

# CV

## Personal details:

<b>Surname:</b>	Maziarz
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## Educational background:

<b>in progress</b>	<p><b>Ph.D. in Earth Sciences</b> AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. Ph.D. thesis: <i>Layered minerals doped with iron nanoparticles showing reductive and magnetic properties for the removal and separation of selected inorganic ions</i> Supervisor: Jakub Matusik, Ph.D.</p>
<b>2015</b>	<p><b>M.Sc. title</b> AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. Branch: Environmental Engineering, specialization: Waste Management M.Sc. thesis: <i>Comparative characteristics of adsorption properties for commercial halloysite and smectite-bearing waste</i> Supervisor: Jakub Matusik, Ph.D.</p>
<b>2014</b>	<p><b>B. Sc. title</b> AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. Branch: Environmental Engineering B.Sc. thesis: <i>The kinetics of heavy metals immobilization on modified halloysite</i> Supervisor: Jakub Matusik, Ph.D.</p>

Research interest:

- Chemical and mineralogical characterization of layered minerals (clay minerals, LDH).
- Modification of layered minerals for application in adsorption.
- Synthesis of layered minerals-metal nanoparticles composites and their application in adsorption processes.
- Determination of sorption properties of mineral-based materials derived mainly from layered minerals.
- Efficiency and mechanisms of heavy metals immobilization using layered minerals and their derivatives.

Research grants

<b>2019</b>	<b>Grant NCN/NCBR TANGO 2</b> - Remediation technology of aquatic environments polluted with anionic forms of elements with the use of functionalized kaolinite sorbents ( <b>Co-Investigator</b> ).
<b>2017 - 2019</b>	<b>Grant NCN PRELUDIUM (2016/21/N/ST10/00390)</b> - Layered minerals doped with iron nanoparticles showing reductive and magnetic properties for the removal and separation of selected inorganic ions ( <b>Principal Investigator</b> ).

Scientific experience:*Conferences / lectures / workshops*

<b>2019.09.15-17</b>	<i>3<sup>rd</sup> Mineral-based sorbents conference, Jerzmanowice, Poland.</i> <b>Oral presentation:</b> Enhanced sulphate removal by precipitation and adsorption using Ca(OH) <sub>2</sub> and synthetic layered double hydroxide: acid mine drainage case study
<b>2019.09.11-13</b>	<i>9<sup>th</sup> European Conference on Mineralogy and Spectroscopy, Prague, Czech Republic</i> <b>Oral presentation:</b> Halloysite-supported iron oxide particles for As(V) removal: adsorption mechanism investigation by the XPS and Mössbauer spectroscopy
<b>2019.09.09-10</b>	<i>Ad hoc Jana2006 workshop, Institute of Physics, Prague, Czech Republic</i>
<b>2019.07.01-05</b>	<i>International Conference on Clay Science and Technology EUROCLAY2019, Paris, France</i> <b>Poster presentation:</b> Physico-chemical studies of Mg/Fe and Mg/Al Layered Double Hydroxides obtained via transformation of minerals <b>Co-author of poster:</b> Halloysite-LDH heterostructured materials: performance in removal of selected anions from aqueous solutions
<b>2018.07.24-26</b>	<i>III International Conference on Applied Mineralogy &amp; Advanced Materials, Bari, Italy</i> <b>Oral presentation:</b> The structural stability of Mg–Al LDH impregnated with iron oxide particles used for As(V) removal

