

MONOCROMATORS FOR ULTRAFAST PUMP-PROBE EXPERIMENTS IN THE EXTREME-ULTRAVIOLET

Introduce:

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Abstract

I will discuss the design and realization of beamlines for ultrafast monochromatic pulses in the extreme ultraviolet, that are generated through high-order laser harmonics. The aim of such beamlines is the realization of pump-probe experiments with temporal resolution in the range of few femtoseconds. The broadband generated radiation is monochromatized by selecting one of the laser harmonics through a grazing-incidence grating monochromator. The operation with dispersive optics gives a pulse-front tilt that increases the duration of the monochromatic pulse beyond the Fourier limit, typically in the scale of hundreds of femtoseconds. To retrieve the temporal resolution in the range of few femtoseconds, configurations able to compensate such pulse-front tilt have to be adopted. The different configurations available to realize so-called time-delay compensated monochromators will be discussed. Some experimental results obtained in operating beamlines will be presented.

Seminario

Venerdì 1 aprile 2016

Sala Riunioni, ore 12.00

Via dei Musei 41 - Brescia



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