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This issue of “Mineralogy” includes selected papers based on some oral and poster presentations of the 1st Geochemical Conference on “Contemporary Problems of Geochemistry” organized by the Geochemical Group of the Mineralogical Society of Poland and Jan Kochanowski University in Kielce. The conference was held at the Institute of Chemistry of Jan Kochanowski University in Kielce on 27–30 September 2010.

The official opening was conducted by the chairman of the Geochemical Group Professor Zdzisław Migaszewski, the vice-president of Jan Kochanowski University in Kielce, Professor Wiesław Caban and the president of the Mineralogical Society of Poland, Professor Ryszard Kryza. The leading theme of this conference was environmental geochemistry, the discipline that has become an important tool in environmental studies and in understanding processes and interactions that affect abiotic and biotic compartments. The scope of oral and poster presentations encompassed various aspects of case studies as well as geochemical, mineralogical, petrographical, sedimentological and geophysical methods and techniques used for solving both theoretical and applied problems in environmental geochemistry. The four keynote speakers presented a broad range of topics: “Biogeochemistry of trace elements – environmental issues”, Professor Alina Kabata-Pendias (Institute of Soil Science and Plant Cultivation in Puławy), “Recent geochemical investigations at the U.S. Geological Survey”, Dr. Paul J. Lamothe (U.S. Geological Survey), “Selected geochemical investigations of the U.S. Geological Survey in Alaska”, Dr. James G. Crock (U.S. Geological Survey), and “Current issues in establishing geochemical background of trace elements”, Professor Agnieszka Gałuszka (Jan Kochanowski University). The plenary session was followed by two field excursions: (1) Biogeochemical and hydrogeochemical studies in Świętokrzyski National Park and (2) Influence of pyrite mineralization on the generation of Acid Mine Drainage in the Wiśniówka mining area near Kielce. The latter trip ended in an abandoned Eifelian dolomite quarry (Zachemie), in which tracks of the oldest amphibians (Tetrapods) have recently been found.

Speakers and poster authors of this three-day conference provided an overview of geochemistry and its applications to various case studies. These investigations focused on

geochemical interactions in-between minerals, rocks, soils, waters and vegetation. Some of the speakers centered on environmental concerns, including acid mine drainage, pollution sources, acid precipitation or natural disasters. Various methods and techniques, applied to different scales – from micro-scale (e.g. single particle aerosols) to macro-scale (e.g. tsunami deposits) were presented. These methods were used to determine different analytes, including stable isotopes, trace and major elements and organic compounds.



Conference attendees standing on the staircase of the Institute of Chemistry building (authors in the foreground)



Field trip participants in the Zachełmie quarry

The principal conclusion drawn from these presentations is that geochemistry represents a holistic approach to the environment, involving various disciplines and making use of different methods and techniques. The geochemical knowledge enables to better understand and potentially control natural or man-induced processes in the environment. However, it should be stressed that the complexity of geochemical processes and a wide variety of environmental and biological factors are often an impediment to correct interpretation. But on the other hand, this multidisciplinary approach provides great challenges, gives satisfaction and brings major benefit to the public.

For three days of September 2010, Kielce became a geochemistry capital of Poland. The next geochemical conference will also be held in Kielce on 24–26 September 2012. The organizers hope that this second meeting will be as interesting, with high-quality scientific presentations and friendly atmosphere, as the first one.

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