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## **【435】 Towards OH-ion reaction studies at astrochemically relevant conditions**

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In interstellar space, reactions involving neutral dipolar molecules and ions are the main mechanism with which new molecules are formed, yet there is sparse data about reactivities in this range.

Here we present an experiment aimed at studying radical-ion reactivities at conditions relevant for astrochemistry –high vacuum and temperatures down to few Kelvins.

A Stark decelerator slows down to temperatures of a few K a beam of radicals, which are then shot onto trapped, laser cooled  $\text{Ca}^+$  ions.

I will report on advancements on the deceleration and detection of the OH molecules and on prospects to couple them to the trapped ion.

### **Theoretical Work**

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