Effects of Catalyst Ink Storage on Polymer Electrolyte Fuel Cells

Supporting information

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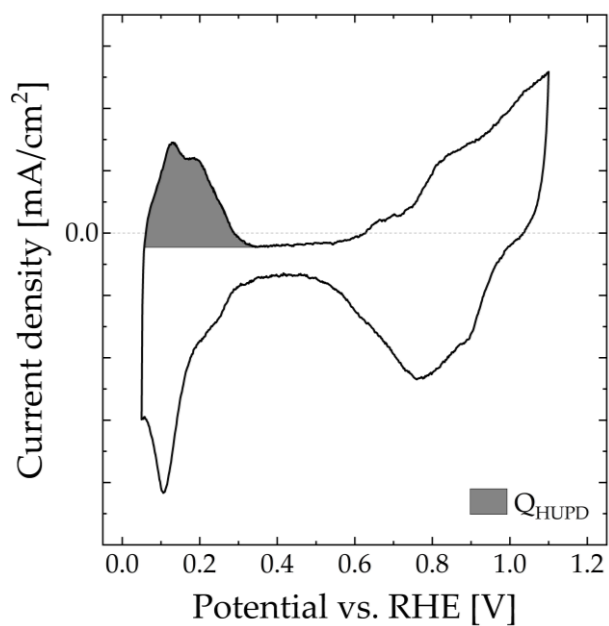
*correspondance: mario.kircher@tugraz.at

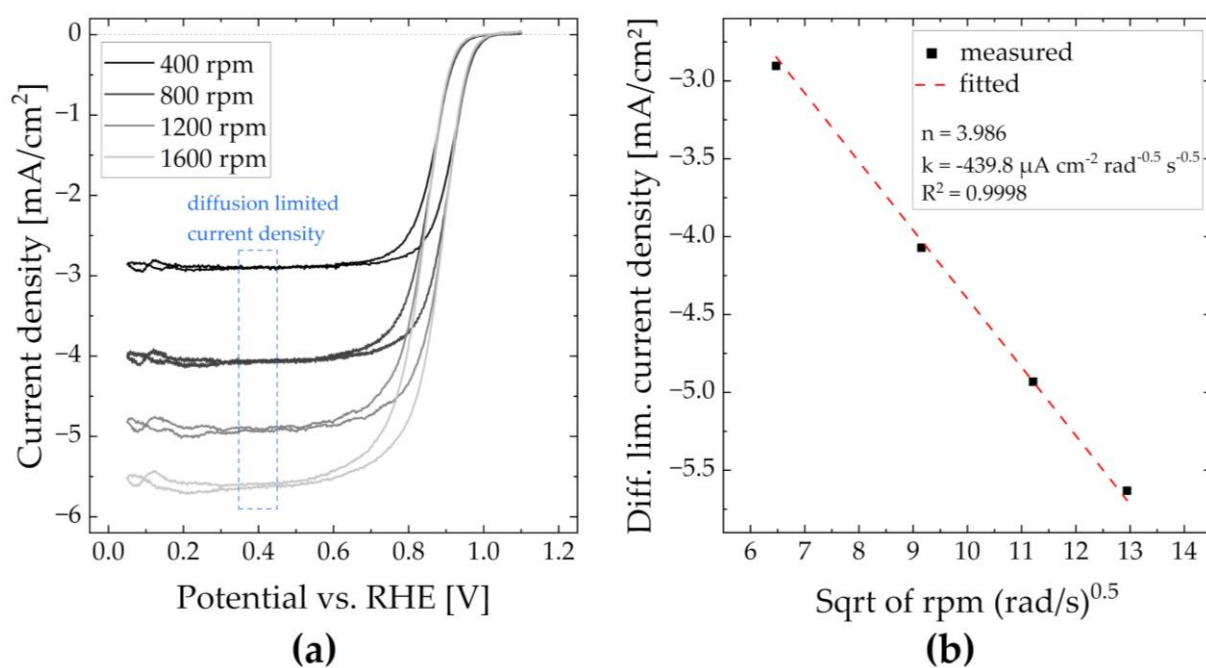Figure S1: Cyclic voltammogram with integrated hydrogen desorption peak for ECSA evaluation

