

The doctoral thesis deals with study of model catalytic systems Ce(Ox)-Pd(111), Sn-CeO₂(111) and Au-CeO₂(111). The metal-metal and metal-oxide interactions are investigated by means of photoelectron spectroscopy method (PES), first of all resonant photoelectron spectroscopy (RPES). The RPES method showed, that the chemical state modifications of the system induce significant modifications in the band structure of its atoms implicating dramatic valence band changes. The RPES method has appeared to be a powerful instrument for valence band electron structure study.