



Physics > General Physics

# Stochastic processes in light-assisted nanoparticle formation

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(Submitted on 11 Apr 2012)

Recently, light-assisted nanofabrication have been introduced, such as the synthesis of quantum dots using photo-induced desorption that yields reduced size fluctuations, or metal sputtering under light illumination resulting in self-organized, nanoparticle chains. The physical mechanisms have originally been attributed to material desorption or plasmon resonance effects. However, significant stochastic phenomena are also present that have not been explained yet. We introduce stochastic models taking account of the light-assisted processes that reproduce phenomenological characteristics consistent with the experimental observations.

Comments: submitted for publication

Subjects: **General Physics (physics.gen-ph)**; Mesoscale and Nanoscale Physics (cond-mat.mes-hall)

Cite as: [arXiv:1204.3319v1](https://arxiv.org/abs/1204.3319v1) [physics.gen-ph]

## Submission history

From: Laszlo Kish [[view email](#)]

[v1] Wed, 11 Apr 2012 15:15:31 GMT (1199kb)

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