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Femtosecond Laser-Induced Surface Structuring of the Porous Transport Layers in Proton Exchange Membrane Water Electrolysis

electronic supplementary information

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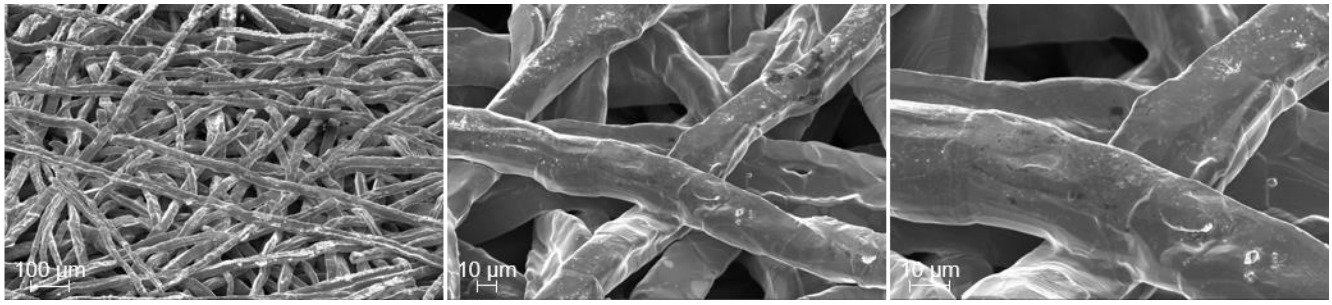

Figure S1: SEM-images after PEMWE-cell tests of the PTL surface towards the CL underneath the channel for the pristine (or unmodified) PTL (sample P2) at magnifications of 100x, 500x and 1000x, from left to right. In contrast to the region underneath the ribs (cf. Figure 7 top or the upper and lower part of Figure S1 at 100x), little to no deposits of the CL can be observed here.

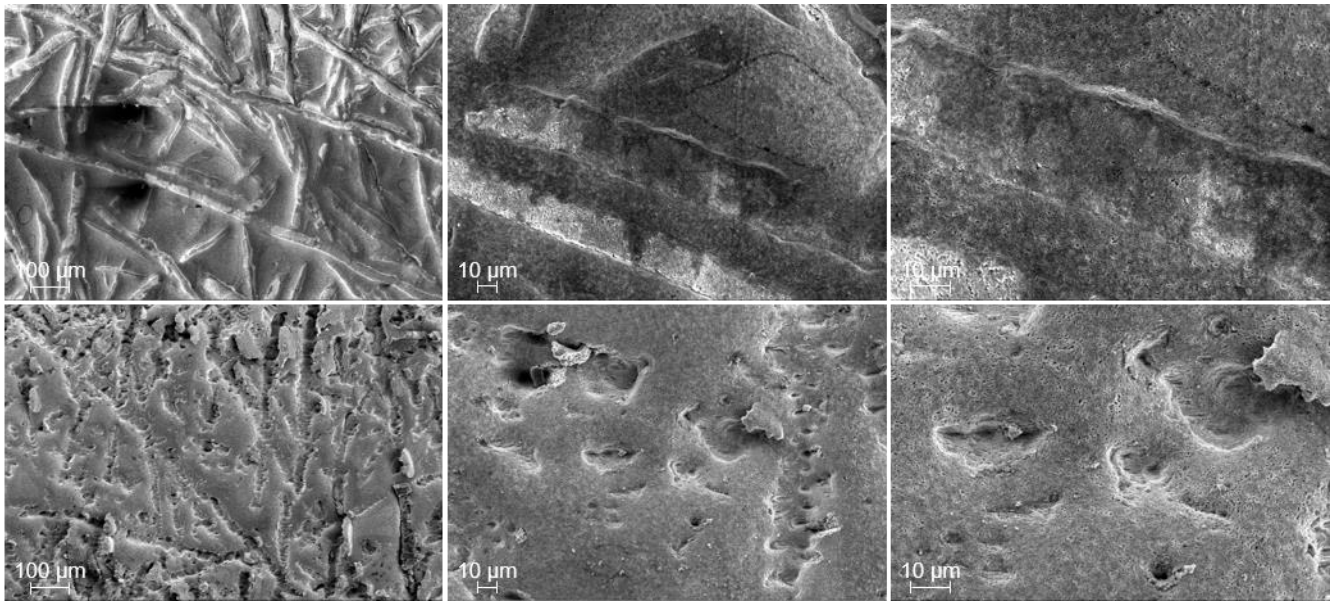

Figure S2: SEM-images after PEMWE-cell tests of the anode side CCM surface underneath the channel of the cell with the pristine PTL (top) and with the laser-structured PTL (bottom) each at magnifications of 100x, 500x and 1000x, from left to right. In contrast to the region underneath the ribs (cf. Figure 8 or the upper and lower parts of Figure S2 at 100x), the imprint is significantly less pronounced here. The SEM-images correspond to the PEMWE-cell test results obtained with the samples P2 (pristine PTL) and L2 (laser-structured PTL).