
Title: Effect of dissimilatory iron and sulfate reduction on arsenic dynamics in the wetland rhizosphere and its bioaccumulation in wetland plants (*Scirpus actus)*

Author: Zheyun Zhang Hee Sun Moon Satish C.B. Myneni Peter R. Jaffé

PII: S0304-3894(16)30577-5
DOI: http://dx.doi.org/doi:10.1016/j.jhazmat.2016.06.022
Reference: HAZMAT 17811

To appear in: *Journal of Hazardous Materials*

Received date: 1-1-2016
Revised date: 9-5-2016
Accepted date: 10-6-2016

Please cite this article as: Zheyun Zhang, Hee Sun Moon, Satish C.B.Myneni, Peter R.Jaffé, Effect of dissimilatory iron and sulfate reduction on arsenic dynamics in the wetland rhizosphere and its bioaccumulation in wetland plants (Scirpus actus), Journal of Hazardous Materials http://dx.doi.org/10.1016/j.jhazmat.2016.06.022

## Highlights

1. High Fe and $SO_4^{2-}$ treatment is most favorable for As sequestration in soils in the presence of wetland plants.
2. As retention in soil and accumulation in plants was mainly controlled by $SO_4^{2-}$ rather than Fe levels.
3. High $SO_4^{2-}$ can stimulate the growth of As dissimilatory reduction bacteria, leading to more As(V) reduction to As(III).