

Publications

Reviewed articles

2021

Rybka, K., Matusik, J., Kuligiewicz, A., Leiviskä, 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, 147923.

Yang Z., Karczewska-Golec J., Styczynski M., Bajda T., Drewniak L. (2021) Characterization of Fe-based sediments received from chemical pre-treatment of hydrometallurgical waste leachate from the recycling of alkaline batteries. *Journal of Hazardous Materials*, 403, 123988.

2020

Matusik, J., Deng, Y. (2020) Fumonisin B1 interaction with Mg–Al and Mg–Fe layered double hydroxides: removal efficiency and mechanisms. *Materials*, 13 (19), 4344.

Mrówka, M., Szymiczek, M., Machoczek, T., Lenża, J., Matusik, J., Sakiewicz, P., Skonieczna, M. (2020) The influence of halloysite on the physicochemical, mechanical and biological properties of polyurethane-based nanocomposites. *Polymers/Polimery*, 65, (11-12), 784-791.

Drzewicz, P., Naglik, B., Natkaniec-Nowak, L., Dumańska-Słowik, M., Stach, P., Kwaśny, M., Matusik, J., Milovský, R., Skonieczny, J., Kubica-Bąk, D. (2020) Chemical and spectroscopic signatures of resins from Sumatra (Sarolangun mine, Jambi Province) and Germany (Bitterfeld, Saxony-Anhalt). *Scientific Reports (ISSN 2045-2322)*, 10, 18283.

Andrunik M., Wołowiec M., Wojnarski D., Zelek-Pogudz S., Bajda T. (2020) Transformation of Pb, Cd, and Zn minerals using phosphates. *Minerals*, 10, 342.

Ciężkowska M., Bajda T., Dacewicz P., Dziewit Ł., Drewniak Ł. (2020) Effect of clinoptilolite and halloysite addition on biogas production and microbial community structure during anaerobic digestion. *Materials*, 13, 4127.

Gondek K., Mierzwa-Hersztek M., Kopeć M., Bajda T. (2020) Phytostabilisation on post flotation sediment waste: mobility of heavy metals and stimulation of biochemical processes by mineral-organic mixtures. *Journal of Soils and Sediments*, 20, 3502–3513.

Staicu L.C., Bajda T., Drewniak Ł., Charlet L. (2020) Power generation: feedstock for high value sulfate minerals. *Minerals*, 10, 188.

Walczak A., Michalik A., Napruszewska B.D, Kryściak-Czerwenka J., Karcz R., Duraczyńska D., Socha R.P., Olejniczak Z., Gaweł A., Klimek A., Wójcik-Bania M., Bahranowski K., Serwicka E.M. (2020) New insight into the phase transformation of sepiolite upon alkali activation: Impact on composition, structure, texture, and catalytic/sorptive properties. *Applied Clay Science*, 195, 105740

Wójcik-Bania M, Stochmal E., Duraczyńska D. (2020) Silver nanoparticles deposited on polysiloxane networks as active catalysts in dye degradation. *Journal of Applied Polymer Science*, 137, e49170

Walczyk A., Karcz R., Kryściak-Czerwenka J., Napruszewska B. D., Duraczyńska D., Michalik A., Olejniczak Z., Tomczyk A., Klimek A., Bahranowski K., Serwicka E. M. (2020) Influence of dry milling on phase transformation of sepiolite upon alkali activation: implications for textural, catalytic and sorptive properties. *Materials (ISSN 1996-1944)*, 13 (18), 3936.

Mikoda B., Potysz A., Gruszecka-Kosowska A., Kmiecik E., Tomczyk A. (2020) Spent sulfuric acid plant catalyst: valuable resource of vanadium or risky residue? Process comparison for environmental implications. *Environmental Science and Pollution Research (ISSN 0944-1344)*, 25 (31), 31520-31534.

2019

Maziarz, P., Matusik, J., Radziszewska, A. (2019) Halloysite/zero-valent iron nanocomposites for removal of Pb(II)/Cd(II) and As(V)/Cr(VI): Competitive effects, regeneration possibilities and mechanisms. *Journal of Environmental Chemical Engineering*, 103507 (1-11).

Koteja, A., Matusik, J. (2019) Preparation of azobenzene-intercalated kaolinite and monitoring of the photoinduced activity. *Clay Minerals*, 54, 57–66.

Matusik, J., Hyla, J., Maziarz, P., Rybka, K., Leiviskä, T. (2019) Performance of halloysite-Mg/Al LDH materials for aqueous As(V) and Cr(VI) removal. *Materials*, 12, 3569.

Maziarz, P., Matusik, J., Leiviskä, T. (2019) Mg/Al LDH enhances sulfate removal and clarification of AMD wastewater in precipitation processes. *Materials*, 12, 2334.