Figure S2: ORR activity (CV) recorded with RDE at varying rotational speeds (a); mean diffusion limited current density over the square root of the rotational speed for with linear fit for Koutecky-Levich analysis (b)
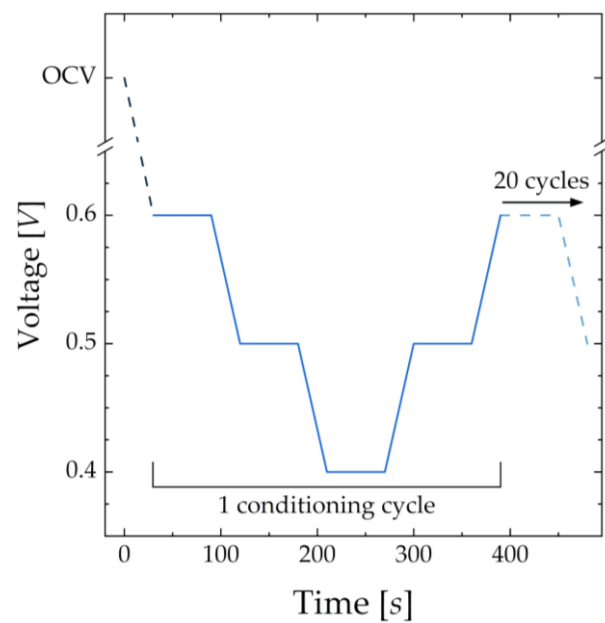
