

CV

Personal details:

Surname:	Rybka
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Educational background:

at present	Ph.D. in Natural Sciences , discipline: Earth and related environmental sciences AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. Ph.D. thesis: <i>Hydrotalcite-like mineral composites obtained by transformation of selected minerals hybrid sorbents for the removal of anions from multi-element aqueous solutions.</i> Supervisor: Jakub Matusik, Ph.D.
2017	Postgraduate certificate <i>Database and Network Systems + Quality Management.</i> Cracow University of Technology Centrum Szkolenia i Organizacji Systemów Jakości
2017	M.Sc. title AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. Branch: Environmental Engineering, specialization: Mineral Engineering. M.Sc. thesis: <i>Efficiency of selected anions removal from aqueous solutions by nanocomposites derived from Maria III kaolinite..</i> Supervisor: Jakub Matusik, Ph.D.
2016	B.Sc. title AGH University of Science and Technology in Kraków, Faculty of Geology, Geophysics and Environmental Protection. Branch: Environmental Engineering. B.Sc. thesis: <i>Causes of air pollution and their influence on the air quality in malopolska.</i> Supervisor: Marzenna Schejbal - Chwastek, Ph.D.

Research interest:

- Chemical and mineralogical characterization of layered minerals (clay minerals, LDH).
- Modification of minerals in order to obtain functional mineral materials e.g. sorbents.
- Determination of sorption properties of mineral-based materials derived mainly from layered minerals.

Scientific experience:*Conferences / lectures / workshops*

2021.01.22-02.19	<i>Science Communication workshop for students and ECRs in the mineral sciences, Mineralogical Society of Great Britain & Ireland (online)</i>
2020.11.05-06	<i>XXI International Conference of Young Geologists (online)</i> Oral presentation: Efficiency of selected anions removal by Mg/Al and Mg/Fe LDH obtained with different sources of Mg. Co-author of oral presentation: Ca-Al LDH obtained via transformation of limestone powder and aluminium can for Cr(VI) removal in single-element system and in the presence of competitive anion.
2020.10.18-23	<i>57th Annual Meeting of the Clay Minerals Society (online)</i> Oral presentation: Mg/Al LDH obtained via transformation of minerals for the removal of selected elements from acidic and alkaline wastewaters Poster: Different approaches to transformation of selected minerals into layered double hydroxides
2020.06.01-12	<i>Rigaku School for Practical Crystallography</i>
2019.09.16-17	<i>4th Mineral-based sorbents conference, Jerzmanowice, Poland</i> Oral presentation: Characterization of hydrotalcite/pyroaurite-like anion adsorbents derived from magnesite and dolomite.
2019.09.11-13	<i>9th European Conference on Mineralogy and Spectroscopy</i> Oral presentation: The effect of M(II)/M(III) molar ratio on the LDH structure derived from chemicals and minerals: a spectroscopic study using FTIR, Raman and XPS.
2019.09.09-10	<i>The 37th Ad-hoc workshop on Jana2006, Prague, Czech Republic</i> Solution refinement and interpretation of crystallographic structures
2019.07.01-05	<i>International Conference on Clay Science and Technology EUROCLAY2019, Paris, France</i> Poster presentation: Physico-chemical studies of Mg/Fe and Mg/Al Layered Double Hydroxides obtained via transformation of minerals Co-author of poster:

	Halloysite-LDH heterostructured materials: performance in removal of selected anions from aqueous solutions
2019.04.23-05.09	Research stay at the Faculty of Technology, Chemical Process Engineering Group, University of Oulu, Finland. Analyses and interpretation of results using X-ray photoelectron spectroscopy.
2019.04.03-05	<i>XX International Conference of Young Geologists, Herlany, Slovakia</i> Oral presentation: Mg/Al LDH synthesis via transformation of minerals through AlCl ₃ hydrolysis
2018.10.25-28	<i>XXVth Meeting of the Petrology Group of the Mineralogical Society of Poland, Brunów, Poland</i> Co-author of poster: One-pot synthesis of magnetic composites based on synthetic Layered Double Hydroxides
2018.10.11-14	<i>5th Meeting of students' geological research circles, Różanka, Poland</i> Co-author of poster: In Polish: Otrzymywanie magnetycznych kompozytów na bazie syntetycznych struktur hydrotalkitowych w procesie jednoetapowego współtrącania (One-pot synthesis of magnetic composites based on synthetic hydrotalcite).
2018.09.17-21	<i>9th Mid-European Clay Conference (MECC), Zagreb, Croatia</i> Oral presentation: Mg-Fe LDH derived from magnesite and hematite and its affinity towards sulphates
2018.07.24-26	<i>3rd International Conference on Applied Mineralogy and Advanced Materials (MMS), Bari, Italy</i> Poster presentation: Synthesis of Mg-Fe Layered Double Hydroxides and their sorption affinity towards Cr(VI)
2018.06.11-14	<i>55th Annual Meeting of the Clay Minerals Society, Urbana-Champaign, USA</i> Poster presentation: The quality of Mg-Fe Layered Double Hydroxide derived from magnesite and hematite Co-author of the oral presentation: Halloysite-based hybrid composites with synthetic LDH and their affinity to remove anions
2018.04.04-07	<i>XIX International Conference of Young Geologists, Herlany, Slovakia</i> Oral presentation: Acid Mine Drainage treatment by zerovalent iron particles: the effect of kaolinite support on ions removal efficiency
2017.09.18-19	<i>3rd Mineral-based sorbents conference, Kraków.</i> Oral presentation: Efficiency of Pb(II) and Mo(VI) removal by kaolinite impregnated with zero-valent iron particles.
2017.03.29-2017.04.02	<i>XVII International Conference of Young Geologist, Dobczyce, Poland.</i> Oral presentation: Efficiency of selected anions removal by kaolinite impregnated with iron-bearing nanoparticles.

