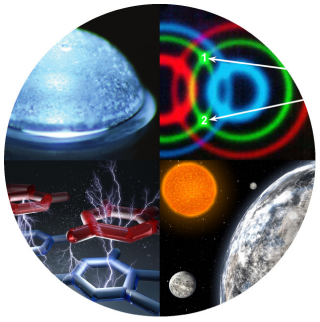

Münchner Physik-Kolloquium

Sommer 2017

Surface nanobubbles and nanodroplets: the big picture

Prof. Dr. Detlef Lohse, *University of Twente, Enschede, The Netherlands*

Monday, 22 May 2017, 17:15 h
Hörsaal H 030, Fakultät für Physik der LMU, Schellingstraße 4, München

Surface nanobubbles are nanoscopic gaseous domains on immersed substrates which can survive for days. They were first speculated to exist about 20 years ago, based on stepwise features in force curves between two hydrophobic surfaces, eventually leading to the first atomic force microscopy (AFM) image in 2000. While in the early years it was suspected that they may be an artefact caused by AFM, meanwhile their existence has been confirmed with various other methods, including through direct optical observation. Their existence seems to be paradoxical, as a simple classical estimate suggests that they should dissolve in microseconds, due to the large Laplace pressure inside these nanoscopic spherical-cap-shaped objects. Moreover, their contact angle (on the gas side) is much smaller than one would expect from macroscopic counterparts. We will report how surface nanobubbles and nanodroplets can be made, how they can be observed (both individually and collectively), and what their properties are.

Student event: Meet the speaker

*We invite you to a **student-only** discussion-round with Prof. Dr. Detlef Lohse before his Munich Physics Colloquium talk.*

Be curious and feel free to ask any question.

Monday, 22 May 2017, 16:00 h
Room H 522 (5th floor), Fakultät für Physik der LMU, Schellingstraße 4, München