



FACULTY OF
SCIENCE
Charles University

Department of Physical and Macromolecular chemistry

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Department of Physical and Macromolecular Chemistry
invites you for a seminar
and
a public habilitation lecture

Acid-base equilibria at the nanoscale

Lecture hall CH 3, Faculty of Science, Hlavova 8, Praha 2

on May 4th, 2022 at 14:00

speaker: RNDr. Peter Košovan, Ph.D.

Dept. of Physical and Macromolecular Chemistry, Faculty of Science, CUNI



Acid-base equilibria are ubiquitous in Chemistry, both in everyday routine work and in research. They are taught in secondary-school courses of Chemistry and then again later, in undergraduate courses of General Chemistry, Analytical Chemistry and Physical Chemistry. The basic concepts of acid, base, pH and the degree of ionisation are well established and familiar to every chemist. Nevertheless, a lot of confusion appears when these concepts are applied to complex systems at the nanoscale, such as solutions of polyelectrolytes, polyampholytes, charged biomacromolecules, self-organized polymer nanostructures, polymers at interfaces or two-phase systems containing macromolecules or supramolecular aggregates.

In this lecture, we will present a selection of results of our research, bridging the gap between simulations and experimental investigations of acid-base equilibria in macromolecular systems. The lessons learned from these results provide important clues on how the acid-base properties of complex fluids differ from the established picture described in textbooks.

Organizers: Prof. Tomáš Obšil, Prof. Jiří Čejka, Dr. Jan Přečh