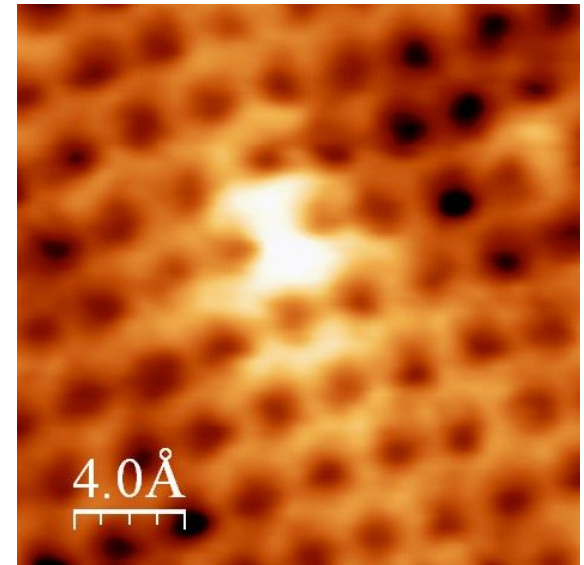# Hydrogen Storage in Graphene

We investigate the use of graphene for hydrogen storage applications, both physisorption and chemisorption. The hydrogen uptake of graphene is increased by functionalization and/or defect engineering. All process steps are performed in the same ultra-high vacuum environment. The students will learn how to prepare samples *in-situ* and how to characterize them with atomic resolution by scanning tunneling microscopy.

4.0Å

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