

Characterization of passive and active components for lightwave communication

The presentation is devoted to the current telecom-related activity of the Nanooptics group in IAP, Jena. Various optical components (like plasmonic waveguides, photonic crystal based MZ-modulators), being developed in the group, have to be checked with respect to their potential applicability for data transmission. Thus, universal laboratory setup for bit-error-rate, and gain and noise figure measurements is highlighted as a core part of the work. The setup consists of both commercial and customized devices, like high gain EDFA, which should have been characterized as well. In addition, numerical and experimental results of the amplification of DWDM signals under the influence of spectral hole burning (SHB) are presented.