influence of the manufacturing method on the properties of materials obtained from mixtures of zirconium and copper powders*
5. M. Osial, F. Bąk, A. Pręgoska, *Magnetorheological Fluid-based Floor*
6. K. Gola, P. Ledwig, B. Dubiel, *Corrosion Resistance Of Inconel 625 Additively Manufactured By L-PBF And L-DED Technologies*
7. H. Pasiowicz, B. Dubiel, *Creep behavior of 3D printed Inconel 625 nickel-based superalloy*
8. S. Staroń, K. Gola, B. Dubiel, *Quantitative analysis of precipitates and oxide inclusions in 3D printed Inconel 625*
9. J. Krupa, S. Zimowski, *Comparison of failure forms of anti-wear coatings after indentation and micro-impact tests*
10. A. Nejman, A. Baranowska-Korczyk, G. Celichowski, M. Cieślak, *Para-aramid fabric functionalized with AgNWs@SnO2*
11. P. Strzępek, *New generation of high strength CuMg alloys dedicated for metal working with applications in electronic systems*

## 12:30 – 13:30

### Poster Session III: Energy Industry, Management of Mineral Resources, Mechanics, mechatronics and nanotechnologies

Lubica Kozakova, Barbara Tora

<https://us02web.zoom.us/meeting/register/tZcscuCurj8rG9aj1R2P1BGmRX1eP85uoAut>

1. N. Generowicz, *Use of waste heat from PVT panels for ground regeneration to maximize ground source heat pump performance*
2. A. Przyłucka, J. Augustyn-Nadzieja, M. Rytwołycki, *Verification of the two-dimensional model of 1.0037 steel oxidation in relation to microscopic measurements*
3. M. Wojtysiak, *Electrochemical synthesis of Pd-Se coatings from chloride solutions*
4. T. Wissam, N. Aouzellag, M. Khiari, *Study of the impact of decentralized generation on the electrical quantities of the HTA-A-MALOU-Bejaia network*
5. A. Czaplicka-Kotas, J. Kulczycka, *Analysis of training needs in the field of technology transfer management in the aspect of non-energy raw materials*
6. E. Dziobek, J. Kulczycka, Ł. Lelek, E. A. Levei, *The Benefits Of Recovering Metals From Mining Waste. Case Of Romania*
7. A. Nawaz, *Mineral Economy*
8. M. Wójcik, J. Nowińska, N. Walczak-Torba, *Proprietary software for design and simulation of operations in gas storage cavern in bedded rock salt deposit*

9. R. Grolik, M. Góra, *Estimation of energy demand for the purposes of a predictive extrusion temperature control algorithm – stabilization of fast-varying extrusion processes with the use of a multilayer perceptron*
10. B. Pszczołkowski, *Influence of the exposure parameter in SLA 3D printing on the change of the structure and functional properties of the print surface*
11. M. Góra, R. Grolik, *Elaboration of flexible, high-flow printing unit for thermoplastic polymers*
12. A. Miś, M. Kaç, *Magnetic nanowires – innovation in nanotechnology*
13. M. Wirwicki, R. Reguła, *Manufacturing prostheses with a bar using modern biocompatible zirconium dioxide*

**14:00 – 15:00****Oral Session VI: Economics and Management**

Agnieszka Cholewa-Wójcik, Wojciech Paprocki, Wioletta Bajdur

<https://us02web.zoom.us/meeting/register/tZYvc-urqDorGtyoCWbJWT1Z7KWgyW5F0QmM>

1. S. Malibroda, L. Chernobay, A. Yessirkepova, *Migration Policy And Migrants' Patterns: Shaping The Economic Benefits*
2. N. Ozcelik, M. Rodríguez, A. Sartal, S. Lutter, *The econometric analysis of water productivity and its drivers*
3. A. Głowacz, *Organizational agility as a source of competitive advantage in industry 4.0*
4. K. Piętka, *Integration of Lean Manufacturing and Industry 4.0 concepts*
5. Z. Żabińska, S. Kazlauskaitė, *HappyVet will make veterinarians happy about their work and proud of their profession*
6. M. Kula, K. Skorek, R. Ščurek, *Analysis and assessment of occupational risks at robotic welding stations in a steel construction company*

**15:00 – 16:15****Poster Session IV: Economics and Management, New Information and Communication Technologies, and University Social Responsibility**

Barabara Pawłowska, Natalia Iwaszczuk, Zhou Fengqi

<https://us02web.zoom.us/meeting/register/tZYvdO2sqTouGNwk2enlyYgAWn9oWa3K007x>

1. I. Piatnychuk, *BSC As An Analytical Tool For Implementing UTCs' Social Responsibility*
2. N. Kozak, A. Tomashevskaya, *The main components of investment potential as a condition for the development of the region*
3. O. Smyrnov, *Impact of the lockdown on the European economy*
4. N. Krawczyk, *The crisis management during the COVID-19 pandemic*
5. T. Dziubiński, *The use of crisis management models by Polish enterprises based on the life cycle in relation to the use of relational models*
6. M. Andriiovych, A. Polyanska, *Gamification as a modern tool of HR-management: advantages of usage*
7. A. Strutynska, I. Boryshkevych, *Formation of An Effective Mechanism Of Motivation Of Employees In Modern Conditions*
8. K. Dvorianin, L. Verbovska, *The prospect of organizing trainings in the company's training center*
9. M. Spikowski, W. Bajdur, M. Kula, *Analysis and assessment of professional risk as a surveyor*
10. M. Bajak, *Sustainable development: the example of The Crystal building*
11. M. Chowaniec, *Determinants of innovativeness of Polish enterprises*
12. V. Shatruck, B. Zoriana, *Information technologies in public administration: the practice of Ukraine*
13. A. Tomańska, *Bees communication and technologies in apiaries*
14. L. Rybak, *Internet Platform As A Means Of Solving Farming Problems*
15. S. Sieracka, *New technologies in industry-university cooperation in VUCA world according business*

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