SFB/TRR 21 - Seminar

16. Januar 2013, Ulm

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Trimer liquids and the Luttinger's staircase in ultracold dipolar gases

In recent years, remarkable experimental progresses in trapping and cooling dipolar gases of atoms and molecules have opened new profound theoretical questions on the role of long-range potentials at the many-body level. In this talk, we will show how dipolar systems confined in low-dimensional geometries display new, relevant phenomena with respect to contact interacting gases. Starting from a general discussion on the effect of long-range potentials in strongly interacting systems, we will discuss how dipolar interactions are responsible for the emergence of novel many-body phenomena, focusing in particular on devil's staircase insulating states and liquid of composite object, that is, trimer liquids. Finally, a résumé of the state-of-art theoretical challenges will be discussed.

16. Januar 2013, 11:00 Uhr

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