Koteja, A., Matusik, J., Lubierda-Durnaś, K., Szczerba, M. (2019) The nature of interactions and UV-induced response within α -zirconium phosphate intercalation compounds with azobenzenes. *Materials*, 12, 1436.

Bello, A., Leiviskä, T., Zhang, R., Tanskanen, J., Maziarz, P., Matusik, J., Bhatnagar, A. (2019) Synthesis of zerovalent iron from water treatment residue as a conjugate with kaolin and its application for vanadium removal. *Journal of Hazardous Materials*, 374, 372–381.

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, 1373.

Maziarz, P., Matusik, J., Strączek, T., Kapusta, C., Woch, W.M., Tokarz, W., Radziszewska, A., Leiviskä, T. (2019) Highly effective magnet-responsive LDH–Fe oxide composite adsorbents for As(V) removal. *Chemical Engineering Journal*, 362, 207–216.

Maziarz, P., Matusik, J., Leiviskä, T., Strączek, T., Kapusta, C., Woch, W.M., Tokarz, W., Górniak, K. (2019) Toward highly effective and easily separable halloysite-containing adsorbents: the effect of iron oxide particles impregnation and new insight into As(V) removal mechanisms. *Separation and Purification Technology*, vol. 210, s. 390–401.

Lempart M., Manecki M., Kwaśniak-Kominek M., Matusik J., Bajda T. (2019). Accommodation of the carbonate ion in lead hydroxyl arsenate (hydroxylmimetite) $Pb_5(AsO_4)_3OH$. *Polyhedron*, 161, 330-337.

Bajda T., Manecki M., Matyjasik M. (2019). The early stages of mimetite dissolution in EDTA studied with atomic force microscopy and scanning electron microscopy. *Microscopy and Microanalysis*, 25, 810–816.

Mierzwa-Hersztek M., Gondek K., Nawrocka A., Pińkowska H., Bajda T., Stanek-Tarkowska J., Szostek M. (2019). FT-IR analysis and the content of phenolic compounds in exogenous organic matter produced from plant biomass. *Journal of Elementology*, 24, 879–896.

-
- Tuchowska M., Muir B., Kowalik M., Socha R.P., Bajda T. (2019). Sorption of molybdates and tungstates on functionalized montmorillonites: structural and textural features. *Materials*, 12, 2253.
-
- Tuchowska M., Rzepa G., Dębiec-Andrzejewska K., Drewniak Ł., Bajda T. (2019). Immobilization of arsenic compounds by bog iron ores. *Desalination and Water Treatment*, 157, 138–147.
-
- Wojciechowska K., Król M., Bajda T., Mozgawa W. (2019). Sorption of heavy metal cations on mesoporous ZSM-5 and mordenite. *Materials*, 12: 3271
-
- Wołowiec M., Komorowska-Kaufman M., Pruss A., Lasocka-Gomuła I., Rzepa G., Bajda T. (2019). The properties of sludge formed as a result of coagulation of backwash water from filters removing iron and manganese from groundwater. *SN Applied Sciences*, 1, 639.
-
- Wołowiec M., Komorowska-Kaufman M., Pruss A., Rzepa G., Bajda T. (2019). Removal of heavy metals and metalloids from water using drinking water treatment residuals as adsorbents : a review. *Minerals*, 9, 487.
-
- Powolny T., Dumańska-Słowik M., Sikorska-Jaworska M., Wójcik-Bania M. (2019) Agate mineralization in spilitized Permian volcanics from “Borówno” quarry (Lower Silesia, Poland) – microtextural, mineralogical, and geochemical Constraints. *Ore Geology Reviews*, 114, 103130
-
- Andrunik M., Bajda T. (2019). Modification of bentonite with cationic and nonionic surfactants: structural and textural features. *Materials*, 12, 3772.
-
- Mierzwa-Hersztek M., Gondek K., Bajda T., Kopeć M. (2019) Zastosowanie biowęglu i zeolitu jako adsorbentów zanieczyszczeń mineralnych. *Przemysł Chemiczny*, 98, 1969-1972.
-
- Tuchowska M., Wołowiec M., Solińska A., Kościelniak A., Bajda T. (2019) Organo-Modified Vermiculite: Preparation, Characterization, and Sorption of Arsenic Compounds. *Minerals*, 9, 483.
-
- Wołowiec M., Tuchowska M., Kudła P., Bajda T. (2019) Synthesis and characterization of cadmium chlorapatite $Cd_5(PO_4)_3Cl$. *Mineralogia*, 50, 3-12.
-

