

# Contents

<b>Tomasz Gonet, Anna Wojas</b> Investigation of the magnetic properties of soils in the Cisna-Wetlina Landscape Park	7
<b>Joanna Kołodziejczyk, Jaroslav Pršek, Burim Asllani, Feriz Maliqi</b> The paragenesis of silver minerals in the Pb-Zn Stan Terg deposit, Kosovo: an example of precious metal epithermal mineralization	19
<b>Zieliński Artur, Łyskowski Mikołaj and Mazurkiewicz Ewelina</b> Ground Penetrating Radar investigation of limestone karst objects in the Botanical Garden in Kielce	31
<b>Maciej Ziulkiewicz, Anna Fortuniak</b> Hydrochemical zoning of valley peatlands as a result of water supply conditions: examples from Poland	39
<b>ABSTRACTS</b>	
<b>Müge Atalar, Marianna Kováčová, Mine Sezgül Kayseri Ozer, Torsten Utescher</b> Late Messinian palynoflora from Central Anatolian Plateau (Çankırı Basin)	57
<b>Vladimír Bilohuščin, Pavel Uher</b> Ludwigite-group minerals and szaibelyite: rare borate minerals from Vysoká – Zlatno skarn, Štiavnica stratovolcano, Slovakia	59
<b>Štěpán Chládek, Karel Breiter, Pavel Uher</b> Composition of Nb-Ta-Ti-Sn-W oxide minerals: indicators of magmatic to hydrothermal evolution of the Cínovec granite intrusion and Sn-W deposit (Czech Republic)	61
<b>Dominika Czapla, Lucyna Natkaniec-Nowak, Przemysław Drzewicz</b> Microhardness as a method for investigation of fossil resins	63
<b>Natalija Ćirica, Kristina Milićević</b> Evaluation of geothermal potential of Mataruška Banja Spa (central Serbia) thermal mineral water	65
<b>Maciej Dwornik, Anna Franczyk, Krzysztof Krawiec</b> Analysis of stability levee during different flooding wave stages	67
<b>Karol Faehnrich, Karolina Kościńska, Jarosław Majka, Maciej Dwornik</b> How fluids infiltrate through fractures and change metamorphic rocks – a case study from northern Spitsbergen	69
<b>Tomáš Fuksi</b> Differences in shell size of the bivalve <i>Varicorbula</i> between marginal parts of the Vienna and Danube basins	71

<b>Paweł Godlewski, Marek Wendorff, Andrzej Świąder</b> Compositional differences between Besko and Otryt sandstones of the Krosno Beds (Oligocene) in Eastern part of the Silesian Tectonic Unit	73
<b>Johanna Holmberg, Jarosław Majka, Iwona Klonowska</b> Metamorphic conditions of the omphacite-garnet gneiss from Otrøy, Western Gneiss Region, Scandinavian Caledonides	75
<b>Janis Ivanovs, Maris Krievans</b> Using LIDAR topography data for determination of morphology and terrace levels of the River Ogre Valley in Middle Latvia Lowland	76
<b>Mateusz Jabłoński, Tomasz Lipecki, Wojciech Jaśkowski, Agnieszka Ochałek</b> Virtual Underground City Osówka	77
<b>Mateusz Jabłoński, Wojciech Jaśkowski</b> The usage of telemetry measurements methods to determine shaft tube deformations caused by natural and anthropogenic rock mass movements	79
<b>Kamil Juško, Agata Kasprzak, Damian Pietrzak</b> Water chemical composition characteristic in the upper part of the Sztoła River	81
<b>Matija Kordić, Miloš Milanković</b> Analysis of the situation of the Euphrates-Tigris-Shatt Al Arab river system and possible solutions of the devastation of the ecosystem	83
<b>Klaudia Korzec</b> Hydrogeochemical characteristic of thermal waters in Bańska Niżna	85
<b>Anna Koteja, Jakub Matusik</b> Na-montmorillonite modified with ammonium salts and azobenzene as a photoactive nanomaterial	87
<b>Vitalii Kulynych, Michał Maruta</b> Modeling of air pollution related to the “V” natural gas deposit exploitation	89
<b>Piotr Kunecki, Rafał Panek, Magdalena Wdowin</b> Na-P1 zeolite synthesis and its crystalline structure ripening through hydrothermal process using coal combustion by-products as substrates	90
<b>Przemysław Lisowski</b> Graph representation of geological stratum	92
<b>Hubert Malik</b> Capabilities of subsidence detection on mining areas in Upper Silesian Coal Basin using Sentinel-1A data acquired in Interferometric Wide Swath Mode	94
<b>Dmitriy A. Mamontov, Olga A. Orlova</b> Preliminary results from sculpture analysis of the apiculate miospores from the Upper Viséan of Kaluga region, Russia	95

