

BB2550 Computational nanotechnology and Bionanotechnology / Beräkningar inom nano- och bionanoteknik, 10 hp

2012, February to March

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
v6	08/02, 10:00-11:45	General introduction	Lecture 1	Home assignment 1: Read Chapter 1 of FBB3080a.pdf
	09/02, 10:00-11:45	Electron in nano	Lecture 2	Home assignment 2: Get known the computer codes of home_assignment_2.pdf
v7	15/02, 10:00-11:45	Light-matter interaction. Read Chapter 2 of FBB3080a.pdf	Lecture 3	
	16/02, 10:00-11:45	Superlattices and Microstructures, vol.30, p.69, 2001	Lecture 4. Laboratory work 1	Compute photocurrent of quantum well infrared photodetector
v8	22/02, 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
	23/02, 10:00-11:45	QD-based solar cell: MEG	Lecture 6	Home assignment 4
v9	29/02, 10:00-11:45	Introduction to plasmonics I	Lecture 7	Read FBB3080c.pdf
	01/03, 10:00-11:45	Introduction to plasmonics II	Lecture 8	Home assignment 5
v10	07/03, 10:00-11:45	Simulation of plasmonic waveguides with Finite-element method	Laboratory work 2	Simulation hands-on practice
	08/03, 10:00-11:45	Plasmonic devices	Lecture 9	
v12	21/03, 10:00-11:45	Electron transport in nanostructure I	Lecture 10	Home assignment 6
	22/03, 10:00-11:45	Electron transport in nanostructure II	Lecture 11	
v13	28/03, 10:00-11:45	Nanoelectronics biosensors	Lecture 12	
	29/3, 10:00-11:45	Hand in home assignments and lab reports	Written examination	