

Seminář odd. 26

Tenkých vrstev a nanostruktur

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TÉMA

Fluorescent nanodiamonds as non-photobleachable responsive probes

Petr Cígler

Institute of Organic Chemistry and Biochemistry of the CAS, v.v.i.

Nanodiamonds (NDs) represent a key component in recent development of high precision optical resolution techniques. NDs can accommodate photoluminescent nitrogen-vacancy (NV) center – an extremely photostable crystal lattice defect emitting in near-infrared region. Electron transitions among NV quantum states can be influenced by very weak external electric or magnetic fields, which have been utilized for construction of various types of probes and nanosensors. Synthesis of these particles and their utilization in sensing will be demonstrated as well as chemical aspects influencing interactions at their surface.

odborný garant: *Ing. Pavel Jelínek, Ph.D.*