

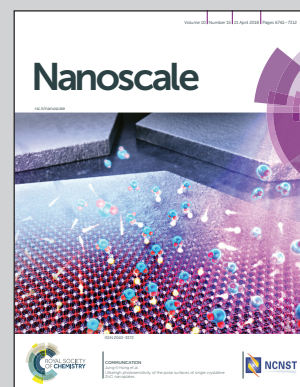


Showcasing collaborative research from University of Virginia, USA and University of Duisburg-Essen, Germany.

Two mechanisms of nanoparticle generation in picosecond laser ablation in liquids: the origin of the bimodal size distribution

This image illustrates two mechanisms of nanoparticle generation in picosecond laser ablation of metal targets in liquids revealed in large-scale atomistic simulations: rapid nucleation and growth of small nanoparticles in an expanding metal-liquid mixing region, proceeding simultaneously with hydrodynamic instabilities that launch large liquid droplets into dense and cold liquid environment. The computational predictions are supported by single and double pulse experiments showing the emergence and optical activation of small satellite microbubbles surrounding the main cavitation bubble generated in laser ablation.

As featured in:



See Bilal Gökce, Leonid V. Zhigilei et al., *Nanoscale*, 2018, 10, 6900.



[rsc.li/nanoscale](https://rsc.li/nanoscale)

Registered charity number: 207890