

Publications

Reviewed articles

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.

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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.

Kępys, 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.

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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.

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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.

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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.

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.

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

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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.

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

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Matusik J., Wisła-Walsh, E., Gawęł 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 poly(lactide)/clay nanocomposites using structurally different kaolinites and kaolinite nanotubes. *Applied Clay Science*, 51, 102-109.

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Matusik J., Gawęł 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.

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

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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.

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