SPascal
SPECSGROUP
saes
high vacuum
KYMA

Contribution ID: **20** Type: **Invited Oral**

Effects of Uniaxial Strain on the Electronic Structure of 2H-NbSe2

Interplay of superconductivity and density wave orders has been at the forefront of research of correlated electronic phases for a long time. The balance between these two competing orders can be tuned by means of lattice deformation, i.e. pressure or strain. 2H-$NbSe_2$ is considered to be an ideal system for studying this interplay, but the origin of charge density wave in this material is still unresolved. Here, by using angle-resolved photoemission spectroscopy, we revisit the charge density wave order and study the effects of uniaxial strain on the electronic structure of 2H-$NbSe_2$. Our results indicate previously undetected signatures of charge density waves on the Fermi surface. The application of small amount of uniaxial strain induces substantial changes in the electronic structure and lowers its symmetry. This, and the altered lattice should affect both the charge density wave phase and superconductivity and should be observable in the macroscopic properties.

Primary author: VALLA, Tonica (Donostia International Physics Center)

Co-authors: Dr KUNDU, Asish (NSLS II); Dr VESCOVO, Elio (NSLS II); Dr BERGER, Helmuth (EPFL); Dr KLIMOVSKIKH, Ilya (DIPC)

Presenter: VALLA, Tonica (Donostia International Physics Center)