4th International Conference on **Pollution Control & Sustainable Environment**

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6th Edition of International Conference on **Water Pollution & Sewage Management**

July 26-27, 2018 Rome, Italy

Mobility of atrazine in stable manure-amended agricultural soil

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The objective of this study was to conduct a series of batch and miscible-displacement experiments to examine the mobility of atrazine herbicide in stable-manure amended agricultural soil. Agricultural soil with 10% w/w stable-manure amendment were used for the objectives. Laboratory studies showed that the high sorption of atrazine was described by rate-limited, non-linear reversible processes for stable-manure amended agricultural soil. This non-ideal transport behavior was most likely due to the fraction of high organic matter content in soil. Flow interruption tests in the column experiments indicated that the rate-limited desorption of atrazine mainly controlled the non-ideal transport of atrazine. Behavior of atrazine in such soils could have important impacts for risk assessment of atrazine-contaminated soil and should be taken into account in the regulation, management, and remediation of atrazine-contaminated sites.

Biography

Nihat Hakan Akyol has completed his PhD at Kocaeli University. He is working as an Associate Professor in Department of Geological Engineering at Kocaeli University. He has published 12 papers in reputed SCI journals and currently continues high budget projects in Turkey and has been a part of various research projects in United States of America with University of Arizona and Alabama University.

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