2018

-
- Naglik, B., Kosmowska-Ceranowicz, B., Natkaniec-Nowak, L., Drzewicz, P., Dumańska-Słowik, M., Matusik, J., Wagner, M., Milovsky, R., Stach, P., Szyszka A. (2018) Fossilization history of fossil resin from Jambi Province (Sumatra, Indonesia) based on physico-chemical studies, *Minerals*, vol. 8 (3), no. 95, 1–13.
-
- Kepys, W., Wisła-Walsh, E., Matusik, J. (2018) Chemical examination of fly ash and bottom ash derived from incineration of hazardous waste. *Inżynieria Mineralna = Journal of the Polish Mineral Engineering Society*; ISSN 1640-4920, 1, 221–233.
-
- Kunecki, P., Panek, R., Koteja, A., Franus, W. (2018) Influence of the reaction time on the crystal structure of Na-P1 zeolite obtained from coal fly ash microspheres. *Microporous and Mesoporous Materials*, 266, 102-108.
-
- diCenzo G.C., Debiec K., Krzysztoforski J., Uhrynowski W., Mengoni A., Fagorzi C., Gorecki A., Dziewit L., Bajda T., Rzepa G., Drewniak L. (2018) Genomic and biotechnological characterization of the heavy-metal resistant, arsenic-oxidizing bacterium *Ensifer* sp. M14. *Genes*, 9(8), 379.
-
- Dębiec, K., Rzepa, G., Bajda, T., Uhrynowski, W., Skłodowska, A., Krzysztoforski, J., Drewniak, Ł. (2018) Granulated bog iron ores as sorbents in passive (bio)remediation systems for arsenic removal. *Frontiers in Chemistry*, 6, 54.
-

- Łach M., Grela A., Bajda T., Mierzwiński D., Komar N., Mikuła J. (2018) Production of zeolite sorbents from burning and co-burning biomass with coal. *E3S Web of Conferences* 44, 00097. DOI: 10.1051/e3sconf/20184400097
- Grela, A., Łach, M., Bajda, T., Mikuła, J., Hebda, M. (2018) Characterization of the products obtained from alkaline conversion of tuff and metakaolin. *Journal of Thermal Analysis and Calorimetry*, 133, 217-226.
- Mierzwa-Hersztek, M., Gondek, K., Klimkiewicz-Pawlas, A. Baran, A., Bajda, T. (2018) Sewage sludge biochars management - ecotoxicity, mobility of heavy metals and soil microbial biomass. *Environmental Toxicology and Chemistry*, 37, 1197-1207.
- Solecka, U., Bajda, T., Topolska, J., Zelek-Pogudz, S., Manecki, M. 2018. Raman and Fourier transform infrared spectroscopic study of pyromorphite-vanadinite solid solutions. *Spectrochimica Acta Part A*, 190, 96-103.
- Mikoda B., Gruszecka-Kosowska A., Klimek A., Tomczyk A. (2018) Air pollution control and flue gas desulfurization residues from Polish copper smelting facility as adsorbents of Pb(II) and Cu(II) from aqueous solutions. *Environmental Science and Pollution Research (ISSN 0944-1344)*, 25 (31), 31520-31534.

2017

- Leiviskä, T., Matusik, J., Muir, B., Tanskanen, J. (2017) Vanadium removal by organo-zeolites and iron-based products from contaminated natural water. *Journal of Cleaner Production*, 167, 589-600.
- Kwaśniak-Kominek, M., Manecki, M., Matusik, J., Lempart, M. (2017) Carbonate substitution in lead hydroxyapatite $Pb_5(PO_4)_3OH$. *Journal of Molecular Structure*, 1147, 594-602.
- Koteja, A., Szczerba, M., Matusik, J. (2017) Smectites intercalated with azobenzene and aminoazobenzene: Structure changes at nanoscale induced by UV light. *Journal of Physics and Chemistry of Solids*, 111, 294–303.
- Maziarz, P., Matusik, J. (2017) Halloysite composites with Fe_3O_4 particles: the effect of impregnation on the removal of aqueous Cd(II) and Pb(II). *Mineralogia / Mineralogical Society of Poland*, 48, no. 1-4, 106-126.
- 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.
- Dębiec, K., Rzepa, G., Bajda, T., Zych, Ł., Krzysztoforski, J., Skłodowska, A., Drewniak, Ł. (2017) The influence of thermal treatment on bioweathering and arsenic sorption capacity of a natural iron (oxyhydr)oxide-based adsorbent. *Chemosphere*, 188, 99-109.
- Drewniak, Ł., Skłodowska, A., Manecki, M., Bajda, T. (2017) Solubilization of Pb-bearing apatite $Pb_5(PO_4)_3Cl$ by bacteria isolated from polluted environment. *Chemosphere*, 171, 302-307.
- Grela, A., Bajda, T. (2017) Usuwanie wybranych związków biogenych z roztworów wodnych z wykorzystaniem metakaolinu i zmodyfikowanego metakaolinu. *Inżynieria Ekologiczna*, 18, 30-38.
- Grela, A., Łach, M., Bajda, T., Mikuła J. (2017) Characteristics of sorbent products obtained by the alkaline activation of waste from waste incineration plants. *Mineralogia*, 48, 87-105.
- Grela, A., Łach, M., Mierzwiński, D., Bajda, T., Mikuła, J. (2017) Obtainig zeolites from slags and ashes from a waste combustion plant in an autoclave process. *E3S Web of Conferences* 17, 00026. DOI: 10.1051/e3sconf/20171700026.

