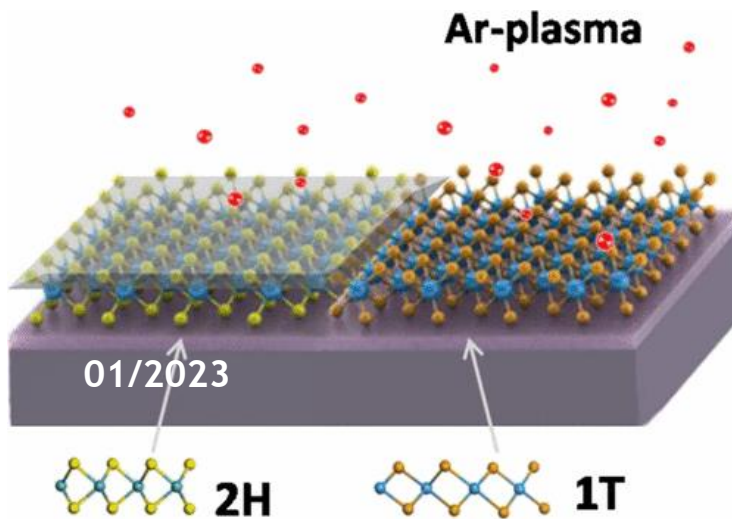


AG Experimentelle Nanophysik

Prof. Dr. Carsten Busse

Interested?
More info via mail,
phone (35839 or in
person (ENC-B 009)

Master Thesis (Nanoscience) Phase engineering using ion irradiation



J. Zhu et al., JACS 139, 10216 (2017)

The properties of two-dimensional materials can be tuned by changing their crystal structure. For example, the 2H-phase of MoS₂ is a semiconductor, while the 1T-phase is a metal. Recent experiments show that weak Ar-plasma bombardment can induce a phase transition from 2H to 1T. In his project, ion irradiation will be used to trigger this transition. The dependence on ion species and ion energy will be investigated.