FACOLTÀ DI SCIENZE MATEMATICHE, FISICHE E NATURALI
DIPARTIMENTO DI MATEMATICA E FISICA "NICCOLÒ TARTAGLIA"
INTERNATIONAL DOCTORAL PROGRAM IN SCIENCE

Seminar lecture in the framework of International doctoral school in Science

Time- and energy-resolved study of Fano Resonances in Halide Perovskite Nanoparticles

Introduce:
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Interviene:
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Abstract
In the last decades, lead halide perovskites have attracted great scientific interest due to their outstanding properties, such as high absorption coefficients, tunable band-gaps and emission wavelengths, long carrier diffusion lengths, and room temperature excitons. These features, combined with low-cost fabrication methods, determined their key role in the development of high-efficiency photovoltaic solar cells (with power conversion efficiency exceeding 20%) and optoelectronic devices. Recently, halide perovskite nanoparticles have been also proposed as white-light emitting metadevices since they exhibit hybrid tunable Fano resonances that originate from the coupling of the excitons to the geometry-induced Mie modes. Here we will present time- and energy-resolved pump-probe measurements showing how the tunable Fano resonance strongly influences the out-of-equilibrium dynamics of these systems.

Seminario

Martedì 4 giugno 2019
Sala Riunioni, ore 14.00
Via dei Musei 41 - Brescia

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