Level: PhD

Course title: Biologically Active Fullerenes (DSH-720)

Status: Elective

ECTS: 15

Requirements: None

Learning objectives

Introducing students with chemical, physical and biological properties of fullerenes, their biologically active derivatives, and potential application of fullerenes and their derivatives in nanobiological and nanomedical research.

Learning outcomes

Knowledge of chemical and biological properties of fullerene and active derivatives of fullerene.

Syllabus

Theoretical instruction

The course deals with active fullerenes in terms of biological and chemical properties, chemical synthesis and physico-chemical characterisation of biologically active fullerenes C_{60} and C_{70} . New approaches in the application of fullerenol nanoparticles and fullerene derivatives in nanobiology and nanomedicine.

Practical instruction

Synthesis and physico-chemical characterisation (FTIR, UV/VIS, NMR, x-ray, TG, MS, HPLC) of potential biologically active derivatives of C_{60} and C_{70}. Biological testing of C_{60} and C_{70} derivatives in *in vitro* and *in vivo* conditions.

Weekly teaching load				Other:
Lectures: 5	Exercises:	Other forms of teaching:	Student research: 5	