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Purification of Pb in pulping wastewater by reed wetland ecosystem

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Liaoning Shuangtai estuary wetland is the international key wetland which played an important role on purification of water quality of Liao River and the stability of regional climate. Based on sampling in this wetland and simulation experiments at the Shenyang Agricultural University lab pool, distribution characteristics of Pb in paper making wastewater, wetland soil and reeds tissue was analyzed respectively within a growing season. The removal rate of Pb was the highest by irrigation 20% concentration wastewater and the best removing effect emerged at jointing stage. For the same period, Pb content in water was least at 10 cm water depth and purifying effect was the most significant. The difference of Pb thermodynamics adsorption was remarkable in 10-40 cm depth soil. As the sampling depth increases the adsorption property of Pb was best in 10 cm soil depth where the purification effect was significant. Distribution characteristics Pb in Reed organization was different. The absorbing capability order of reed tissue to Pb was root>stem>leaves in the whole growth period.

Biography

Chengjiu Guo is a Professor at Shenyang Agricultural University. He is the Vice-Director of Liaoning Shuangtai Estuary Wetland Station, a national Ecological observation & research station. He has published more than 30 papers and serving as a Chairman of the research team of soil and water conservation and desertification control in College of Water Conservancy.

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