

# **Program**

## **The 2<sup>nd</sup> Conference on**

**C**  **ntemporary**  
**Pr** **blems of**  
**Ge** **chemistry**

**Kielce, Poland, Sept 24–26.2012**

**Sept 23, 2012 (Sunday)**

|             |                           |                                                                                                |
|-------------|---------------------------|------------------------------------------------------------------------------------------------|
| Since 16:00 | Arrival and accommodation | On-site registration at "Melodia" Hostel of J. Kochanowski University in Kielce, 15 Ślaska St. |
| Since 16:00 | Poster mounting           | Institute of Chemistry, 15G Świętokrzyska St.                                                  |

**Sept 24, 2012 (Monday)**

|           |                              |                                                |
|-----------|------------------------------|------------------------------------------------|
| 7:00–8:00 | Breakfast                    | University in Kielce, 15 Ślaska St. (catering) |
| 8:00–9:00 | Poster mounting/registration | Institute of Chemistry, 15G Świętokrzyska St.  |

**Addresses**

|           |                                                                                                  |                                                                        |
|-----------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 9:00–9:05 | Zdzisław M. Migaszewski (Leader of the Geochemical Group of the Mineralogical Society of Poland) | Greeting of the participants and presentation of the conference agenda |
| 9:05–9:10 | Jacek Semaniak (President of the Jan Kochanowski University in Kielce)                           | Official opening of the conference                                     |
| 9:10–9:15 | Ryszard Kryza (President of the Mineralogical Society of Poland)                                 | Greeting of the participants                                           |

**Plenary session I/1 (invited speakers)****Chairperson:** Zdzisław M. Migaszewski

|             |                                                                                                         |                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 9:15–10:00  | Khageshwar S. Patel, Yogita Nayak, Raj K. Patel, Harald Saathoff, Jutta Lintemann, Georg Matuschek      | Black carbon and polycyclic aromatic hydrocarbon pollution in India                           |
| 10:00–10:45 | Ruth E. Wolf, Andrew S. Todd, Suzette A. Morman, Todd M. Hoefen, Philip L. Hageman, Geoffrey S. Plumlee | Using ICP-MS to decipher biogeochemical processes: speciation and isotope doping case studies |
| 10:45–11:00 | Discussion                                                                                              |                                                                                               |
| 11:00–11:30 | Coffee break + poster session                                                                           |                                                                                               |

**Plenary session I/2 (environmental geochemistry (1))****Chairperson:** Ruth E. Wolf

|             |                                                                                                                                         |                                                                                                            |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 11:30–11:50 | Khageshwar S. Patel, Yogita Nayak, Nitin K. Jaiswal, Raj K. Patel, Matini Lautent, Laura Borgese, Alessandra Gianoncelli, Elza Bontempi | Heavy metal pollution of Indian sediment                                                                   |
| 11:50–12:10 | Beata Smieja-Król                                                                                                                       | The formation of ZnS and barite pseudomorphs after Ca oxalate crystals in organic rich soil                |
| 12:10–12:30 | Jakub Kierczak, Artur Pędziwiatr Jarosław Waroszewski                                                                                   | Distribution and bioavailability of Ni and Cr in serpentine soils from Lower Silesia – preliminary results |
| 12:30–12:45 | Discussion                                                                                                                              |                                                                                                            |
| 12:45–13:45 | Lunch                                                                                                                                   |                                                                                                            |

