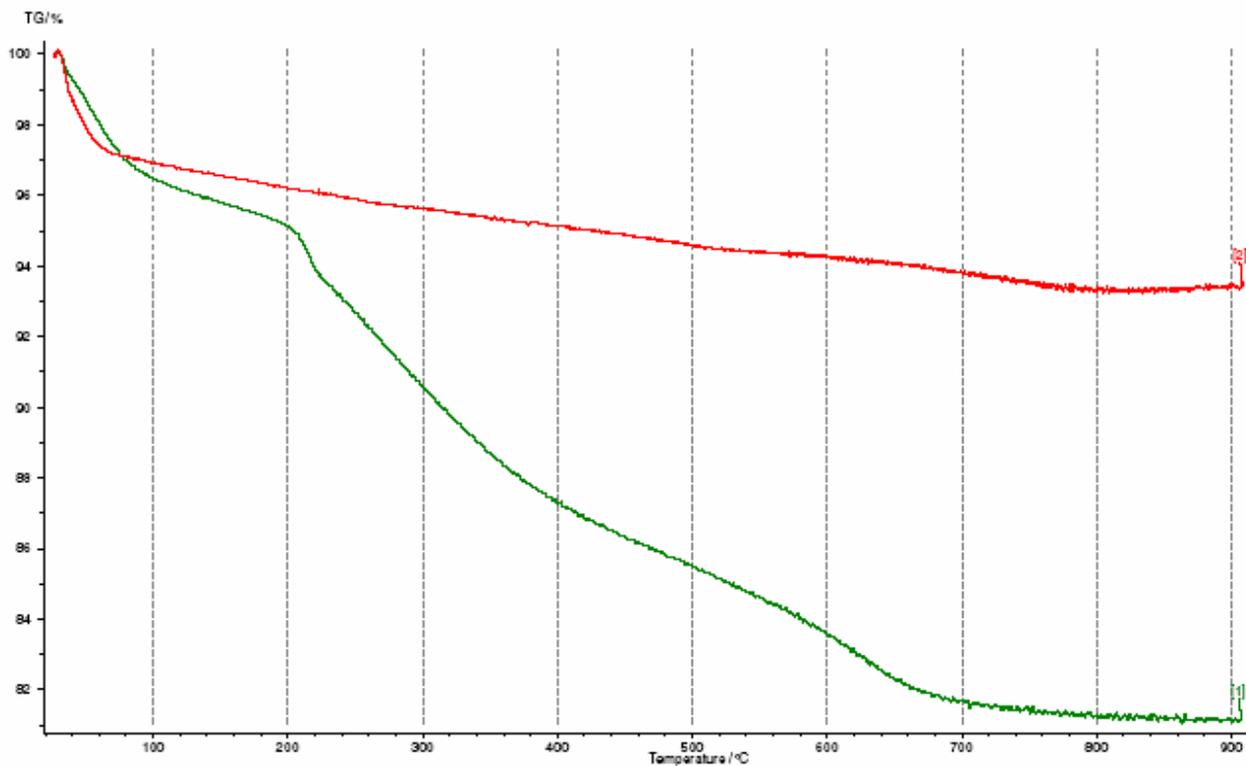
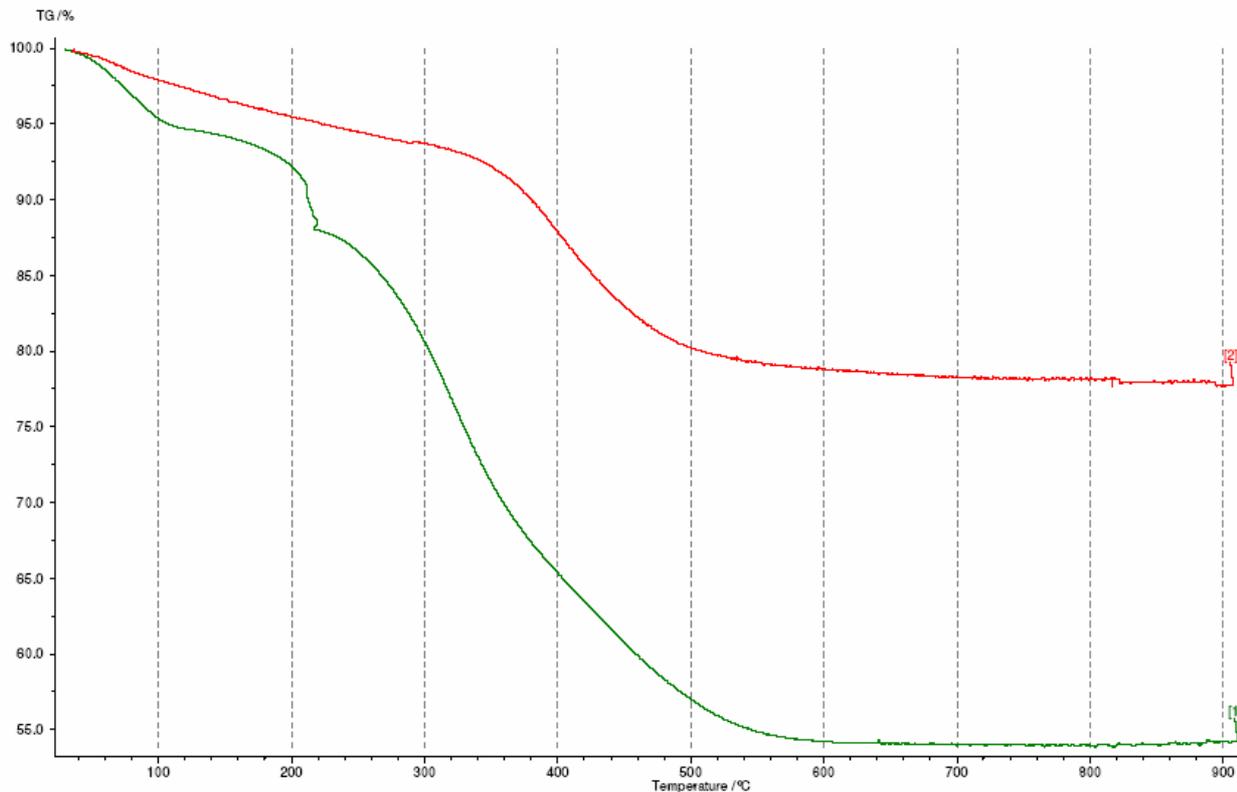


Supplementary Fig. 1 PXRD patterns of the substrate materials. $d_{100}(\text{COOH-SBA-15})=10.2$ nm and $d_{100}(\text{SBA-15})= 9.32$ nm. XRD measurements were performed using a Kratky compact small-angle system (M. Braun, Austria). The system is equipped with a position-sensitive detector (PSD 50m) consisting of 1024 channels of 55.5 μm width each. A Seifert ID-300 X-ray generator, operating at a maximum intensity of 50kV and 40 mA, provided the Cu $K\alpha$ radiation at $\lambda = 1.542\text{\AA}$. A Ni filter was used to remove $K\beta$ radiation and a W filter protected the detector from the primary beam. The sample-to-detector distance was 277mm. The sample holder was kept under vacuum during the measurements in order to minimize the background scattering from air.



Supplementary Fig. 2 TGA-curve for the purely siliceous SBA-15 substrate prior to (red) and after functionalization (green). Total mass loss = 14 wt%, of which PEI loss = 11 wt%



Supplementary Fig. 3 TGA-curve for the COOH-SBA-15 substrate prior to (red) and after (green) functionalization. Total mass loss = 42 wt%, of which PEI loss = 28 wt%.