- Krajewski, M., Olchowcy, P., Zatoń, M., Bajda, T. 2017. Kimmeridgian hardground-sequence boundary from the Mesozoic margin of the Holy Cross Mountains (central Poland): implications for the evolution of the northern Tethyan carbonate shelf. *Facies*, 63, 1-15.
- Muir, B., Andrunik, D., Hyla, J., Bajda, T. (2017) The removal of molybdates and tungstates from aqueous solution by organo-smectites. *Applied Clay Science*, 136, 8-17.
- Muir, B., Wołowiec, M., Bajda, T., Nowak, P., Czupryński, P. (2017) The removal of organic compounds by natural and synthetic surface-functionalized zeolites: a mini-review. *Mineralogia*, 48, 145-155.
- Wołowiec, M., Bajda, T. (2017) Current stage of knowledge relating to the use ferruginous sludge from water treatment plants – a preliminary review of the literature. *Mineralogia*, 48, 39-45.
- Wołowiec, M., Muir, B., Zięba, K., Bajda, T., Kowalik, M., Franus, W. (2017) Experimental study on the removal of VOCs and PAHs by zeolites and surfactant-modified zeolites. *Energy & Fuels*, 31, 8803-8812.
- Wołowiec, M., Muir, B., Bajda, T., Zięba, K., Kijak, B., Franus, W. (2017) Removal of BTEX and hexane by organo-zeolites: The influence of surfactants' carbon chain length on the sorption process. *Desalination and Water Treatment*, 94, 120-128.
- Wójcik-Bania M., Łącz A., Nyczyk-Malinowska A., Hasik M. (2017) Poly(methylhydrosiloxane) networks of different structure and content of Si-H groups: Physicochemical properties and transformation into silicon oxycarbide ceramics. *Polymer*, 130, 170-181
- Napruszewska B. D., Michalik-Zym A., Rogowska M., Bielańska E., Rojek W., Gawel A., Wójcik-Bania M., Bahranowski K., Serwicka E. M. (2017) Novel montmorillonite/TiO₂/MnAl-mixed oxide composites prepared from inverse microemulsions as combustion catalysts. *Materials*, 10, 1326-1341
- Górniak K., Szydłak T., Gawel A., Klimek A., Tomczyk A., Motyka J., Bahranowski K. (2017) Bentonite from the Central Slovakia Volcanic Field – a prospective raw material for Polish industry. *Mineralogia / Mineralogical Society of Poland (ISSN 1899-8291)*, 48, no. 1-4, 23-38.
- Górniak K., Szydłak T., Gawel A., Klimek A., Tomczyk A., Motyka J., Bahranowski K. (2017) Smectite-, silica- and zeolites-bearing raw materials (Hliník and Hronom bentonite, Slovakia) – a new approach using integrated petrographic and mineralogical studies. *Applied Clay Science (ISSN 0169-1317)*, 141, 180–191.

2016

- Radziemska, M., Mazur, Z., Fronczyk, J., Matusik, J. (2016) Co-remediation of Ni-contaminated soil by halloysite and Indian mustard (*Brassica juncea*L.) *Clay Minerals - Journal of the European Clay Groups*, 51 (no. 3), 489-497.
- Maziarz, P., Matusik, J. (2016) The effect of acid activation and calcination of halloysite on the efficiency and selectivity of Pb(II), Cd(II), Zn(II) and As(V) uptake. *Clay Minerals - Journal of the European Clay Groups*, 51 (no. 3), 385-394.
- Muir, B., Matusik, J., Bajda, T. (2016) New insights into alkylammonium-functionalized clinoptilolite and Na-P1 zeolite: structural and textural features. *Applied Surface Science*, 361, 242-250.
- Giera, A., Manecki, M., Bajda, T., Rakovan, J., Kwaśniak-Kominek, M., Marchlewski, T. (2016) Arsenate substitution in lead hydroxyl apatites: a Raman spectroscopic study. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 152, 370-377.

