

FBB3080 Computational nanophotonics / Nanofotonik beräkningar

2010, February to March

Basic 7,5 hp

Local for lectures and laboratory work: **RB15**, Roslagstullsbacken 15, Albanova University Center (<http://www.theochem.kth.se/contact/>)

time	Preparation and lecture/lab content	Lecture & Lab	Home assignment	
v8	24/02, 10:00-11:45	General introduction	Lecture 1	Home assignment 1: Read Chapter 1 of FBB3080a.pdf
	25/02, 10:00-11:45	Electron in nano	Lecture 2	Home assignment 2: Get known the computer codes of home_assignmene_2.pdf
v9	03/03, 10:00-11:45	Light-matter interaction. Read Chapter 2 of FBB3080a.pdf	Lecture 3	
	04/03, 10:00-11:45	Superlattices and Microstructures, vol.30, p.69, 2001	Lecture 4. Laboratory work 1	Compute photocurrent of quantum well infrared photodetector
v10	10/03, 10:00-11:45	QD Biomarker Read Chapter 3 of FBB3080b.pdf	Lecture 5	Home assignment 3 FBB3080a.pdf, p.49-50 Find eA/P for solar radiation
	11/03, 10:00-11:45	QD-based solar cell: MEG	Lecture 6	Home assignment 4
v11	17/03, 10:00-11:45	Introduction to plasmonics. Read FBB3080c.pdf	Lecture 7	
	18/03, 10:00-11:45	Numerical methods	Lecture 8	
v12	24/03, 10:00-11:45	Finite-element method	Laboratory work 2	Simulation hands-on practice
	25/03, 10:00-11:45	Plasmonic device	Lecture 9 Summary	Home assignment 5
v13	31/03, 10:00-11:45	Hand in home assignments and lab reports	Written examination	
v36	10/09, 10:00-11:45	Hand in home assignments and lab reports	Written examination	

2010, May

Project 2,5 hp

One computational project will be given for those who wish to continue to the 2,5 hp project. The students have one week for the project. The goal of this project is how to prepare for unpredictable real-world problems.

Deadline for project report: 2010-05-08, kl.12.00