**Plenary session I/3 (isotope geochemistry/geochemical modeling)****Chairperson:** Khageshwar S. Patel

|             |                                                                                                   |                                                                                                                                                                                 |
|-------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13:45–14:05 | Maciej Górka, Dominika Lewicka-Szczebak, Roland Fuß, Mariusz-Orion Jędrysek                       | One-year spatial and temporal monitoring of concentration and carbon isotopic composition of atmospheric CO <sub>2</sub> and CH <sub>4</sub> in urban area (Wrocław, SW Poland) |
| 14:05–14:25 | Stanisław Hałas, Józef Dąbek, Adrian Pacek                                                        | Lithium isotope analysis in waters and sediments                                                                                                                                |
| 14:25–14:45 | Agnieszka Gałuszka, Zdzisław M. Migaszewski                                                       | Arsenic in waters of the Podwiśniówka area: geochemical and environmental considerations                                                                                        |
| 14:45–15:00 | Discussion                                                                                        |                                                                                                                                                                                 |
| 15:00–15:15 | Presentations of scientific instruments by Perkin Elmer Polska                                    |                                                                                                                                                                                 |
| 15:15–15:35 | Coffee break + poster session                                                                     |                                                                                                                                                                                 |
| 15:35–16:15 | Free time                                                                                         |                                                                                                                                                                                 |
| 16:15–19:00 | <b>Tour of Kielce:</b><br>"Devonian story"<br>(leaders: Zdzisław Migaszewski, Agnieszka Gałuszka) | <b>Itinerary:</b><br>(1) Center of Geoeducation in Kielce;<br>(2) Geology of Wietrzna quarry                                                                                    |
| 19:00–      | Break the ice dinner at the Institute of Chemistry                                                |                                                                                                                                                                                 |

**Sept 25, 2012 (Tuesday)**

|                                                                                     |                                                                                      |                                                                                                                            |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 7:30–8:30                                                                           | Breakfast                                                                            | University in Kielce, 15 Ślaska St. (catering)                                                                             |
| Plenary session II/1 (applied geochemistry)                                         |                                                                                      |                                                                                                                            |
| Chairperson: Ruth E. Wolf                                                           |                                                                                      |                                                                                                                            |
| 9:15–9:35                                                                           | Jakub Matusik, Tomasz Bajda                                                          | Kaolinite-based sorbent of hexavalent chromium: sorption mechanism, pH effect and desorption behaviour                     |
| 9:35–9:55                                                                           | Ciążela Jakub, Torsten Bolte, Francois Holtz, Andrzej Muszyński, Katarzyna Machowiak | The effect of water activity on the eutectic point in natural granitic systems                                             |
| 9:55–10:15                                                                          | Zdzisław M. Migaszewski, Agnieszka Gałuszka, Andrzej Migaszewski                     | REE concentrations in well and pond waters of the Podwiśniówka area (Holy Cross Mountains, south-central Poland)           |
| 10:15–10:30                                                                         | Discussion                                                                           |                                                                                                                            |
| 10:30–11:00                                                                         | Coffee break                                                                         |                                                                                                                            |
| 11:00–11:15                                                                         | Presentation of scientific instruments by Bruker Polska                              |                                                                                                                            |
| 11:15–11:45                                                                         | Poster session (Agnieszka Gałuszka)                                                  |                                                                                                                            |
| 11:45–12:30                                                                         | Free time (preparation for the field trip)                                           |                                                                                                                            |
| Field session (departure of coach at “Melodia” Hostel of J. Kochanowski University) |                                                                                      |                                                                                                                            |
| 12:30–18:00                                                                         | Excursion leaders: Zdzisław M. Migaszewski, Agnieszka Gałuszka                       | Tour of Romanesque Cistercian abbey in Wąchock and Neolithic Flint Mine at Krzemionki (approx. 70 km north-east of Kielce) |
| 18:00–19:00                                                                         | Free time                                                                            |                                                                                                                            |
| 19:00–                                                                              | Official dinner                                                                      | “Monte Carlo” restaurant in Kielce                                                                                         |

**Sept 26, 2012 (Wednesday)**

|                                                               |                                           |                                                                                                                   |
|---------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 7:30–8:30                                                     | Breakfast                                 | University in Kielce, 15 Ślaska St. (catering)                                                                    |
| <b>Plenary session III/1 (environmental geochemistry (2))</b> |                                           |                                                                                                                   |
| <b>Chairperson:</b> Stanisław Hałas                           |                                           |                                                                                                                   |
| 9:20–9:40                                                     | <u>Sabina Dołęgowska</u> , Artur Michalik | Anomalous concentrations of rare earth elements in mosses and soils from the Kielce region (south-central Poland) |
| 9:40–10:00                                                    | <u>Artur Michalik</u> , Sabina Dołęgowska | Rare earth elements distribution in spring waters of Świętokrzyski National Park, Poland                          |
| 10:00–10:15                                                   | Discussion                                |                                                                                                                   |

|             |                                                 |
|-------------|-------------------------------------------------|
| 10:15–10:45 | Coffee break                                    |
| 10:45–11:00 | Summary of poster session by Agnieszka Gałuszka |
| 11:00       | Conference closure                              |

**List of Posters:**

**IMPORTANT NOTE:** The Authors of posters should prepare a 5 minute speech on the thematic issue, which will be presented during the poster sessions.

