

NANO-SEMINÁŘ
a seminář projektu NANOCENT
čtvrtek, 24. 10. 2023, 14.00,
posluchárna F2, MFF UK, Ke Karlovu 5

Václav Holý

Department of Condensed Matter Physics, Faculty of Mathematics and Physics,
Charles University

**Basics of synchrotron radiation and its application in
physics**

The talk presents the basics of generation of synchrotron radiation as well as its properties (energy spectrum, polarization, time structure, coherence). The second part of the talk deals with insertion devices (wigglers, undulators), as well as x-ray optics elements (monochromators, lenses, zone plates, etc).

In the third part several examples are presented using unique properties of synchrotron radiation, like its coherence (coherent imaging, phase retrieval), energy tunability (absorption spectroscopy methods, anomalous scattering, DAFS, resonant scattering) and unique time structure (pump-probe experiments).

If time permits, the talk will be completed by a few examples of our recent results measured at several synchrotron sources.

**corresponding author: e-mail: vaclav.holy@matfyz.cuni.cz*