

Laserové centrum HiLASE Vás srdečně zve na seminář

An overview of fabrication of transparent ceramics for different applications

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After the first demonstration of CW laser oscillation by Ikesue in 1995 using Nd: YAG transparent ceramics, attention on such transparent polycrystalline ceramics increased over single crystals because of their economical and functional advantages for optical applications. Fabrication of large scale gain media with uniform and high dopant concentration at relatively low temperature makes ceramics more promising than that of single crystal for high power laser applications. Even after two decades of its first laser oscillation, transparent ceramics are still being explored in multiple ways to understand and improve the microstructure to develop anisotropic ceramics.

In this talk, the techniques behind transparent ceramics fabrication, crucial underlying difficulties in achieving high quality and limitations on ceramics fabrication will be discussed. In addition, studies on multi doped YAG ceramics and their energy transfer mechanism for solar pumped laser applications will be presented. Study on nonlinear characterization on YAG ceramics using dual arm Z-scan technique to determine and understand the third order nonlinear parameters between crystals and ceramics will be presented. Also, development of barium chloride ceramics for radiation detector applications will be discussed.

který se bude konat ve středu 31.8. 2016 od 15:00

v přednáškové místnosti laserového centra HiLASE

Za Radnicí 828, Dolní Břežany