

Seminar lecture in the framework of International doctoral school in Science

Second harmonic generation in ZnO/SiO₂ core-shell structures

Introduce:

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Interviene:

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Abstract

Nonlinear optical processes find applications in many fields, such as imaging, data storage, communication and spectroscopy. The low absorption of dielectrics at optical frequencies make them a valuable alternative to plasmonic devices. The possibility to enhance the electric field inside dielectric nanostructure is of fundamental interest for applications based on nonlinear processes. In this framework, Whispering Gallery Modes (WGM) have been successfully employed to enhance second harmonic generation. We present a core-shell structure based on ZnO, that has a non-zero second order susceptibility, and SiO₂. Second harmonic generation spatial maps, SEM and numerical simulations are used to study the role of defects in the formation of whispering gallery modes and second harmonic emission.

Seminario

Mercoledì 12 febbraio 2019

Sala Riunioni, ore 14.00

Via dei Musei 41 - Brescia

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