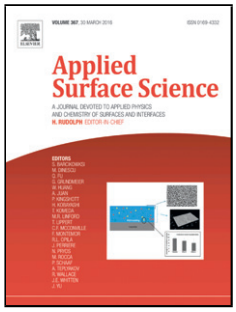

Title: Surface Potentials of (111), (110) and (100) oriented CeO_{2-x} thin films

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Surface Potentials of (111), (110) and (100) oriented CeO_2 thin films

Highlights

- Fermi level positions, work functions and ionization potentials of differently oriented CeO2 thin films are determined photoelectron spectroscopy
- The state of the surface is varied by different deposition conditions and post-deposition treatments
- The ionization potential varies is more than 2 eV different for most strongly oxidized and reduced surfaces. This 2-3 times as much as observed for other oxide surfaces
- The Fermi level position varies only slightly upon surface oxidation and reduction
- A Ce3+ concentration of >10% remains even on the most strongl oxidized surfaces, which exhibit ionization potentials >9 eV