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Sustainable Remediation Using Metallic Iron: Quo Vadis?

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Message from the Guest Editors

Dear Colleagues,

During the past three decades, groundwater remediation using permeable reactive barriers (PRBs) containing metallic iron (Fe^0) has become a well-established technology. However, many uncertainties exist regarding their design, suggesting that Fe^0 PRBs is still an innovative technology.

Research on Fe^0 PRBs started in the early 1990s and has boomed in the past three decades. Sufficient data and observations have been accumulated to establish the science of the Fe^0/H_2O system. To explain the initial observation that there were losses of chlorinated organic contaminants from aqueous solutions in contact with a variety of metals (including Fe^0), it was proposed that reductive dechlorination was the main cause, with electrons coming from the metal body. In the meantime, Fe^0 is described in the literature as “reservoir of electrons” for contaminant transformation. [...]

For further reading, please follow the link to the Special Issue Website at:

https://www.mdpi.com/journal/water/special_issues/Metallic_Iron

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Message from the Editor-in-Chief

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