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MDPI

Supplementary Materials

Plasma-Assisted Chemical Vapor Deposition of F-Doped MnO_2 Nanostructures on Single Crystal Substrates

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S1. Chemico-physical Characterization

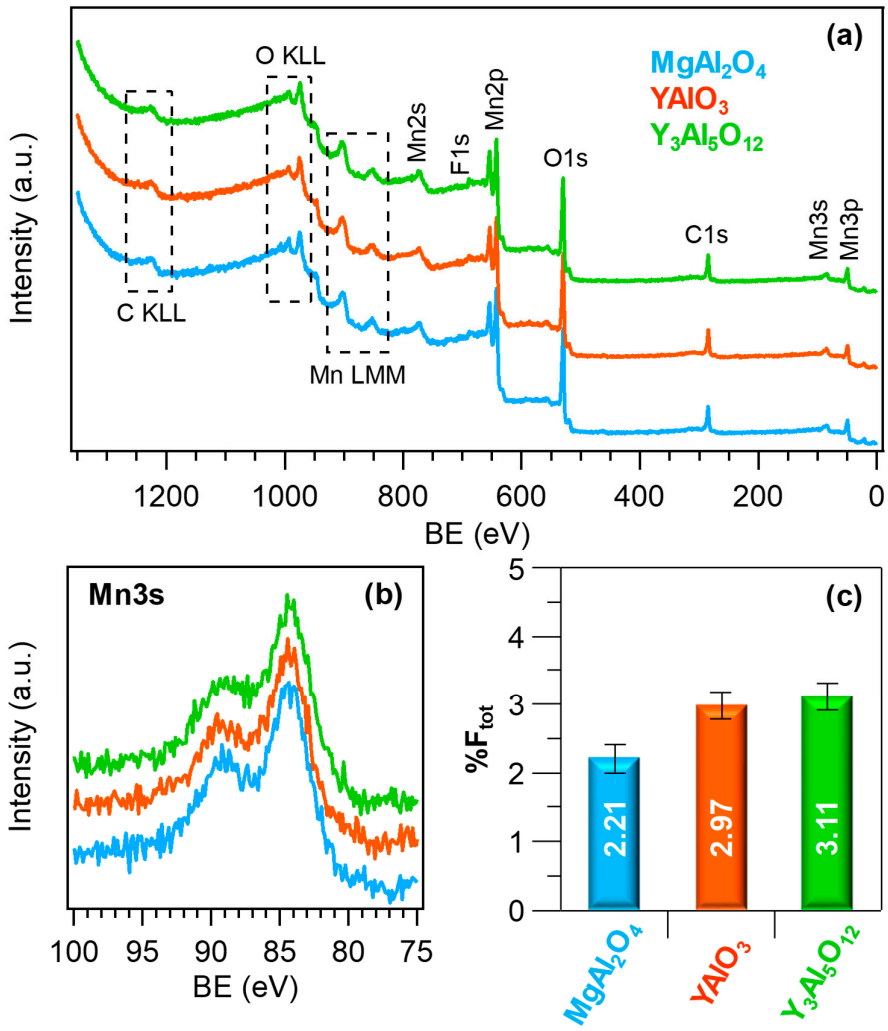

Figure S1 (**a**) Wide-scan XP surveys for MnO_2 samples deposited on $MgAl_2O_4$(100), $YAlO_3$(010) and $Y_3Al_5O_{12}$(100). (**b**) Mn3s photopeaks and (**c**) total surface fluorine content for the different analyzed specimens.

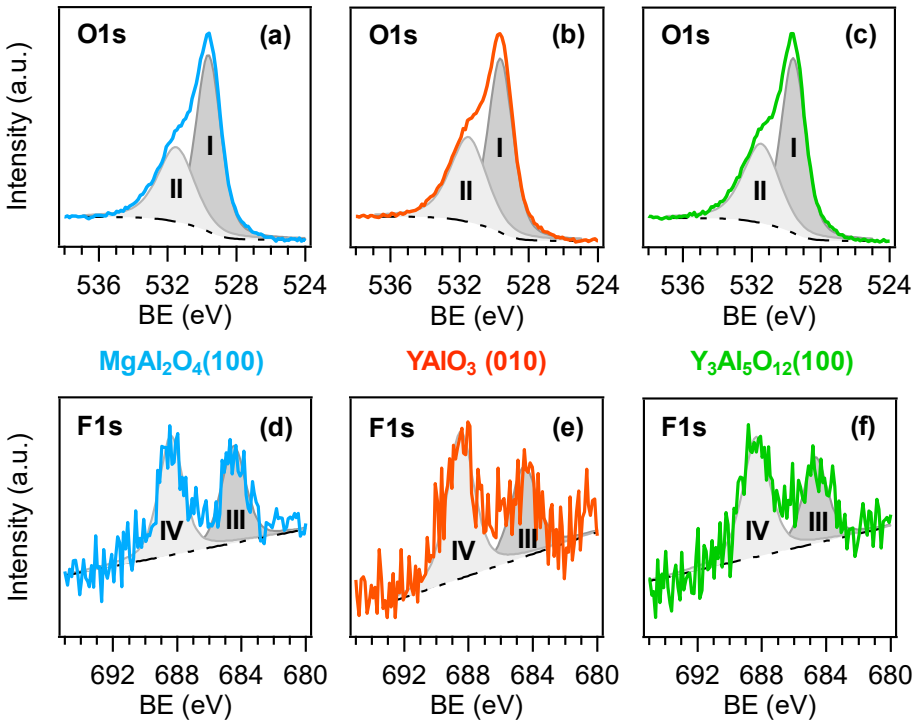

Figure S2. Surface O1s (**a–c**) and F1s (**d–f**) spectra, along with the corresponding fitting components, for MnO_2 specimens. The contribution of component (II) to the total O content was estimated to be 39.0%, 43.0% and 41.0% for samples supported on $MgAl_2O_4(100)$, $YAlO_3(010)$ and $Y_3Al_5O_{12}(100)$, respectively. The contribution of component (IV) to the total F content was estimated to be 56.0%, 62.0% and 61.0% for samples supported on $MgAl_2O_4(100)$, $YAlO_3(010)$ and $Y_3Al_5O_{12}(100)$, respectively.

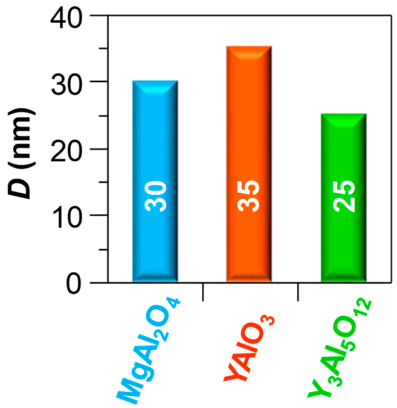

Figure S3. Crystallite size (*D*) values for MnO_2 samples deposited on different substrates.