

Publications

Reviewed articles

2025

Dziewiątka, K., Matusik, J., Herber, M., Hill, E.H., Kuc, J., Cempura, G., Jędras, A. (2025) Enhanced photodegradation of zearalenone with kaolin group-based nanotubular materials: Unveiling reaction mechanisms and pathways. *Chemical Engineering Journal*, 506, 2025, 160198.

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Jędras, A., Matusik, J., Dhanaraman, E., Fu, Y.-P., Cempura, G. (2024) Tuning the structural and electronic properties of Zn-Cr LDH/GCN heterostructure for enhanced photodegradation of estrone in UV and visible light. *Langmuir*, 40, 17845.

Matusik, J., Scholtzová, E., Lis, K., Marzec, M.M. (2024) Induced π -complexation properties of smectites impregnated by Ni, Cu and Ag transition metals: the highly efficient styrene uptake. *Applied Surface Science*, 675, 160999, 1-12.

Bajda, T., Grela, A., Pamuła, J., Kuc, J., Klimek, A., Matusik, J., Franus, W., Kumar, A. S. K., Danek, T., Gara, P. (2024) Using zeolite materials to remove pharmaceuticals from water. *Materials*, 17, 3848.

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Dziewiątka, K., Matusik, J., Trenczek-Zając, A., Cempura, G. (2023) TiO₂-loaded nanotubular kaolin group minerals: the effect of mineral support on photodegradation of dyes as model pollutants. *Applied Clay Science*, 245, 107123.

Rybka, K., Hudcová, B., Matusik, J., Marzec, M. (2023) Interaction of vanadates with Mg/Al and Mg/Fe LDH intercalated with carbonates and sulphates based on experimental data and surface complexation modelling. *Applied Clay Science*, 242, 107047.

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Joshi, N., Grewal, J., Matusik, J., Drewniak, Ł., Pranaw, K. (2023) Faujasite Na-X zeolite as a novel carrier for cellulase immobilization and application in biomass saccharification. *Biochemical Engineering Journal*, 198, 109017.

Grela, A., Kuc, J., Klimek, A., Matusik, J., Pamuła, J., Franus, W., Urbański, K., Bajda, T. (2023) Erythromycin scavenging from aqueous solutions by zeolitic materials derived from fly ash. *Molecules*, 28, art. no. 798, s. 1–20.

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Dziewiątka, K., Matusik, J., Rybka, K. (2022) Simultaneous scavenging of As(V) and safranin O dye by Mg/Al LDH-zeolite heterocoagulated materials: the effect of adsorbent synthesis approach on its efficiency in static and dynamic system. *Separation and Purification Technology*, 302, 122072, 1-13.

Jędras, A., Matusik, J., Rybka, K. (2022) Impregnation of smectite with layered double hydroxides of different chemistry for simultaneous removal of Cr(III) and acid blue dye. *Journal of Water Process Engineering*, 50, 103252, 1–12.

Kumar, A. S. K., Warchał, J., Matusik, J., Tseng, W.L., Rajesh, N., Bajda, T. (2022) Heavy metal and organic dye removal via a hybrid porous hexagonal boron nitride-based magnetic aerogel. *npj Clean Water*, 5, 24, 1-12.

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.

Matusik, J., Koteja-Kunecka, A., Maziarz, P., Kunecka, A. (2022) Styrene removal by surfactant-modified smectite group minerals: efficiency and factors affecting adsorption/desorption. *Chemical Engineering Journal*, 428, 13084, 1-10.

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Rybka, K., Matusik, J., Slaný, 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 (6), 106792.

Wójcik-Bania, M., Matusik, J. (2021) The effect of surfactant-modified montmorillonite on the cross-linking efficiency of polysiloxanes. *Materials*, 14 (10), 2623, 1-16.

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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.

Matusik, J. (2021) Special issue: Layered Double Hydroxides (LDH) and LDH-based hybrid composites, Materials, ISSN 1996-1944, vol. 14 iss. 10 art. no. 2582, s. 1-3.

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