

Magnetisation induced changes in the photoemission current from corannulene on *h*-BN/Ni(110)

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Corannulene ($C_{20}H_{10}$) is a polycyclic aromatic hydrocarbon molecule with one pentagon and corresponds to a hydrogen terminated third of C_{60} . It is a candidate for molecular electro- or magnetostriction, i.e. reorientation upon changes of its electromagnetic environment because of its large dipole moment and the counter-rotating ring currents. Ni(110) is used as a substrate since it has $\langle 111 \rangle$ easy magnetisation axes in the surface plane. Single layer hexagonal boron nitride *h*-BN were grown on Ni(110) by chemical vapor deposition of borazine ($HBNH_3$). *h*-BN acts as a tunneling barrier, reducing the reactivity of the nickel surface. Low energy electron diffraction (LEED) and angle resolved photoemission (ARUPS) show that *h*-BN forms a (1×6) and a (7×5) superstructure. At certain corannulene coverages on *h*-BN/Ni(110) the angular resolved photoemission current from corannulene molecular orbitals reversibly depends on the magnetisation direction in the substrate.