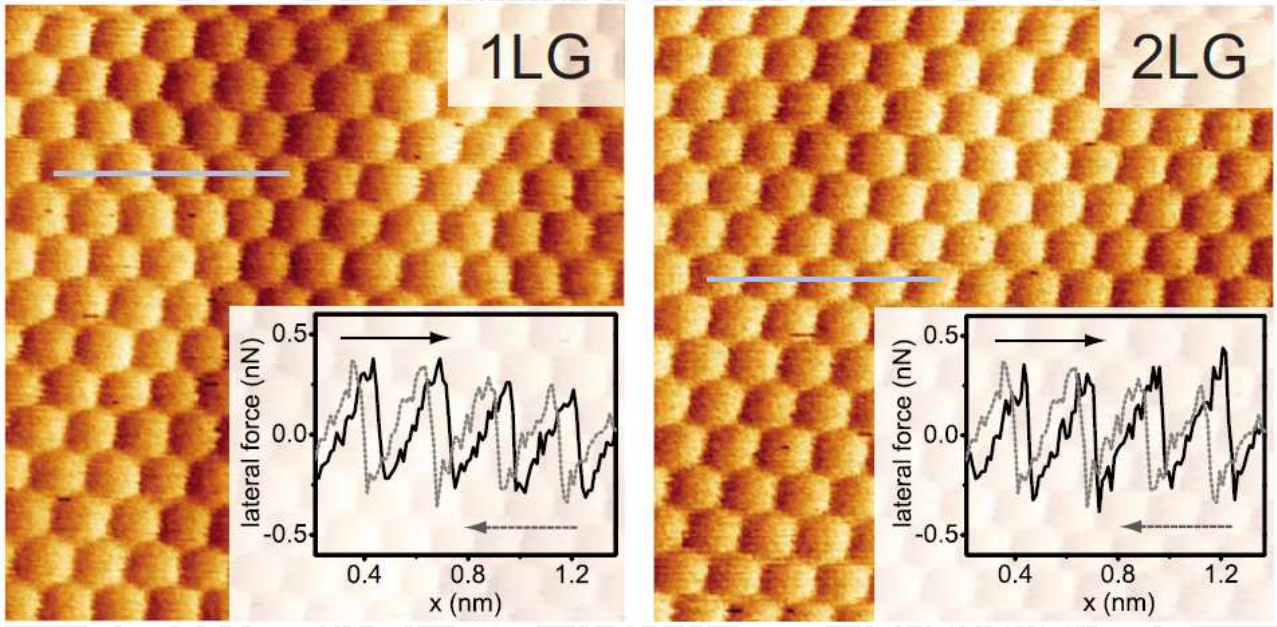
Physikalisches Institut
Fakultät für Mathematik und Physik
Albert-Ludwigs-Universität Freiburg

PHYSIKALISCHES KOLLOQUIUM

AM 16. DEZEMBER 2013 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



FRICTION CONTROL BY MOLECULAR LAYERS

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Friction between bodies in relative motion is determined by area and shear strength of their contact. The shear strength is usually thought of as a materials parameter. We explore ways of controlling friction though molecular modification of the surfaces in contact. High-resolution force microscopy experiments help to understand the underlying microscopic mechanisms. Two systems will be in the focus of this talk: graphene as a solid lubricant and ionic liquids, which open new possibilities towards an electrochemical control of friction.