

## **Ultrafast dynamics of silver nanoprisms prepared by wavelength-controlled photochemical growth**

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In this talk I will present the ultrafast dynamics that follows impulsive laser excitation of triangular silver nano-plates in aqueous solution. To grow the particles, we have devised a photochemical method that allows controlling the size and shape of the products with the color of the light used to drive the reaction. We use multicolor transient absorption spectroscopy to capture the complex dynamics of these particles and isolate the processes that contribute to it, on different time-scales, ranging from tens of fs to hundreds of ps. We use model calculations to interpret the results and gain new insight on the behaviour of electrons and phonons in confined systems interacting with their environment. This also represents an important step towards the use of these particles as components of systems organized at the nano-scale and, in particular, as nanoscopic local probes.

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