

## Publications

### *Reviewed articles*

- Rybka K.**, Matusik J., Marzec M. (2022) Mg/Al and Mg/Fe layered double hydroxides derived from magnesite and chemicals: The effect of adsorbent features and anions chemistry on their removal efficiency. *Journal of Cleaner Production*, 332, 130084
- Rybka K.**, Matusik J., Słaný M. (2021) Technical aspects of selected minerals transformation to LDH-containing materials: The structure, chemistry and affinity towards As(V). *Journal of Environmental Chemical Engineering*, 9, 106792
- Rybka K.**, Matusik J., Kuligiewicz A., Leivskä T., Cempura G. (2021) Surface chemistry and structure evaluation of Mg/Al and Mg/Fe LDH derived from magnesite and dolomite in comparison to LDH obtained from chemicals. *Applied Surface Science* 538, 1-11
- Matusik J., Hyla J., Maziarz P., **Rybka K.**, Leivskä T. (2019) Performance of Halloysite-Mg/Al LDH Materials for Aqueous As(V) and Cr(VI) Removal. *Materials* 12(29), 3569
- Matusik J., **Rybka K.** (2019) Removal of Chromates and Sulphates by Mg/Fe LDH and Heterostructured LDH/Halloysite Materials: Efficiency, Selectivity, and Stability of Adsorbents in Single- and Multi-Element Systems. *Materials* 12(9), 1373
- Rybka K.**, Suwała, K., Maziarz, P., Matusik, J. (2017) Efficiency of Pb(II) and Mo(VI) removal by kaolinite impregnated with zero-valent iron particles. *Mineralogia / Mineralogical Society of Poland* 48, no. 1-4, s. 71-86.

### *Conference materials*

- Rybka K.**, Matusik J., (2021) The efficiency and stability of Mg/Al and Mg/Fe as mineral-based adsorbents for the removal of Cr and Se from wastewaters. 6<sup>th</sup> International Conference on Water Pollution and Treatment, 15-17.07.2021, online
- Rybka K.**, Matusik J., Dziewiątka K., Giera A. (2021) Mineral-based adsorbents for wastewater treatment – the kinetics study of Cr(VI) and Se(VI) adsorption in the presence of sulphates and nitrates by Mg/Al and Mg/Fe Layered Double Hydroxides. *Sustainable Minerals '21*, 21-24.06.2021, online
- Sordyl J., Wudarska A., Babicka A., **Rybka K.**, Manecki M., Bajda T. (2021) Phosphate substitution in synthetic schultenite PbHAsO<sub>4</sub>: vibrational spectroscopic study. *Goldschmidt 2021*, 04-09.07.2021m online
- Rybka K.**, Matusik J., (2020) Efficiency of selected anions removal by Mg/Al and Mg/Fe LDH obtained with different sources of Mg. XXI<sup>st</sup> International Conference of Young Geologists Herl'any, 05-07.11.2020, online
- Hałabuza J., **Rybka K.**, (2020) 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. XXI<sup>st</sup> International Conference of Young Geologists Herl'any, 05-07.11.2020, online
- Rybka K.**, **Matusik J.**, (2020) Mg/Al LDH obtained via transformation of minerals for the removal of selected elements from acidic and alkaline wastewaters. 57<sup>th</sup> Annual Meeting of the Clay Mineral Society, 18-23 October 2020, online
- Rybka K.**, Matusik J., (2020) Different approaches to transformation of selected minerals into Layered Double Hydroxides. 57<sup>th</sup> Annual Meeting of the Clay Mineral Society, 18-23 October 2020, online

- 
- Rybka K.,** Matusik J. (2019) Characterization of hydrotalcite/pyroaurite-like anion adsorbents derived from magnesite and dolomite. *Sorbenty mineralne 2019 : surowce, energetyka, ochrona środowiska, nowoczesne technologie*. 16–17.09.2019, Jerzmanowice, Poland / *red. nauk. Tomasz Bajda. — Kraków : Wydawnictwo Naukowe AKAPIT, 2019. — ISBN: 978-83-65955-37-1. — S. 57–58*
- 
- Rybka K.,** Matusik J. (2019) 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. *ECMS 2019 European Conference on Mineralogy and Spectroscopy : [September 11–13, 2019, Prague, Czech Republic] : book of abstracts.*
- 
- Matusik J., **Rybka K.,** Maziarz P., Hyla J., Kuzdro J., Tobała B. (2019) Halloysite-LDH heterostructured materials: performance in removal of selected anions from aqueous solutions. *EUROCLAY 2019 international conference on Clay science and technology, 1-5 July 2019, Paris : book of abstracts. [France : s.n.], [2019]. — S. 428.*
- 
- Rybka K.,** Matusik J. (2019) Physico-chemical studies of Mg/Fe and Mg/Al Layered Double Hydroxides obtained via transformation of minerals. *EUROCLAY 2019 international conference on Clay science and technology : 1-5 July 2019, Paris : book of abstracts. — [France : s.n.], [2019]. — S. 540.*
- 
- Rybka K.,** Matusik J. (2019) Mg/Al LDH formation via transformation of minerals through the AlCl<sub>3</sub> hydrolysis. *XX International Conference of Young Geologists: 03-05.04.2019, Herl'any, Slovakia, Bratislava : The Publishing House of the Comenius University, 2019 ISBN: 978-80-223-4705-1; e-ISBN: 978-80-223-4704-4. — S. 97–98. — Bibliogr. s. 98*
- 
- Rybka K.,** Matusik J. (2018) Acid Mine Drainage treatment by zerovalent iron particles: the effect of kaolinitesupport on ions removal efficiency. *XIX International Conference of Young Geologists, 05-07.04.2018, Herl'any, Slovakia. Mente et Malleo ; ISSN 2454-096X. — 2018 [vol.] 2018, s. 23.*
- 
- Gajewska K., Bałaga K., Maziarz P., **Rybka K.** (2018) One-pot synthesis of magnetic composites based on synthetic hydrotalcite. *XXV Meeting of the Petrology Group of the Mineralogical Society of Poland: session: "Petrology in narrow and wide perspective: 25 years of sessions of the Petrology Group of the Mineralogical Society of Poland" : 25–28 October 2018, Brunów Mineralogia – Special Papers ; ISSN 1899-8518 vol. 48, s. 48*
- 
- Rybka, K.,** Matusik, J. (2018) Mg–Fe LDH derived from magnesite and hematite and its affinity towards sulphates. *9th Mid-European Clay Conference: Zagreb, September 17–21, 2018, ISBN 978-953-6923-39-7, s. 94.*
- 
- Rybka, K.,** Matusik, J. (2018) Synthesis of Mg–Fe layered double hydroxides from minerals and their sorption affinity towards Cr(VI). *III international conference on Applied mineralogy & advanced materials: MMS 2018 Minerals & Materials Sciences : bridging materials & minerals sciences: Bari, Italy, July, 24–26, 2018. ISSN 2464-9147, s. 77.*
- 
- Rybka, K.,** Matusik, J. (2018) The quality of Mg–Fe layered double hydroxide derived from magnesite and hematite. *55th annual meeting The Clay Minerals Society, University of Illinois at Urbana-Champaign (Illinois, USA) June 11-14, 2018, s. 204.*
- 
- Matusik, J., **Rybka, K.,** Kuzdro, J., Tobała, B. (2018) Halloysite-based hybrid composites with synthetic LDH and their affinity to remove anions. *55th annual meeting The Clay Minerals Society, University of Illinois at Urbana-Champaign (Illinois, USA) June 11-14, 2018, s. 169.*
- 

Kraków, 27.12.2021