

3rd May 2012 - 10:00
Building 49, room 108

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Coulomb-crystallized molecular ions in traps: methods, applications, prospects

Translationally cold, spatially localised molecular ions prepared by sympathetic cooling with laser-cooled atomic ions in ion traps have recently found a wide range of applications in both chemistry and physics. The very low temperatures of the ions (down to millikelvins), their tight localisation in the trap and the ability to control and manipulate single molecules on the quantum level offer intriguing possibilities for new experiments in the realms of cold chemistry, precision molecular spectroscopy and quantum technology. The talk will give an overview over current developments, new experiments and future trends in this field.

