

Seminář odd. 26

Tenkých vrstev a nanostruktur

Fyzikální ústav AVČR, Cukrovarnická 10, Praha 6

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TÉMA

Silicon nanocrystals, photonic structures and optical gain

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Oddělení tenkých vrstev a nanostruktur, Fyzikální ústav AV ČR, v.v.i.

In this talk, which is a public rehearsal of my PhD defense, I will present the main results of my doctoral work. First, I will discuss the origin of a fast blue-green luminescence band in silicon nanocrystals which was investigated by means of time-resolved spectroscopy at low helium temperatures. Second, I will give a brief introduction to the phenomenon of light extraction employing leaky modes of photonic crystals. Third, results of light extraction enhancement from two-dimensional photonic crystals prepared on a nanocrystalline diamond layer and on a silica layer with embedded silicon nanocrystals will be discussed.

odborný garant: prof. RNDr. Ivan Pelant, DrSc.