



## Seminar/Talk

# Understanding shape control of gold nanoparticles: a microscopic, atomistic perspective

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Host: Maria Ibáñez

Gold nanoparticles are widely used in many areas, such as photothermal cancer therapy, biochemical sensing, and medical imaging, due to their size and shape-dependent optical properties. Therefore, directly manipulating and controlling the size and shape of gold nanoparticles is a crucial step for their tailored applications. We use molecular dynamics simulation models to understand the microscopic origin of the asymmetric growth mechanism in gold nanorods. The different factors influencing the growth are selectively included in the models to unravel the role of the surfactants and ions. In particular, both infinite planes models, representing the mature stage of the growth, and nanoseed models in the size of a few nanometers are used to understand how asymmetry between the different facets of the nanorods builds up. Our work shed new light on the understanding of the microscopic structure of the nanorods/electrolyte solution, dissecting the role of the different components of the solution into the anisotropic growth.

Zoom Details: Talk Dr. Santosh Kumar Meena  
Uhrzeit: 29.Aug. 2023 16:00  
Amsterdam, Berlin, Rom, Stockholm, Wien  
Zoom-Meeting beitreten  
[https://istaustria.zoom.us/j/66903412538?pwd=T01YanRQRW9WeUFGZXFjTk01ZDJydz09](https://istaustria.zoom.us/j/66903412538?pwd=T01YanRQRW9WeUFGZXFjTk01ZDJydz09Meeting-ID: 669 0341 2538)  
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Ortseinwahl suchen: <https://istaustria.zoom.us/u/ceuLB4VSJF>

**Tuesday, August 29, 2023 04:00pm - 05:00pm**

Online via Zoom:

<https://istaustria.zoom.us/j/66903412538?pwd=T01YanRQRW9WeUFGZXFjTk01ZDJydz09>

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