Study of Tin Accumulation Strategy by Cyperus Species in Pot Experiments

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Abstract
The present investigation reports the results of the Sn accumulated by Cyperus Sp. in a pot experiment on different levels of Sn supply (0, 0.5, 2, 6, 25, 60 mg/kg). All tested Cyperus species showed the different abilities to remove Sn which depends on species and concentrations level. Sn accumulated by the leaves, twigs and roots linearly increased with increasing Sn supply levels. The higher concentration of Sn treatments significantly promoted the Sn accumulation. Cyperus rotundus L performed the stronger ability of Sn accumulation under different Sn supply treatments, while Cyperus alternifolius and Cyperus fastigiatus Rottb. had the poorer accumulation ability. Sn in soil was more intensively absorbed in the leaves and twigs for all three Cyperus species, was not retained in roots and was transferred to above ground plant tissues. The results indicated that Cyperus Sp. has excellent potential for Sn phyto remediation because of high accumulation ability.