

Univerza
v Ljubljani

Fakulteta *za kemijo*
in kemijsko tehnologijo

p.p. 537, Večna pot 113
1001 Ljubljana
telefon: 01 479 80 00
faks: 01 241 91 44
dekanat@fkkk.uni-lj.si



**VABILO NA PREDAVANJE
V OKVIRU DOKTORSKEGA ŠTUDIJA
KEMIJSKE ZNANOSTI**

Prof. Christiane Funk

Department of Chemistry, Umeå University, Sweden

z naslovom:

**MicroBioRefine -
Collection and characterization of
photosynthetic microorganisms adapted to
the Nordic climate - for biomass production
and wastewater reclamation**

v sredo, 1. marca 2017 ob 15:00 uri
v predavalnici 1 v 1. nadstropju Fakultete
za kemijo in kemijsko tehnologijo, Večna pot 113

Vljudno vabljeni!

Abstract:

The impact of carbon dioxide on the earth's climate forces us to investigate possibilities for utilizing sustainable energy resources. One approach to address this problem is to recycle CO₂ for fuel- or chemical-production by photosynthesis. Algae and cyanobacteria are without doubt the most productive photosynthetic organisms on Earth; their biomass allows the production of biofuels or high value products in an environment-friendly and low-cost manner.

Within the consortium MicroBioRefine situated in Umeå, Northern Sweden, we focus on the collection and characterization of local strains, adapted to the harsh Nordic conditions. The microorganisms receive their energy from organic carbon sources found in waste streams, flue gas and from sun light. Natural strains even minimize GMO contamination risks in the process of cleaning water.

Photosynthetic performances, uptake of nitrogen and phosphorus, reduction of toxic pollutants and biomass generation are investigated in different waste water types (municipal and industrial), in the lab as well as outdoors in large scale. Special focus is on biomass production during winter months, which are characterized by short daylight hours and low light intensity.