QUANTUM GASES OF ULTRACOLD POLAR MOLECULES

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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. These range from the investigation of peculiar scattering properties via the control of ultracold collisions and chemical reactions to strongly correlated dipolar quantum many-body systems. In this talk I will take you on a journey through the world of ultracold molecular systems and discuss future prospects.