



National Course in Physical Chemistry – Optical Spectroscopy

About:

The forefront researchers within optical spectroscopy in Sweden have joint forces to give a course within optical spectroscopy on an advanced level. It includes lectures giving the fundamentals, as well as pen and paper exercises consolidating the theory learnt. Lectures are given in person, and are focused to three intense occasions in Uppsala, Göteborg, and Lund. Recommended credits = 7.5 HEC.

Time and place:

The first occasion will take place in Uppsala the 20-22th of March, the second in Göteborg the 17-19th of April, and the last occasion in Lund in late May or early June.

Contents:

The course builds on the textbook Modern Optical Spectroscopy by William Parson. People working at universities having an agreement with Springer can download this book for free. The course will involve lecturers, group exercises, and assignments. The course ends with a workshop covering optical spectroscopy in Sweden, where the lecturers on the course describe their research fields and their research findings. The contents and lecturers in the different sessions are indicated below:

- Uppsala
 - Basic concepts of light and matter, description of the absorption event
 - Leif Hammarström, Jacinto Sá, Michal Maj and Victor Gray
- Göteborg
 - Emission of light, vibrational absorption, energy transfer, exciton interactions, circular dichroism
 - Maria Abrahamsson, Bo Albinsson, Joakim Andréasson and Karl Börjesson
- Lund
 - Coherence and dephasing, pump-probe spectroscopy
 - Spectroscopy in Sweden workshop
 - Tönu Pullerits

Entry requirements

For admission to the course, the minimum requirement is up to date knowledge of basic physical chemistry (e.g. from a course based on the Atkins Physical Chemistry textbook). However, a larger understanding of quantum mechanics (e.g. from a course based on the Atkins Molecular Quantum Mechanics textbook or similar) and basic spectroscopy (e.g. from a course based on the Hollas Modern Spectroscopy textbook or similar) is preferable.

Other info:

The course is given on initiative by the Physical Chemistry section within the Swedish Chemical Society and is open to all PhD students and Postdocs in Sweden. The goal of the course is to increase the fundamental knowledge within Physical Chemistry for PhD students and to serve as a meeting point for PhD students from different universities. The course is free of charge, but the participants are expected to cover associated costs such as travel and accommodation. The minimum number of attendees needed for the course to be given is 12 and the maximum number that will be admitted is 24.

Apply by sending an e-mail to karl.borjesson@gu.se. Include your name, name of PhD-supervisor, and affiliation. The deadline for registration is the 24st of February.