Oxides at the nanoscale as new catalytic materials

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Oxides at the nanoscale and in particular oxide ultrathin films may exhibit specific surface morphology, physical properties, and chemical reactivity, thus providing new opportunities for the design of innovative materials with special emphasis on nanocatalysis. In this talk we discuss the possibility to functionalize oxide thin films by selective doping and we show how this can be used to tune the shape, electronic structure and reactivity of supported metal nanoparticles.