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Einfluss von Mikrowellen auf die Extraktion von schwermetallbelasteten Böden mit modifizierten Biomasse-Reststoffen

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Herrn Prof. Dr. *Gerhard Zimmermann* zum 70. Geburtstag gewidmet.

Abstract

Heavy metal-polluted soils are to decontaminate in respect to ecological and economical balance of leaching techniques. Here is shown based on Fischer et al. the utilization of biomass residues as sources for natural chelates for the remediation of contaminated soils. Biomass residues, such as molasses or blood meal, containing various carboxylic acids, sugar acids or amino acids (or their precursors), were modified by oxidation or hydrolysis. The tested soil was extracted in batch experiments in presence of microwave irradiation (2.45 GHz). The results are in comparison with traditional leaching experiments of interest: The reaction duration is signifcantly shorter and the extraction rates are in the rule higher (with exception of Pb). Further tests are planned and let expect innovative results.