Title: Ionic catalysts for the environment

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Abstract: In presented work we studied the catalytic characteristics of Ce-Sn-O mixed oxide thin layers, deposited on silicon substrates by magnetron sputtering method. Reactivity of prepared samples was measured on a prototype microreactor, enabling the control of temperature and the gas composition. The above mentioned mixed oxide thin films were sputtered at different temperatures of the silicon substrate, which affected the structure of the resultant layer as well as studied catalytic properties. Physico - chemical properties of thin films, prepared in this way were studied by surface analysis methods, namely X-ray diffraction analysis (XRD), photoelectron spectroscopy (XPS) and scanning electron microscopy (SEM).

Keywords: magnetron sputtering, Ce-Sn-O, XRD, XPS, SEM