Gondek, K., Mierzwa-Hersztek, M., Smreczak, B., Baran, A., Kopeć, M., Mróz, T., Janowski, P., Bajda, T., Tomczyk, A. (2016) Content of PAHs, activities of γ -radionuclides and ecotoxicological assessment in biochars. *Polish Journal of Chemical Technology*, 18(4), 27-35.

Kleszczewska-Zębała, A., Manecki, M., Bajda, T., Rakovan, J., Borkiewicz, O. (2016) Mimetite formation from goethite adsorbed ions. *Microscopy and Microanalysis*, 22, 698-705.

Muir, B., Bajda, T. (2016) Organically modified zeolites in petroleum compounds spill cleanup - production, efficiency, utilization. *Fuel Processing Technology*, 149, 153-162.

Rzepa, G., Bajda, T., Gaweł, A., Dębiec, K., Drewniak, Ł. (2016) Mineral transformations and textural evolution during roasting of bog iron ores. *Journal of Thermal Analysis and Calorimetry*, 123, 615-630.

Topolska, J., Manecki, M., Bajda, T., Borkiewicz, O., Budzewski, P. (2016) Solubility of pyromorphite $Pb_5(PO_4)_3Cl$ at 5–65°C. *Journal of Chemical Thermodynamics*, 98, 282-287.

Wójcik-Bania M., Hasik M., Krowiak A., Strzeżik J. (2016) Pt supported on cross-linked poly(vinylsiloxanes) and SiCO ceramics - new materials for catalytic applications. *Materials and Design*, 96, 171-179

Górniak K., Szydłak T., Gaweł A., Klimek A., Tomczyk A., Sulikowski B., Olejniczak Z., Motyka J., Serwicka E. M., Bahranowski K. (2016) Commercial bentonite from the Kopernica deposit (Tertiary, Slovakia): a petrographic and mineralogical approach. *Clay Minerals - Journal of the European Clay Groups (ISSN 0009-8558)*, 51 (no. 1), 97-122.

Rzepa G., Pieczara G., Gaweł A., Tomczyk A., Zalecki R. (2016) The influence of silicate on transformation pathways of synthetic 2-line ferrihydrite. *Journal of Thermal Analysis and Calorimetry (ISSN 0368-4466)*, 125, 407–421

2015

Kwaśniak-Kominek, M., Matusik, J., Bajda, T., Manecki, M., Rakovan, J., Marchlewski, T., Szala, B. (2015) Fourier transform infrared spectroscopic study of hydroxylpyromorphite $Pb_{10}(PO_4)_6OH_2$ – hydroxylmimetite $Pb_{10}(AsO_4)_6(OH)_2$ solid solution series. *Polyhedron*, 99, 103-111.

Michalik-Zym, A., Dula, R., Duraczyńska, D., Kryściak-Czerwenka, J., Machej, T., Socha, R.P., Włodarczyk, W., Gaweł, A., Matusik, J., Bahranowski, K., Wisła-Walsh, E., Lityńska-Dobrzyńska, L., Serwicka, E.M. (2015) Active, selective and robust Pd and/or Cr catalysts supported on Ti-, Zr- or [Ti,Zr]-pillared montmorillonites for destruction of chlorinated volatile organic compounds. *Applied Catalysis B: Environmental*, 174-175, 293-307.

Bahranowski, K., Włodarczyk, W., Wisła-Walsh, E., Gaweł, A., Matusik, J., Klimek, A. (2015) [Ti,Zr]-pillared montmorillonite - a new quality with respect to Ti- and Zr-pillared clays. *Microporous and Mesoporous Materials*, 202, 155-164.

Szala, B., Bajda, T., Matusik, J., Zięba, K., Kijak, B. (2015) BTX sorption on Na-P1 organo-zeolite as a process controlled by the amount of adsorbed HDTMA. *Microporous and Mesoporous Materials*, 202, 115-123.

Koteja, A. and Matusik, J. (2015) Di- and triethanolamine grafted kaolinites of different structural order as adsorbents of heavy metals. *Journal of Colloid and Interface Science*, 455, 83-92.

Bajda, T., Szala, B., Solecka, U. (2015) Removal of lead and phosphate ions from aqueous solutions by organo-smectite. *Environmental Technology*, 36, 2872-2883.

Grela, A., Bajda, T., Mikuła, J. (2015) Skład mineralny i właściwości teksturalne zeolitów z metakaolinu. *Przemysł Chemiczny*, 94, 619-622.

Szala, B., Bajda, T., Jeleń, A. (2015) Removal of chromium(VI) from aqueous solutions using zeolites modified by HDTMA and ODTMA surfactants. *Clay Minerals*, 50, 103-115.

