

PLENARY TALK II (11:00 - 12:00)

Session Chair: Hypolito J. Kalinowski - UFF, Brazil

Photonic diffractive biosensors: long period gratings and molecular BIO-patterns for biorecognition

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Currently, the development of improved photonic biosensors is a trending topic due to their potential impact on industry and diagnosis. Devices that present features such as label-free performance, low resolution limits, low-cost and capacity of operating at the point-of-care are desirable. In this talk, we will present the last works of the Laboratory of Fiber Optics, at the University of Valencia (Spain) to fabricate photonic biosensors. Different strategies will be presented. First, we will review in-fiber alternatives, such as special diffractive elements such as narrow bandwidth long period gratings, nanoarchitectures or U-sections of commercial fibers will be investigated as potential biosensors for the hybridization of DNA or the recognition between the BSA-aBSA antigen-antibody couple. Also, an approach based on planar diffractive gratings based on the UV-deactivation of molecules to inscribe diffractive gratings will be discussed.

SPONSOR (13:30 - 13:50)

Session Chair: Jonas H. Osório - UFLA, Brazil

Sisfóton activities in optical sensing

João B. Rosolem

CPQD - Research and Development Center in Telecommunications

Sisfóton (National System of Laboratories in Photonics) is a network of laboratories that operates in several areas where photonic technologies are needed, such as, health, agriculture, industry, and telecommunications. Optical sensing using or not using optical fibers is an important activity at Sisfóton. This work presents the main results of Sisfóton on different optical sensing topics.