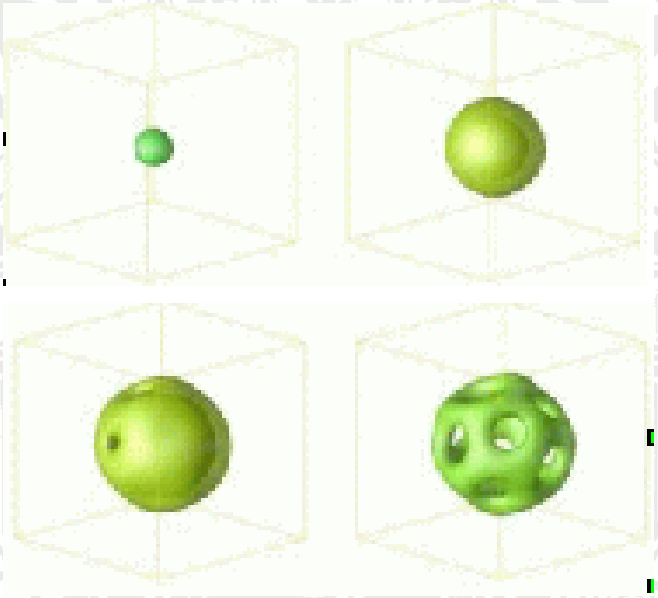
PHYSIKALISCHES KOLLOQUIUM

AM 04. NOVEMBER 2019 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



MOLECULAR LEGO: THE POWER OF SELF-ASSEMBLY

PROF. DR. FRIEDERIKE SCHMID
JOHANNES-GUTENBERG-UNIVERSITÄT MAINZ

Living matter as well as many technological applications rely on nature's ability to self-assemble spontaneously into a variety of structures with tunable properties. In the talk, we will specifically focus on the self-assembly of nanoparticles and nanocontainers for drug delivery.
We will discuss a number of principles that can be used to guide the final structure and morphology of such nanoobjects. Apart from obvious determinants like the chemical structure and molecular architecture of the components, many other less obvious factors also contribute and can be exploited, such as the dispersity of the constituents, the processing during self-assembly, and the in vivo interaction of the nanoparticles with the environment once they are injected in the body.