

AVVISO DI SEMINARIO

16 GIUGNO 2011

ORE 11.30 AULA FORMAZIONE AURIGA 1° PIANO

Fabrication and assessment of nano-scale glass-based optical structures



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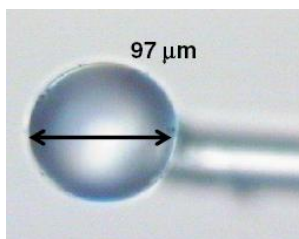
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The aim of this lecture is to give an overview of the advances in glass-derived photonic systems, where light confinement or nanostructured materials induce an enhancement of optical and/or spectroscopic properties of the rare earth ions allowing light management. In particular, the following topics will be highlighted:

- Amorphous planar waveguides and monolithic laser
- Glass-ceramic waveguides produced by
 - ❖ top-down approach
 - ❖ bottom-up approach
- Coated spherical microresonators
- Sol Gel-derived 3D Photonic Crystals
- Acid-Based Synthesis of Rare-Earth-Doped Colloidal SiO₂ Spheres
- Core-Shell-like Structures activated Er³⁺
- 1D microcavities

Some specific application will be discussed in particular in the field of sensing and solar spectrum exploitation.



Spherical
micro-resonator

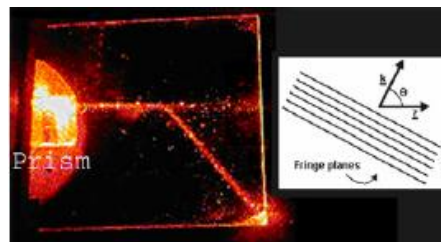
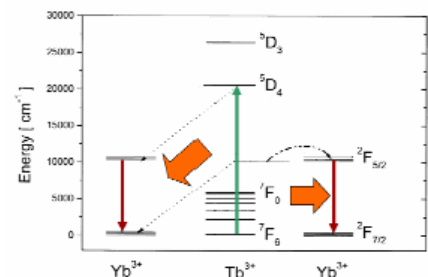


Photo-induced Bragg grating
in SiO₂ - GeO₂ planar waveguide



Nano-micro photonic structures
for down-converters