



KONWERSATORIUM INSTYTUTU FIZYKI UMCS

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Redox processes occurring on transition metal oxide surfaces studied at the nanoscale

Transition metal oxides find wide applications across various industries due to their tunable physical and chemical properties via oxidation and reduction processes. These redox reactions alter the oxygen content within the crystal, affecting the oxidation state of the transition metal. In this presentation, we will show experimental findings focused on two model oxides, namely TiO_2 and SrTiO_3 . We will demonstrate how modifications in the near-surface region during redox processes influence surface properties, including work function, electrical conductivity, reconstruction, and surface chemistry.

Uprzejmie zapraszam wszystkich pracowników, doktorantów i studentów Instytutu Fizyki.

Prof. dr hab. Ryszard Zdyb
Dyrektor IF UMCS