2018.06.11-14	<p><i>55th annual meeting The Clay Minerals Society, University of Illinois at Urbana-Champaign, USA</i></p> <p><b>Oral presentation:</b> Maghemite particles supported on halloysite as magnetically responsive composites for efficient As(V) removal</p>
2018.03.07-12.06	<p><b>Research stay</b> at the Faculty of Technology, Chemical Process Engineering Group, University of Oulu, Finland. The research carry out within the scientific project - "Layered minerals doped with zero-valent iron particles for wastewater treatment".</p>
2017.11.20-12.04	<p><b>Research stay</b> at the Faculty of Technology, Chemical Process Engineering Group, University of Oulu, Finland. Analyses and interpretation of results using X-ray photoelectron spectroscopy.</p>
2017.09.18-19	<p><i>3<sup>rd</sup> Mineral-based sorbents conference, Kraków.</i></p> <p><b>Oral presentation:</b> Halloysite composites with Fe<sub>3</sub>O<sub>4</sub>: the effect of impregnation on Cd(II) and Pb(II) removal from aqueous solutions.</p> <p><b>Co-author of oral presentation:</b> Efficiency of Pb(II) and Mo(VI) removal by kaolinite impregnated with zero-valent iron particles.</p>
2017.07.17-21	<p><i>XVI International Clay Conference, Granada, Spain.</i></p> <p><b>Oral presentation:</b> Layered minerals as supports for magnetite nanoparticles and their use for aqueous As(V) removal.</p>
2017.06.2-7	<p><i>54<sup>rd</sup> Annual Meeting of the Clay Minerals Society (Living Clays), Edmonton, Canada.</i></p> <p><b>Poster presentation:</b> The LDH-based magnetic nanocomposites for the removal of As(V) and Mo(VI) anionic species.</p>
2017.03.29 - 04.02	<p><i>XVII International Conference of Young Geologist, Dobczyce, Poland.</i></p> <p><b>Oral presentation:</b> The novel magnetic adsorbents doped with Fe<sub>3</sub>O<sub>4</sub> nanoparticles for As(V) and Cr(VI) removal</p> <p><b>Co-author of oral presentation:</b> Efficiency of selected anions removal by kaolinite impregnated with iron-bearing nanoparticles</p>
2016.07.4-8	<p><i>8<sup>th</sup> Mid-European Clay Conference, Koszyce, Slovakia.</i></p> <p><b>Poster presentation:</b> The effect of experimental factors on alkali activation of halloysite</p>
2016.04.14-16	<p><i>XVII International Conference of Young Geologists, Svaty Jur, Slovakia.</i></p> <p><b>Oral presentation:</b> The influence of alkali concentration and temperature on chemical activation of halloysite</p>
2015.07.5-10	<p><i>EuroClay 2015, Edinburgh, Scotland</i></p> <p><b>Co-author of poster:</b> Raw, acid activated and calcined halloysite for metals and metalloids adsorption: sorption capacity and mechanisms</p>
2015.05.7-9	<p><i>XVI International Conference of Young Geologists, Herlany, Slovakia</i></p> <p><b>Oral presentation:</b> A comparative study on the removal of Pb(II), Zn(II), Cd(II) and As(V) by natural, acid activated and calcinated halloysite</p> <p><b>Co-author of oral presentation:</b> Removal of selected anions by raw halloysite and smectite clay</p>
2014.05.8-10	<p><i>XV International Conference of Young Geologists, Międzybrodzie</i></p>

Żywieckie, Poland

**Oral presentations:**

The kinetics of heavy metals immobilization by modified halloysite

*Teaching experience*

- **Spectroscopic methods**

*In Polish:* Metody spektroskopowe (as a part of course: Analysis methods of minerals and rock and Structural studies methods) (*1<sup>st</sup> degree, 3<sup>rd</sup> year, GG, IŚ*) (2015-2016)

- **Mineral sorbents in environmental engineering**

*In Polish:* Sorbenty mineralne w inżynierii środowiska (*2<sup>nd</sup> degree, 2<sup>nd</sup> year, specialization Mineral engineering, IŚ*) (2015 –now)

Achievements / awards

<b>2019</b>	1 <sup>st</sup> prize for the students poster presentation at the 56th annual meeting of The Clay Minerals Society (CMS) and the 6th Mediterranean Clay, Meeting (MCM), 1-5.07.2019, Paris, France.
<b>2017</b>	EDUFI scholarship from Finnish National Agency for Education for 3 months research stay at Oulu University, Finland
<b>2017</b>	The Award for the 2 <sup>nd</sup> place in Student poster presentation competition at The 54th annual Clay Minerals Society conference: 2-7.06.2017, Edmonton, Alberta Canada
<b>2017</b>	Travel Grant Award from The Clay Minerals Society for attendance in : The 54th annual Clay Minerals Society conference: 2-7.06.2017, Edmonton, Alberta Canada.
<b>2016</b>	Travel Grant Award from The Mineralogical Society of Great Britain and Ireland, for attendance in 8th Mid-European Clay Conference, 4-8.07.2016, Kosice, Slovakia

*Parametric summary of the scientific output*

Citations (*Scopus*): **35**, without auto-citations: **23**

Hirsch index (*Scopus*): **3**

Citations (*Web of Science*): **24**, without auto-citations: **19**

Hirsch index (*Web of Science*): **3**

Membership:

- Mineralogical Society of Poland (2015-present)
- Clay Minerals Society (2015-present)
- International Association for the Study of Clays (AIPEA) (2017-present)

Kraków, 31.12.2019