ID de Contribution: **487** Type: **Contribution orale**

Quantum gases of ultracold polar molecules

vendredi 7 juillet 2023 09:00 (30 minutes)

In recent years, tremendous progress in the preparation and control of ultracold molecular gases in the quantum regime has been achieved and has opened exciting new research opportunities. Molecules rotate and oscillate and therefore offer many more quantum degrees of freedom than their atomic counterparts. Polar molecules interact via strong and long-range anisotropic interactions. These unique molecular properties lead to largely unexplored new possibilities and surprising results. These range from peculiar scattering properties via the control of ultracold collisions and chemical reactions to strongly correlated dipolar quantum many-body systems.
Within my talk, I take you on a tour through our experiments with ultracold polar molecules and discuss recent results on molecule-molecule and atom-molecule collisions including collisional resonances.

Affiliation de l'auteur principal

Leibniz Universität Hannover, Institut für Quantenoptik

Auteur principal: OSPELKAUS, Silke (Leibniz Universität Hannover)

Orateur: OSPELKAUS, Silke (Leibniz Universität Hannover)

Classification de Session: Mini-colloques: MC05 Physico-chimie des environnements atomiques et moléculaires froids et ultra froids

Classification de thématique: MC5 Physico-chimie des environnements atomiques et moléculaires froids et ultra froids