

21-25/10/2017, CEITEC Brno, Autumn school

**From structures to optical functions: layered materials serving biosensing**

Sat 21 title

welcome, TWINFUSYON session

time

Sun 22

basics

Humlicek 9-11 Optical properties of bulk: response functions

Holy 11-12 X-rays as electromagnetic radiation I

**lunch** 12-13

Holy 13-14 X-rays as electromagnetic radiation II

Klenovsky 14-15 Optical properties of nanostructures

Mo 23

Dubroka 9-10 IR: optical response of free carriers and phonons

Munzar 10-12 Introduction to quantum theory of optical response of solids

**lunch** 12-13

Tiwald 13-14 Advances in ellipsometric instrumentation

Tiwald 14-15 Biological applications of ellipsometry

Farka 15-16 Immunosensors for detection of pathogenic bacteria

CEITEC lab tour 16-18

Tu 24

Klapetek 9-10 Thin-film metrology

Cobet 10-11 tba

Chaloupka 11-12 Photonic crystals

**lunch** 12-13

Caha 13-14 X-ray reflectivity: Experiment and case studies

Rozboril / Humlicek 14-16 exercise session

**dinner (downtown: Stopka)** 19-22

We 25

Novak 9-10 Small angle x-ray scattering - basics and applications

Hemzal 10-11 Identification of biomolecular motifs using Raman spectroscopy

Dvorak 11-12 Total internal reflection ellipsometry under SPR conditions

**lunch** 12-13

summary, discussions 13-15