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Intellectual Property

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Patent Pending

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Methods and Systems for Reduction of Halogenated Compounds

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Invention Description

Halogenated organic compounds (organohalides) have often been released into the soil and groundwater. These compounds may be carcinogenic and are hazardous to the natural environment. A significant need exists therefore for techniques to efficiently decontaminate these types of toxic compounds.

Researchers at the Biodesign Institute of Arizona State University have developed methods and systems for dehalogenating organohalides present at contamination sites. Dehalogenation of contaminants can be achieved by providing hydrogen to anaerobic dehalogenating bacteria. Hydrogen can readily be created *in situ* through the electrolysis of water.

The method is efficient, inexpensive, renewable, and enables onsite decontamination of water and soil.

Potential Applications

- Groundwater treatment systems
- Water purification
- Wildlife preservation
- Contamination prevention

Benefits and Advantages

- Adaptable to different conditions at particular sites
- *In situ* decontamination