

ELEC-E3230 Nanotechnology (5 cr)

Spring 2019

Lectures Wed 13-15 Large seminar room, Micronova
Thu 10-12 Small seminar room, Micronova
The lectures will start on Thu. 28.2 at 10:15

Exercises Wed 15-17 Large seminar room (starting 6.3)

Lecturers: Prof. Harri Lipsanen, Dept. of Electronics and Nanoengineering

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Assistant: MSc Petri Mustonen, Dept. of Electronics and Nanoeng.

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Contents: Multidisciplinary introduction to nanoscience and nanotechnology including brief introductory to topics such as nanolithography, fullerenes, carbon nanotubes, quantum dots, graphene and other 2D materials, self-assembly, quantum computation, magnetoresistance, molecular electronics, nanoelectronics measurement strategies, NEMS and sensors, quantum-confined optoelectronics, organic optoelectronic nanostructures, photonic crystals, biomimetic nanostructures and nanofluidics.

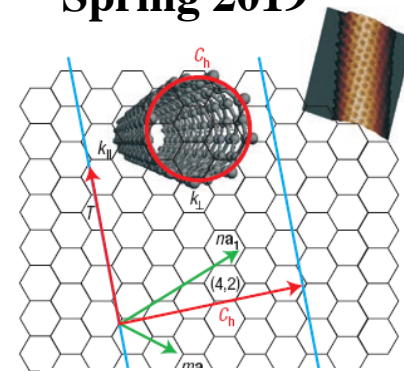
Book: Lecture material and reference articles. Lecture notes and extra material available latest after each lecture in MyCourses

<https://mycourses.aalto.fi/course/view.php?id=20903>

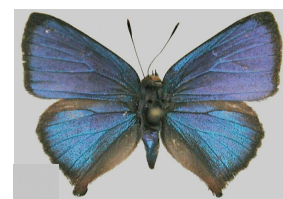
Exercises: Exercises material available on MyCourses. Laboratory tour arranged in Micronova during the course instead of an exercise session.

Assessment: Exam, Quizzes on lectures (replace one fixed question on exam), exercises (replace one fixed question on exam).

Exam: Wednesday, April 10, at 13-16 (change to TU1, Maarintie 8)



Carbon nanotube & graphene



Natural photonic crystal