

Development of an Algae Filter Module (AFM) for the removal of heavy metals from water

Project manager: Dr. Hedda Sander

Summary: Heavy metal contamination in terrestrial and aquatic systems represents a growing environmental problem in municipal and industrial sewage, agricultural soils, mineral waters, rivers and the marine environment. An accumulation in the food chain has serious health consequences. Conventional heavy metal removal technologies, such as chemical precipitation, ion-exchange chromatography and electro-chemical procedures are often neither effective nor economical, especially at low concentration ranges.

Using algae may provide an environmentally friendly solution to the problem. It has long been known that micro-algae, for example, are able to adsorb large quantities of heavy metals. In addition, algal biomass can be produced inexpensively and in large quantities.

Dr. Sander and Dr Cordes, Managing Directors of ASA Spezialenzyme GmbH in Wolfenbüttel, are jointly developing an Algae Filter Module (AFM) within the scope of their project. The module is to clean running and standing water polluted with heavy metals.

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