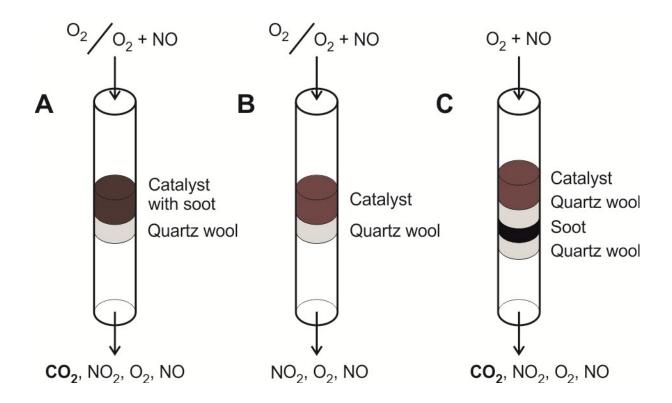
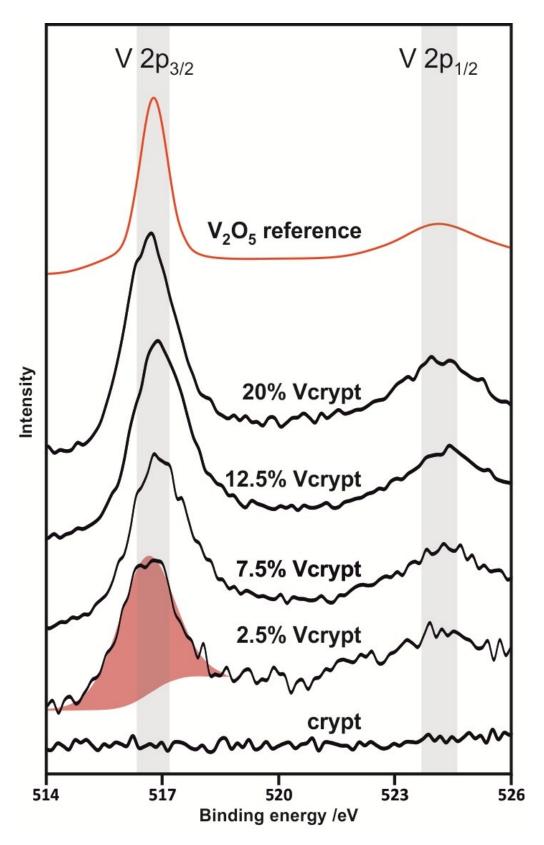
Electronic Supplementary Material (ESI) for Catalysis Science & Technology. This journal is © The Royal Society of Chemistry 2018



**Figure S1** - experimental setups for catalytic tests. A – loose-contact soot combustion, B – no oxidation and C – contactless soot combustion.



**Figure S2** – the XPS vanadium 2p3/2 and V 2p1/2 narrow scan spectra for the investigated V-doped cryptomelane catalysts together with the  $V_2O_5$  reference. The red shaded area shows the fitting for V5<sup>+</sup> band. No significant contribution from V4<sup>+</sup> was observed.