Szala, B., Bajda, T., Matusik, J., Zięba, K., Kijak, B. (2015) BTX sorption on Na-P1 organo-zeolite as a process controlled by the amount of adsorbed HDTMA. *Microporous and Mesoporous Materials*, 202, 115-123.

2014

Matusik, J., Wścisko, A. (2014) Enhanced heavy metal adsorption on functionalized nanotubular halloysite interlayer grafted with aminoalcohols. *Applied Clay Science*, 100, 50-59.

Matusik, J. (2014) Arsenate, orthophosphate, sulfate, and nitrate equilibria and kinetics for halloysite and kaolinites with an induced positive charge. *Chemical Engineering Journal*, 246, 244-253.

Matusik, J., Matykowski, L. (2014) Behaviour of kaolinite intercalation compounds with selected ammonium salts in aqueous chromate and arsenate solutions. *Journal of Molecular Structure*, 1071, 52-59.

Szala, B., Greiner-Wronowa, E., Piccardo, P., Kwaśniak-Kominek, M., Bajda, T. (2014) Influence of environment of the corrosion of glass-metal connections. *Applied Physics A Materials Science & Processing*, 116, 1627-1635.

Turek, P., Bajda, T., Manecki, M. (2014) Dissolution of mimetite $Pb_5(AsO_4)_3Cl$ in malic acid solutions. *Mineralogia*, 45, 3-12.

Nyczyk-Malinowska A., Wójcik-Bania M., Gumuła T., Hasik M., Cypryk M., Olejniczak Z. (2014) New precursors to SiCO ceramics derived from linear poly(vinylsiloxanes) of regular chain composition. *Journal of the European Ceramic Society*, 34, 889-902

Wójcik-Bania M., Olejarka J., Gumuła T., Łącz A., Hasik M. (2014) Influence of metallic palladium on thermal properties of polysiloxane networks. *Polymer Degradation and Stability*, 109, 249-260

2013

Matusik, J., Kłapyta, Z. (2013) Characterization of kaolinite intercalation compounds with benzylalkylammonium chlorides using XRD, TGA/DTA and CHNS elemental analysis. *Applied Clay Science*, 83-84, 433-440.

Matusik, J., Kłapyta, Z., Olejniczak, Z. (2013) NMR and IR study of kaolinite intercalation compounds with benzylalkylammonium chlorides. *Applied Clay Science*, 83-84, 426-432.

Matusik, J., Bajda, T. (2013) Immobilization and reduction of hexavalent chromium in the interlayer of positively charged kaolinites. *Journal of Colloid and Interface Science*, 398, 74-81.

Matusik, J., Bajda, T., Manecki, M. (2013) Aqueous cadmium removal by hydroxylapatite and fluoroapatite. *Geology, Geophysics & Environment* 2012 [wyd. 2013] vol. 38 no. 4, s. 427-438.

Bajda, T., Kłapyta, Z. (2013) Adsorption of chromate from aqueous solutions by HDTMA-modified clinoptilolite, glauconite and montmorillonite. *Applied Clay Science*, 86, 169-173.

Król, M., Mozgawa, W., Barczyk, K., Bajda, T., Kozanecki, M. (2013) Changes in the vibrational spectra of zeolites due to sorption of heavy metal cations. *Journal of Applied Spectroscopy*, 80, 662-668

Szala, B., Turek, P., Jeleń, A., Bajda, T. (2013) Synteza i właściwości sorpcyjne organo-zeolitów. *Zeszyty Naukowe Uniwersytetu Zielonogórskiego*, 150. *Inżynieria Środowiska*, 30, 5-12.

Topolska, J., Borowicz, P., Manecki, M., Bajda, T., Kaschabek, S., Merkel, B.J. (2013) The effect of gluconic acid secretion by phosphate-solubilizing *Pseudomonas Putida* bacteria on dissolution of pyromorphite $Pb_5(PO_4)_3Cl$ and Pb remobilization. *Annales Societatis Geologorum Poloniae*, 83, 343-351.

Hasik M., Wójcik-Bania M., Nyczyk A., Gumuła T. (2013) Polysiloxane-POSS systems as precursors to SiCO ceramics. *Reactive & Functional Polymers*, 73, 779-788

2012

Matusik, J., Scholtzová, E., Tunega, D. (2012) Influence of synthesis conditions on the formation of a kaolinite-methanol complex and simulation of its vibrational spectra. *Clays and Clay Minerals*, 60, 227-239.

Matusik, J., Gawel, A., Bahranowski, K. (2012) Grafting of methanol in dickite and intercalation of hexylamine. *Applied Clay Science*, 56, 63-67.

Janicka, U., Bajda, T., Manecki, M. (2012) Synthesis and solubility of brompyromorphite $Pb_5(PO_4)_3Br$. *Mineralogia*, 43, 129-135.

