

Post-synthesis reshaping of gold nanorods using a femtosecond laser

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Streszczenie

This work describes the interaction between femtosecond laser pulses (~ 130 fs, 800 nm) and gold nanorods (NRs) leading to reshaping of the NRs. We focus on the investigation of structural changes of the NRs and the parameters influencing the reshaping, like surface modification using sodium sulphide, laser power and the position of the longitudinal surface plasmon resonance band (L-SPR) with respect to the laser wavelength. A thermogravimetric analysis experiment is performed to examine changes in the composition of NRs upon heating. A new type of banana-shaped NPs is described and the conditions of their appearance are discussed.

Adres publiczny

<http://dx.doi.org/10.1039/c3cp53457j>

Strona internetowa wydawcy

<https://www.rsc.org/>