

# Tunning the Schootky barrier height at interfaces between metals and crystalline oxides.

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Metallic gate contacts are fundamental components of MOSFET architectures, and understanding their physical properties at a fundamental level is of great importance for the engineering of advanced electronic devices. In this poster we will present results of a comprehensive ab initio study of the structural and electronic properties of interfaces between metals and crystalline binary oxides. Our primary interest is in the characterization of the chemical composition at the interface on the Schottky barrier Height (SBH) formation and in the possibility of using and manipulating the interface dipole to tune the SBH. We found that changing the interface structure by introducing another metal layer, or alloy, we can tune the SBH in a controlled and continuous way.