**Topic “Environmental Geochemistry”**

1. Zdzisław M. Migaszewski, Agnieszka Gałuszka, Karina Krzciuk – “LA-ICP-MS study of selected trace element distributions in pyrite from the Podwiśniówka quarry, Holy Cross Mts (south-central Poland)”
2. Justyna Smolarek, Leszek Marynowski, Achim Bechtel, Marc Philippe – “New molecular indicator of fossil conifer wood degradation by wood-decay fungi”
3. Irena A. Wysocka, Irena Jaroń, Jarosław Kucharzyk – “Investigation of rare earth elements content in ground waters of Poland by using ICP-MS technique”
4. Irena A. Wysocka, Ewa Krzemińska – “Analysis of the garnet samples as the example of application of laser ablation inductively coupled plasma mass spectrometry technique”

**Topic “Applied Geochemistry, Mineralogy and Petrology”**

1. Piotr Bożęcki, Grzegorz Rzepa, Przemysław Rzepka – “Preliminary results of neutralization of AMD waters from selected reservoir in the Muskau Arch near Łęknica, W Poland”
2. Kamil Czech, Magdalena Garnuszek, Dariusz Wideł – “Application of selected modified halloysite adsorbents for ammonia adsorption determined by capillary electrophoresis method”
3. Beata Gebus, Stanisław Hałas – “Micro ion selective electrodes – an alternative for nitrate/nitrite precision concentration measurements”
4. Dorota Kowalik-Kociszewska, Ryszard Kryza, Jacek Cwiakalski – “Historical sandstone epitaphs from Lower Silesia (SW Poland: preliminary results of petrographic investigations”
5. Katarzyna Pietrzykowska, Marta Prell, Ryszard Kryza – “Świny Castle (Sudetes, SW Poland): a natural laboratory to study lichenological-lithological interrelationships”
6. Marta Prell, Katarzyna Pietrzykowska, Ryszard Kryza – “Petrography, deterioration and lichenology of sandstones from the Pomorski bridge in Wrocław and old Płakowice quarry (a comparative study)”

7. Alicja Wzorek, Mariusz Urbaniak, Barbara Gawdzik, Jarosław Gawdzik, Łukasz Rożak – “Remediation of soils contaminated with petroleum hydrocarbons: A case study, TBD S.A. Dębica”

#### Topic “Isotope Geochemistry”

1. Anna Baran, Andrzej Pelc, Stanisław Chmiel, Stanisław Hałas – “Origin of saline waters in the vicinity of Rzeszów in the light of isotope ( $\delta^{18}\text{O}$ ,  $\delta\text{D}$ ,  $\delta^{13}\text{C}$ ,  $\delta^{37}\text{Cl}$ ) and hydrochemical studies”
2. Zbigniew Czupyt, Stanisław Chmiel, Stanisław Hałas – “Cavity Ring Down Spectrometry: an alternative to Isotope Ratio Mass Spectrometry”
3. Agata Duczmal-Czernikiewicz, Stanisław Hałas, Beata Gebus, Zbigniew Czupyt – “Stable isotope record of carbonates from the Poznań Formation”
4. Beata Gebus, Zbigniew Czupyt, Stanisław Hałas – “Simultaneous preparation of  $\text{N}_2$  and  $\text{CO}_2$  for stable isotope analysis from nitrate samples”
5. Miłosz Huber, Stanisław Hałas – “Ore minerals characterization and stable sulfur isotopes from Broken Hammer, Sudbury”
6. Maciej Rybicki, Maciej Górka, Leszek Marynowski – “Detection of multiple organic matter sources in PM10 aerosol particles from Wrocław city using carbon isotope signature and molecular study”
7. Elżbieta Zwolińska, Maciej Górka, Anna Zwoździak, Jerzy Zwoździak, Mariusz-Orion Jędrysek – “Carbon isotope analyses of PM10 dust in the vicinity of Bogatynia (SW Poland) as an indicator of anthropogenic impact”