2011

Matusik J., Wisła-Walsh, E., Gawel A., Bielańska E., Bahranowski K. (2011) Surface area and porosity of nanotubes derived from kaolin minerals of different structural order. *Clays and Clay Minerals*, 59, 117-136.

Matusik J., Stodolak, E., Bahranowski K. (2011) Synthesis of polyacide/clay nanocomposites using structurally different kaolinites and kaolinite nanotubes. *Applied Clay Science*, 51, 102-109.

Bajda, T. (2011) Dissolution of mimetite $Pb_5(AsO_4)_3Cl$ in low-molecular-weight organic acids and EDTA. *Chemosphere*, 83, 1493-1501.

Bajda, T., Marchlewski, T., Manecki, M. (2011) Pyromorphite formation from montmorillonite sorbed lead. *Mineralogia*, 42, 75-91.

Bajda, T., Mozgawa, W., Manecki, M., Flis, J. (2011) Vibrational spectroscopic study of mimetite-pyromorphite solid solutions. *Polyhedron*, 30, 2479-2485.

Flis, J., Manecki, M., Bajda, T. (2011) Solubility of pyromorphite $Pb_5(PO_4)_3Cl$ - mimetite $Pb_5(AsO_4)_3Cl$ solid solution series. *Geochimica et Cosmochimica Acta*, 75, 1858-1868.

Mozgawa, W., Król, M., Bajda, T. (2011) IR spectra in the studies of anion sorption on natural sorbents. *Journal of Molecular Structure*, 933, 109-114.

Szrek, D., Bajda, T., Manecki, M. (2011) A comparative study of the most effective amendment for Pb, Zn and Cd immobilization in contaminated soils from Upper Silesia, Poland. *Journal of Environmental Science and Health Part A.*, 46, 1491-1502.

Nyczyk A., Klimek A., Wójcik M., Hasik M., Pospiech P., Cypryk M. (2011) Ceramic precursors prepared from linear polysiloxanes. *Polish Journal of Applied Chemistry* 55, 57–63

2010

Bajda, T., Manecki, M. (2010) Dissolution of lead arsenate promoted by organic acids. *Mineralogia – Special Papers*, 36, 25-26.

Flis, J., Borkiewicz, O., Bajda, T., Manecki, M., Klasa, J. (2010) Synchrotron-based X-ray diffraction of the lead apatite series $Pb_{10}(PO_4)_6Cl_2-Pb_{10}(AsO_4)_6Cl_2$. *Journal of Synchrotron Radiation*, 17, 207-214.

2009

Matusik J., Gawel A., Bielańska E., Osuch, W., Bahranowski K. (2009) The effect of structural order on nanotubes derived from kaolin group minerals. *Clays and Clay Minerals*, 57, 452-464.

Kleszczewska, A., Manecki, M., Figuła, A., Bajda, T. (2009) Immobilization of Pb^{2+} using new generation glass fertilizers. *Fresenius Environmental Bulletin*, 18(7A), 1205-1209

Maneck, M., Bajda, T., Wegner, M., Borkiewicz, O. (2009) Immobilizacja Pb(II) przez krystalizację piromorfitu na galenie w obecności nawozów fosforanowych. *Geologia (kwartalnik AGH)*, 35 (2/1), 263-269.

Mozgawa, W., Król, M., Bajda, T. (2009) Application of IR spectra in the studies of heavy metal cations immobilization on natural sorbents. *Journal of Molecular Structure*, 924-926, 427-433.

Rzepa, G., Bajda, T., Ratajczak, T. (2009) Utilization of bog iron ores as sorbents of heavy metals. *Journal of Hazardous Materials*, 162, 1007-1013.

2008

Matusik J., Bajda T., Manecki M. (2008) Immobilization of aqueous cadmium by addition of phosphates. *Journal of Hazardous Materials*, 152, 1332-1339.

2007

Matusik J. (2007) Synthesis and characterization of Ca, Pb, Zn, Cu and Cd chlorapatites and Pb-Cd chlorapatites solid solutions. *International Forum of Young Researchers: Topical issues of rational use of natural resources, Saint Petersburg 26-28 IV.2006. Zapiski Gornogo Instituta*, 170 (II), 10-13.

2006

Bajda, T., Kłapyta, Z. (2006) Sorption of chromate by clinoptilolite modified with alkylammonium surfactants. *Mineralogia Polonica*, 37, 109-115.

Bajda, T., Manecki, M., Szmit, E., Flis, J. (2006) Thermodynamic stability of mimetite $Pb_5(AsO_4)_3Cl$ at 5-35°C. *Mineralogia Polonica Special Papers*, 28, 16-18.