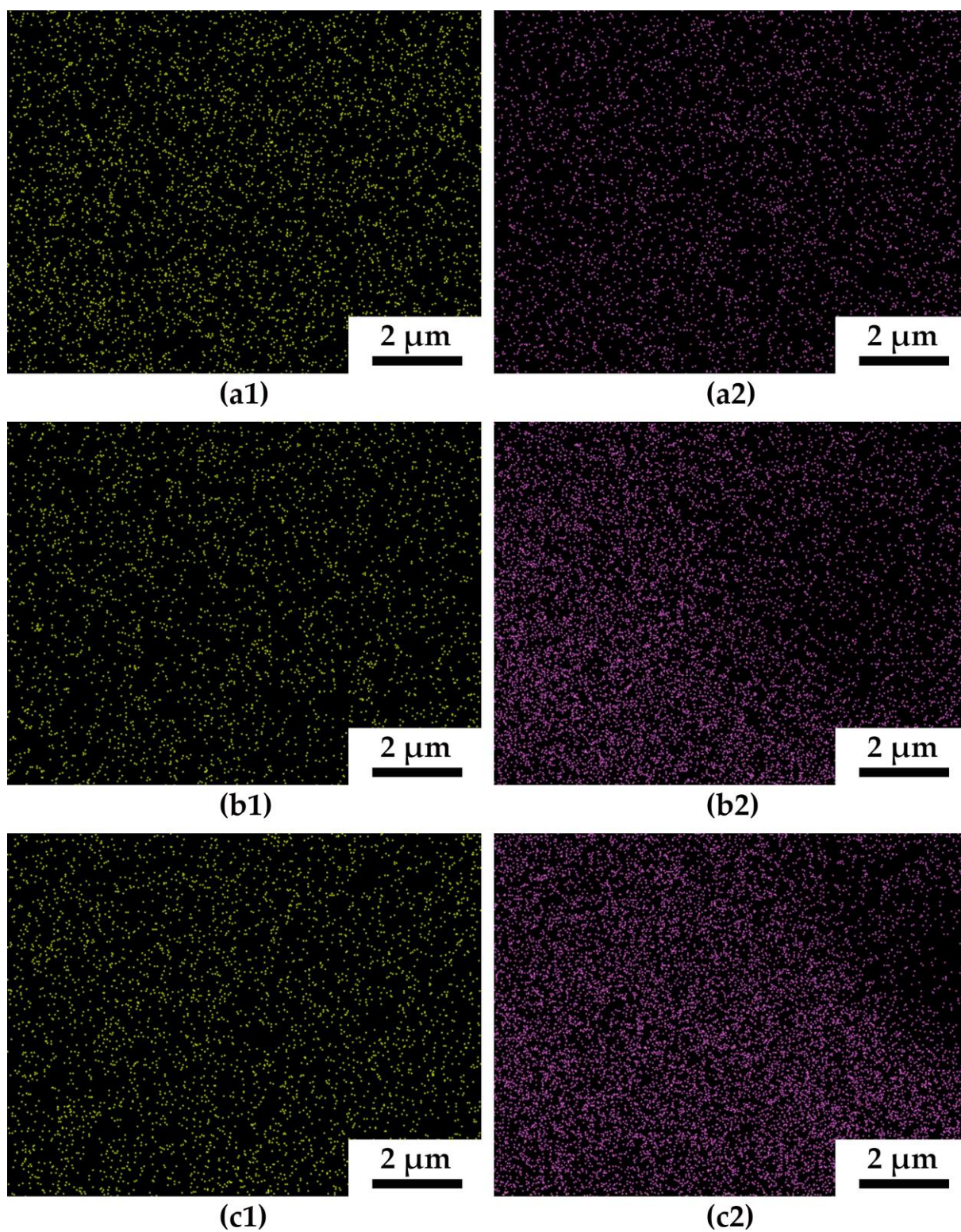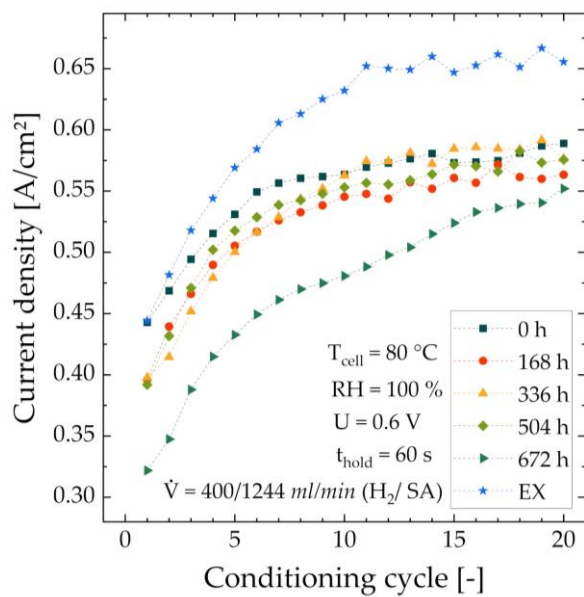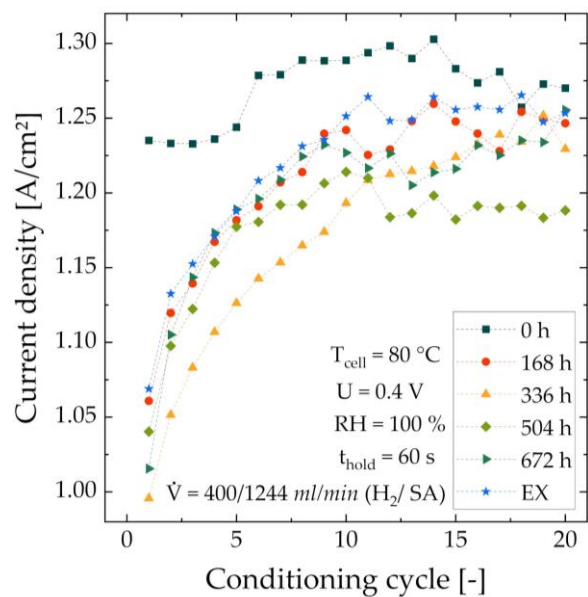Figure S3: Potential profile used as conditioning method for MEAs

(a1) **(a2)** **(b1)** **(b2)** **(c1)** **(c2)**

Figure S4: SEM-EDX images of CLs of MEA-0 (a), -672 (b) and –EX (c) for catalyst (Pt La) (1) and Nafion (F Ka) (2)