<b>Paulina Maziarz, Jakub Matusik</b> The influence of alkali concentration and temperature on chemical activation of halloysite	97
<b>Anna Mika</b> Use of statistical tools in hydrogeological research	99
<b>Maria Młynarska, Bartosz Puzio, Monika Kwaśniak-Kominek, Maciej Manecki</b> The effect of Ca-Pb and P-As substitutions on the solubility of hydroxylapatites	100
<b>Barbara Muir, Damian Andrunik, Tomasz Bajda</b> Molybdates and tungstates sorption on organo-smectites as a process controlled by the type and amount of surfactant	102
<b>Jakub Nedvěd</b> A new approach in skin effect and storativity estimation from pumping test data with low pumping rates	104
<b>János Nádas, Viktor Márai, János Földessy</b> Evaluation of geochemical anomalies detected in the Boda Claystone Formation	105
<b>Piotr Opido, Andrzej Leśniak</b> The comparison of usage of satellite SAR and optical data in the process of urban growth monitoring	107
<b>Aleksey Pakhalko, Aleksey Krylov, Elena Miroljubova, Ekaterina Taldenkova, Pavel Rekant</b> First discovers of Pleistocene authigenic carbonate crusts (ACC) at the Mendeleev Rise, Arctic Ocean	109
<b>Andrzej Pasternacki, Paweł Wandycz, Tomasz Maćkowski</b> Effect of the near surface layer for the microseismic monitoring – 2D modelling	111
<b>Andrzej Pasternacki, Eryk Święch, Tomasz Maćkowski</b> Seismic modelling as a tool for optimization of downhole microseismic monitoring array	112
<b>Henrieta Pavolová, Tomáš Bakalár, Štefan Sabo, Petra Puškárová</b> Adsorption efficiency of selected natural and synthetic sorbents	114
<b>Maciej Pawlikowski, Maciej Manecki, Dawid Kozień, Edyta Waluś, Aleksandra Borecka, Jacek Stanisław, Michał Pękala, Monika Kiecana</b> Characteristics of soil of “Józefka” deposit overlay, Kielce District	116
<b>Damian Pietrzak</b> Assessment of the quantitative and chemical groundwater status of the Łukowica river catchment area	118
<b>Marta Polak, Bożena Gołębiowska, Grzegorz Rzepa</b> Manganese oxides from Zalas, Kraków area, southern Poland	120
<b>Marina Poledica, Danica Stevanović</b> Proposal of new monitoring network of water bodies of karst groundwater in Serbia	122

<b>Sergey Vladimirovich Rud'ko, Anton Borisovich Kuznetsov, Boris Glebovich Pokrovsky</b> $\delta^{13}\text{C}$ variation in carbonate platform sediments of the Northern Tethys in Late Jurassic	124
<b>Vladimír Šimo, Dušan Starek</b> Analysis of the trace fossils from Paleogene formations of the Central Western Carpathian (Orava region)	126
<b>Urszula Solecka, Sylwia Zelek, Tomasz Bajda</b> The Rietveld refinement studies of pyromorphite-vanadinite and mimetite-vanadinite solid solution series	127
<b>Jacek Stanisław, Jarosław Kos, Marta Kumorowska, Maria Kaczmarzyk</b> The influence of root system on slope stability in the view of numerical analysis	129
<b>Eryk Święch, Andrzej Pasternacki, Tomasz Maćkowski</b> Selected effects of VTI anisotropy on downhole microseismic data	131
<b>Magdalena Tuchowska, Tomasz Bajda, Grzegorz Rzepa, Klaudia Dębiec, Łukasz Drewniak</b> Arsenic interactions with bog iron ores – As(III) and As(V) adsorption-desorption study	133
<b>Anna Twaróg, Piotr Guzy, Henryk Sechman</b> Measurement of methane flux in the selected area of the Polish Outer Carpathians – preliminary research	135
<b>Paweł Wandycz, Eryk Święch, Andrzej Pasternacki</b> Comparison of solutions for microseismic focal mechanism estimation	137
<b>Magdalena Wołowicz, Barbara Muir, Tomasz Bajda</b> Sorption of organic compounds by organo-zeolites	139
<b>Franc Zalewski</b> Triangles in the walls of the Great Pyramid in Giza	141
<b>Grzegorz Ziemniak, Jerzy Czerny, Maciej Manecki, Karolina Kościńska</b> The Baklia Fault Zone – a regional strike-slip zone splitting Prins Karls Foreland (Svalbard)	142
INSTRUCTIONS FOR THE AUTHORS	145