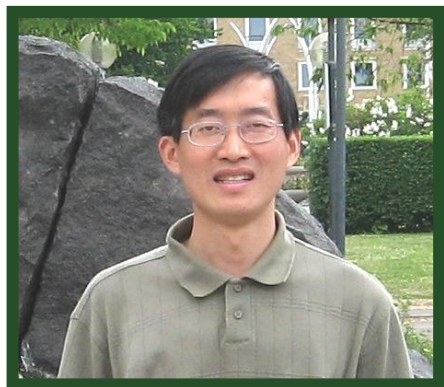


The Department of Chemistry and Biochemistry

Seminar Series

Presents a Seminar Titled:

“Tracing the DOM Dynamics in Land-Ocean Interfaces Using Spectroscopic Analysis: Case Studies in Subtropical Chinese River-Estuarine Systems”



Presented By

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Dissolved organic matter (DOM) plays important roles in biogeochemical cycles and ecosystem dynamics in aquatic environments. Fluvial discharge of DOM is an important linkage between terrestrial and marine ecosystems. Global climate change has resulted the increase in the strength and occurrence frequency of extreme weather conditions (e.g. storm and drought events), accompanied by the increase of the anthropogenic disturbances in watersheds. This has exerted notable influence on the dynamics and transport of DOM from watershed to the estuaries. However, the dynamics of DOM in the coupled river-estuarine systems and the underlying biogeochemical factors are rarely studied in the monsoon-affected eastern China.

Absorption and fluorescence spectroscopy are easy and useful analytical methods to characterize the qualitative and quantitative variation in the nature and geochemical behaviors of DOM. Especially, the combination of excitation emission matrix (EEM) fluorescence spectroscopy with multivariate statistical method (i.e., parallel factor analysis) has been proven an powerful tool for identifying different components of fluorescent DOM (FDOM) and assessing their sources and dynamics in aquatic environments.

This talk will present the spectral study for DOM in the typical subtropical river-estuary systems across the Taiwan Strait: the Jiulong River-Estuary System and river-estuary systems in the western Taiwan. The major contents include: the introduction of absorption and fluorescence spectroscopy, dynamics of DOM under the influences of climate events and anthropogenic disturbances, and dynamics of DOM in estuaries.

Friday, September 20, 2013 at 3:00 p.m. in OCNPS 100