Teaching experience

- **Experimental mineralogy**
In Polish: Mineralogia eksperymentalna
(2nd degree, 2nd year, specialization Applied Mineralogy and Gemmology, GiG) (2018,2019)
- **Mineral engineering**
In Polish: Inżynieria mineralna
(2nd degree, 2nd year, specialization Waste Management, IŚ) (2018)
- **Mineral sorbents in environmental protection**
In Polish: Sorbenty mineralne w ochronie środowiska
(2nd degree, 2nd year, specialization Environmental Assessment, OŚ) (2017,2018,2019)
- **Soil pollution and remediation**
In Polish: Skażenia i rekultywacja gleb
(2nd degree, 1st year, specialization Environmental Assessment, OŚ) (2018)
- **Mineral engineering in environmental protection**
In Polish: Inżynieria mineralna w ochronie środowiska
(2nd degree, 2nd year, specialization Techniques of Environment Remediation, OŚ) (2017,2018)

Achievements / awards

2018	Clay Minerals Group (Mineralogical Society of Great Britain & Ireland) bursary for the conference: <i>9th Mid-European Clay Conference (MECC), Zagreb, Croatia</i>
2018	1 st prize for the best poster presentation at <i>55th Annual Meeting of the Clay Minerals Society, Urbana-Champaign, USA</i>
2018	The MMS Organising Committee grant for the conference: Minerals & Materials Sciences (MMS)2018, Bari, 24-26.07.2018
2018	Discintion for presentation at <i>XIX International Conference of Young Geologists, Herlany, Slovakia</i>
2018	Blair Jones/Jane Flynn award for the highest ranked abstract in CMS Student Travel Award 2018 competition
2018	The Clay Minerals Society Student Travel Award for the Conference: <i>55th Annual Meeting of the Clay Minerals Society 2018, Urbana-Champaign, USA</i>
2017	Discintion for presentation at <i>XVIII International Conference of Young Geologists, Dobczyce, Poland</i>

Parametric summary of the scientific output

Citations (*Scopus*): **19**, without auto-citations: **16**

Hirsch index (*Scopus*): **2**

Citations (*Web of Knowledge*): **8**, without auto-citations: **8**

Hirsch index (*Web of Knowledge*): **1**

Supervisor

2019	<i>Justyna Hałabuza.</i> Synthesis of a synthetic hydrocalumite via transformation of an aluminium can and a limestone powder and its' affinity towards Cr(VI). (Otrzymywanie syntetycznego analogu hydrokalumitu poprzez transformację aluminiowej puszki i mączki wapiennej i ocena jego zdolności sorpcyjnych względem Cr(VI)) (student project)
2018	<i>Karolina Bałaga.</i> The synthesis of easily-separable magnetic composites based on LDH: potential application in water treatment. (Synteza łatwo separowalnych kompozytów magnetycznych na bazie LDH: potencjalne zastosowanie w oczyszczaniu roztworów wodnych) (student project)

Membership:

- Mineralogical Society of Poland (member) 2017 - present
- Clay Minerals Society (member) 2017-present
- Association Internationale pour l'Etude des Argiles AIPEA (member) 2017-present

Certificates:

- Assistant of Quality Management PN-EN ISO 9001:2015; Polskie Centrum Badań i Certyfikacji, 2017
- Internal Auditor of Quality Management PN-EN ISO 9001:2015; Polskie Centrum Badań i Certyfikacji, 2017
- Certificate of finishing the Projecting, programming and database optimisation course based on Oracle 10g server, intermediate; Institute of Applied IT, Cracow University of Technology, 2017
- Certified Allied Telesis Technician (CAT), Institute of Applied IT, Cracow University of Technology, 2017

Conference organization:

2020 – XXIst International Conference of Young Geologists, Niedzica - member of Organizing Committee

2019 - 4th Mineral Sorbents Conference, Jerzmanowice - member of Organizing Committee

Non-academic experience:

2017	Intern at Quality & Environment Department, EDF Polska S.A.
2016	Sales and technical advisor on household water treatment systems, FHU Impet
2014	Intern at Field Research Department of Environmental Protection Inspectorate in Cracow

Kraków, 26.02.2021