

Thesis Topic
for B.Sc., M.Sc.
BAU,UMW, WASTE, WAREM

Pfaffenwaldring 61
70569 Stuttgart
Telefon +49 (0) 711 685 - 64717
Telefax +49 (0) 711 685 - 67020
vegass@iws.uni-stuttgart.de
www.vegass.uni-stuttgart.de

Feasibility study on the treatment of DNAPL groundwater contamination by Surfactant-Supported In-Situ Oxidation using the example of polycyclic aromatic hydrocarbons (PAH)

Description

As part of an international EU research project, the application possibilities of surfactant-supported in-situ oxidation processes in the field and on a large scale in the laboratory are to be investigated. The method is based on making contaminants available by solubilization with surfactants in order to increase the efficiency of chemical oxidation.

The subject of this Bachelor's or Master's thesis is first to investigate the solubilization of PAHs from contaminated soil material in the presence of surfactants as well as the resulting increase in efficiency of the oxidative degradation of the substances in systematic laboratory experiments. Particular attention will be given to the competitive reaction of the oxidation of the surfactants with the desired reaction with the contaminants. Based on these findings, a treatment of the contaminated soil with the developed method will then be carried out by column tests.

The capacity and experience of the VEGAS analytical laboratory are available for the processing of the work.

Ratio practice/theory: 80/20

Supervisors

Dr.-Ing. Norbert Klaas, M.Sc.
Benjamin Herzog, M.Sc.

Examiner

Jürgen Braun, Ph.D.

Contact

benjamin.herzog@iws.uni-stuttgart.de