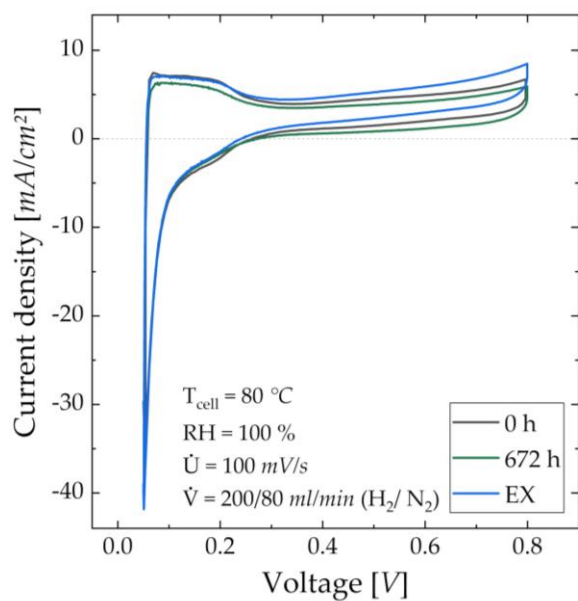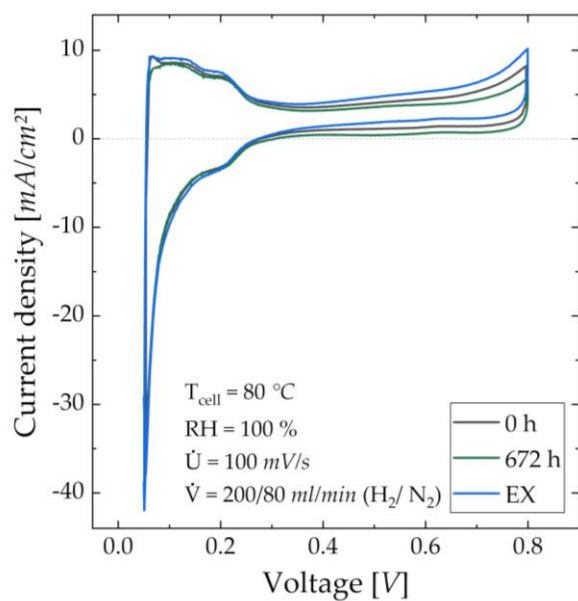
Figure S5: Current density evolution (mean over the holding time of each voltage step) during the conditioning process for all MEAs characterized at 0.6 V (a) and 0.4 V (b)
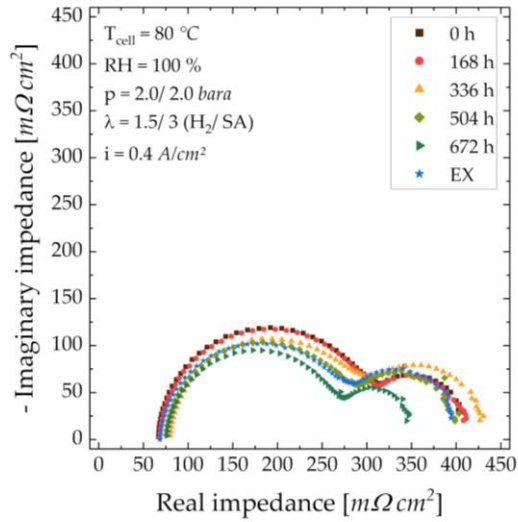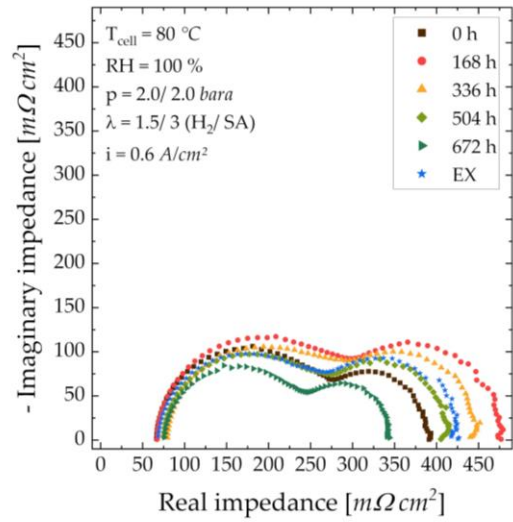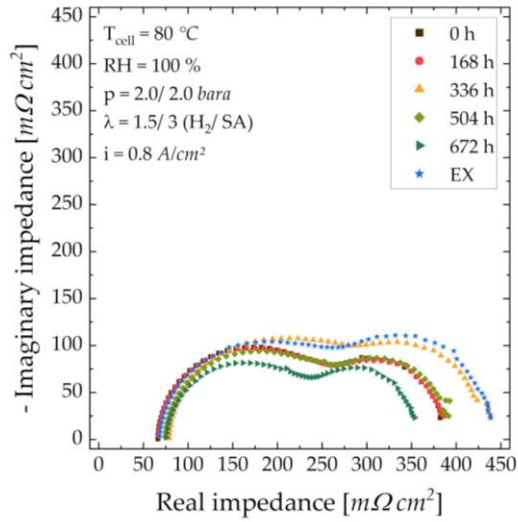

