

**PHYSICAL COLLOQUIUM
INVITATION**

Monday, 03.05.2021, 4.15 p.m.,
video conference: <https://meeting.uol.de/b/anj-2vc-j6s-fwe>

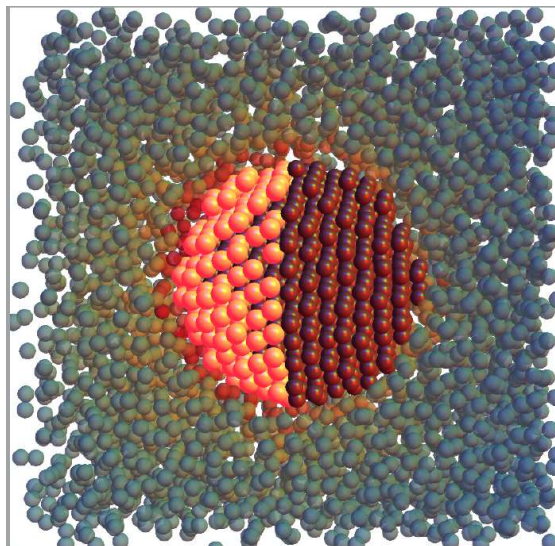
speaks

Prof. Dr. Klaus Kroy,
ITP - Institut für Theoretische Physik
Soft Condensed Matter Theory Group, Universität Leipzig

about

“Hot Microswimmers”

Hot microswimmers are “active” colloidal particles that maintain enhanced Brownian fluctuations and thermophoretic self-propulsion thanks to a persistent supply of thermal energy. As paradigmatic constituents of synthetic active matter, they can serve to illustrate how basic thermodynamic notions, such as equipartition, reciprocity, temperature, heat, and pressure, fare and fail far from equilibrium. I will mainly focus on elementary theoretical toy problems that have well-controlled experimental realisations and are amenable to analytical solutions; e.g., a microswimmer in a motility well, and an active heat engine. Upon coarse-graining, such non-equilibrium systems admit a thermodynamic description with broken symmetries that reveal the dissipative character of their elementary constituents to mesoscale observers.



All interested persons are cordially invited.

Sgd. Prof. Dr. Joachim Peinke