Manecki, M., Bogucka, A., Bajda, T., Borkiewicz, O. (2006) Decrease of Pb bioavailability in solis by addition of phosphate ions. *Environmental Chemistry Letters*, 3, 178-181.

Mozgawa, W., Bajda, T. (2006) Application of vibrational spectra in the studies of cation sorption on zeolites. *Journal of Molecular Structure*, 792-793, 170-175.

Ratajczak, T., Fijał, J., Rzepa, G., Bajda, T. (2006) Rudy darniowe jako sorbenty mineralne - badania jakości i propozycje zasad dokumentowania. *Górnictwo Odkrywkowe*, XLVIII (1-2), 141-145.

Rzepa, G., Bajda, T., Sikora, M. (2006) Speciation and concentration of trace elements in the ferruginous sediments of Poland. *Polish Journal of Environmental Studies*, 15(2a), 474-478.

Rzepa, G., Budzyń, B., Bajda, T. (2006) Iron oxides in the weathering zone of serpentinites from the Szklary massif (Lower Silesia) - preliminary mineralogical description. *Mineralogia Polonica Special Papers*, 28, 190-192.

2005

Bajda, T. (2005) Chromatite $Ca[CrO_4]$ in the soil polluted with electroplating effluents (Zabierzów, Poland). *Science of the Total Environment*, 336, 269-274.

Bajda, T., Ratajczak, T. (2005) Możliwość wykorzystania bełchatowskich iłów beidellitowych jako sorbentów pierwiastków toksycznych na przykładzie związków chromu. *Górnictwo Odkrywkowe*, XLVII (2), 39-43.

Bajda, T., Rzepa, G. (2005) Mineralogy of ferruginous precipitates from Kokino Nero (Greece) and their relation to those from the polish Carpathians. *Polskie Towarzystwo Mineralogiczne Prace Specjalne*, 25, 265-268.

Bajda, T., Szmit, E., Manecki, M. (2005) Solubility of mimetite $Pb_5(AsO_4)_3Cl$ at 20°C and pH from 2.0 to 12.0. *Polskie Towarzystwo Mineralogiczne Prace Specjalne*, 25, 27-30.

Bogucka, A., Manecki, M., Bajda, T., Borkiewicz, O. (2005) Pyromorphite formation from goethite-adsorbed phosphate ions. *Polskie Towarzystwo Mineralogiczne Prace Specjalne*, 25, 35-38.

Mozgawa, W., Bajda, T. (2005) Spectroscopic study of heavy metals sorption on clinoptilolite. *Physics and Chemistry of Minerals*, 31, 706-713.

Mozgawa, W., Bajda, T., Sikora, M. 2005. Spectroscopic study of metals sorption on Carpathian zeolites. *Polskie Towarzystwo Mineralogiczne Prace Specjalne*, 25, 337-340.

Strycharczyk, M., Manecki, M., Bajda, T., Gawęł, A., Mozgawa, W. (2005) Synthesis of pyromorphite-mimetite solid solutions from aqueous solutions – preliminary results. *Polskie Towarzystwo Mineralogiczne Prace Specjalne*, 25, 225-228.

Wegner, M., Manecki, M., Bajda, T. (2005) Removal of Pb from aqueous solutions by phosphorous fertilizers. *Polskie Towarzystwo Mineralogiczne Prace Specjalne*, 25, 246-249.

2004

Bajda, T., Franus, W., Manecki, A., Manecki, M., Mozgawa, W., Sikora, M. (2004) Sorption of heavy metals on natural zeolite and smectite-zeolite shale from the Polish Flysch Carpathians. *Polish Journal of Environmental Studies*, 13, Suppl. III, 7-10.

Bajda, T., Kłojzy-Karczmarczyk, B., Fijał, J., Rzepa, G., Mazurek, J. (2004) Sorpcja Cu(II), Zn(II) i Hg(II) na naturalnych i modyfikowanych rudach darniowych. *Gospodarka Surowcami Mineralnymi*, 20 (z.spec. 2), 83-98.

Rzepa, G., Bajda, T., Ratajczak, T. (2004) Właściwości sorpcyjne rud darniowych – dotychczasowy stan badań. *Gospodarka Surowcami Mineralnymi*, 20 (z.spec. 2), 47-59.

2002

Krajewski, M., Bajda, T. (2002) Zróżnicowanie mineralogiczne i geochemiczne górnourajskich wapieni zrębu Zakrzówka, region krakowski, południowa Polska. *Zeszyty Naukowe AGH, Geologia*, 28/4, 129-143.

2000

Bajda, T. (2000) Mineralogy and geochemistry of chromium compounds of the weathering zone of serpentinites from the Szklary massif (Lower Silesia). *Polskie Towarzystwo Mineralogiczne Prace Specjalne*, 17, 111-113.

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