Figure S6: CVs of MEA-0, -672 and –EX before conditioning (a) and after conditioning (b)
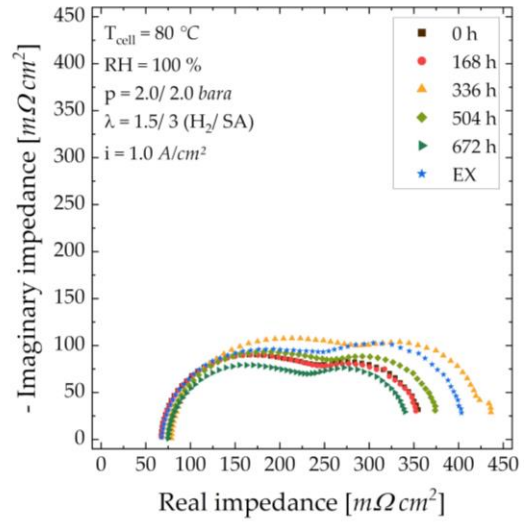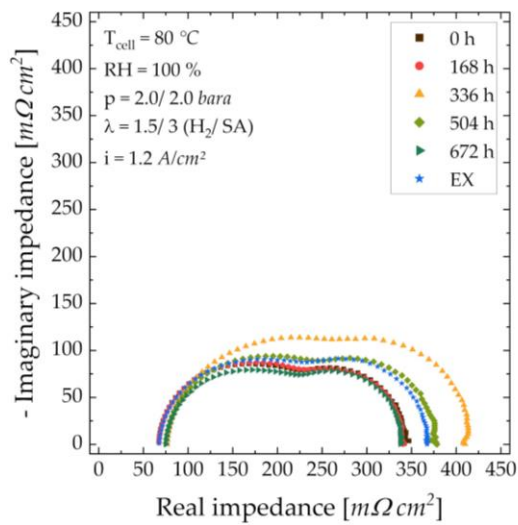
Figure S7: Impedance spectra recorded by EIS for all MEAs characterized at 0.4 A/cm² (a), 0.6 A/cm² (b), 0.8 A/cm² (c), 1.0 A/cm² (d) and 1.2 A/cm² (e)