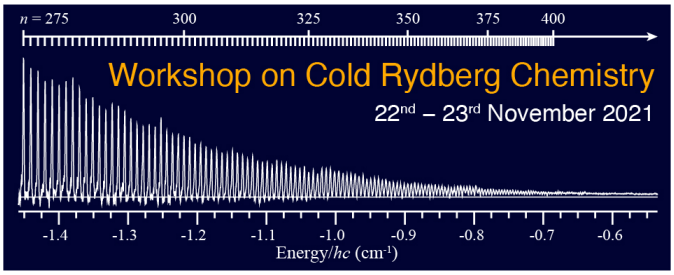

Contribution ID: **16** Type: **Invited**

Search for novel atom-ion Rydberg molecules

Monday 22 November 2021 19:30 (30 minutes)

Recently our group has predicted a novel ionic Rydberg molecule, which consists of a neutral Rydberg atom and an atomic ion at large internuclear distance [1]. The binding mechanism is based on a sign flip in the polarizability of the Rydberg atom in the electrical field of an ion at a particular distance. Besides explaining how this atom-ion Rydberg molecules works and what its properties are, I will talk about our search for it and the difficulties that we met in our ion-trap setup.

[1] Long-Range Atom-Ion Rydberg Molecule: A Novel Molecular Binding Mechanism,
Markus Deiß, Shinsuke Haze, and Johannes Hecker Denschlag, Atoms 9(2), 34 (2021)

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