

During this work CeO<sub>x</sub> films were prepared by magnetron sputtering on a graphite foil and a monocrystalline silicon wafer. Samples were characterised by the method of x-ray photoelectron spectroscopy in situ and then exposed to effects of the atmosphere. Influences of substrate, target substrate distance and duration of sputtering on stoichiometry of prepared films were observed. It was found out, that exposition to atmosphere reduces prepared films. Reduction was higher on films prepared on graphite foil and sputtered from greater distance.