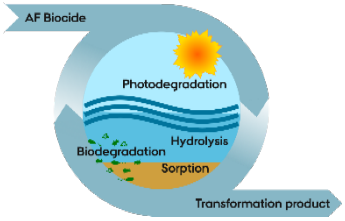

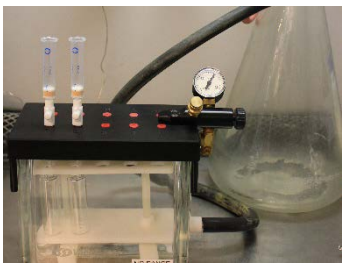

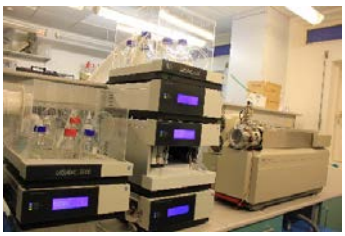

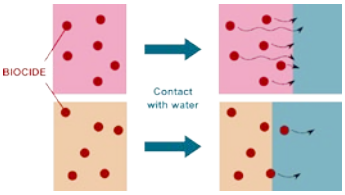

AARHUS
UNIVERSITY
DEPARTMENT OF ENVIRONMENTAL SCIENCE

RESEARCH ASSISTANT

Antifouling biocides: leaching, degradation and fate

A 2-years research assistant position on "Antifouling biocides: leaching, degradation and fate" is open at Aarhus University, Department of Environmental Science for appointment from 1 September 2017 or soon thereafter. It is anticipated to transfer the work into a PhD fellowship as soon as founding is settled.

Research area and project description

Antifouling biocides are used to keep the underwater boat hulls free of algae and other microorganisms and thereby reduce roughness of the surface to give you higher speed and lower fuel consumption. Since the increasing exchange and finally ban of tributyltin (TBT) products, huge changes of the antifouling market happened. However, since then the antifouling market has changed due to the approval and disapproval of compounds. Hence, reliable present data is needed on occurrence and fate of currently used antifouling biocides in the marine environment. The knowledge on transformation products is limited and a study on other possible transformation products and their fate is necessary. Moreover, modern antifouling paint technologies with self-polishing polymer matrices or eroding matrices are predominantly in use. Hence, leaching performance might differ considerably from that of hard antifouling paints.

The following main objectives will be addressed within the project:

- Establishing a standard analytical method for current-used antifouling biocides
- Monitoring of antifouling biocides in harbors (predominantly marinas), open water, and sediment
- Identification of degradation products and their fate in the environment
- Determination of biocide leaching from different types of antifouling paints
- Comparison and verification of predictions based on the laboratory with the monitoring data

Qualifications and specific competences

The respective candidates should hold a masters in environmental chemistry, environmental analytical chemistry, marine chemistry or similar. Experience in determining organic micropollutants, extraction procedures, environmental mass spectrometry, chromatography and degradation experiments is of advantage. The work will include laboratory studies as well as monitoring campaigns in the coastal/marine environment.

Place of Employment and Place of Work

Place of Employment is Aarhus University, Department of Environmental Science, Frederiksborgvej 399, 4000 Roskilde.

Contacts

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