



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Frau M.Sc. Andrea Pyttlik
Kolloid- und Grenzflächenchemie
(Prof. Dr. Tobias Kraus)

am

Freitag, 4. April 2025, 12:00 Uhr s.t.

per Videokonferenz; Link für MS Teams: <http://bit.ly/4buoWsR>
Raum für die Prüfung: Campus D2 5, Leibniz-Saal.

Thema der Dissertation:

Agglomeration of gold nanoparticles in microgravity

The arrangement and distribution of nanoparticles inside a matrix crucially affect the material properties of nanocomposites. Agglomeration of the particles and the gravitational sedimentation of the agglomerates can alter the structure of the particles inside the matrix. To quantify the influence of gravity, agglomeration experiments were performed under normal and microgravity conditions. The temperature induced agglomeration of hexadecanethiol-capped gold nanoparticles was studied. Microgravity experiments were realized in the drop tower of the ZARM Institute (Bremen, Germany), providing a microgravity duration of 9.3 s. The formation of larger agglomerates in microgravity was found, indicating a more reaction-limited agglomeration on ground and a more diffusion-limited agglomeration in microgravity.

Saarbrücken, 21. März 2025

Prof. Dr. Uli Kazmaier