Supporting Information

Double layer structure of the Pt(111)-aqueous electrolyte interface

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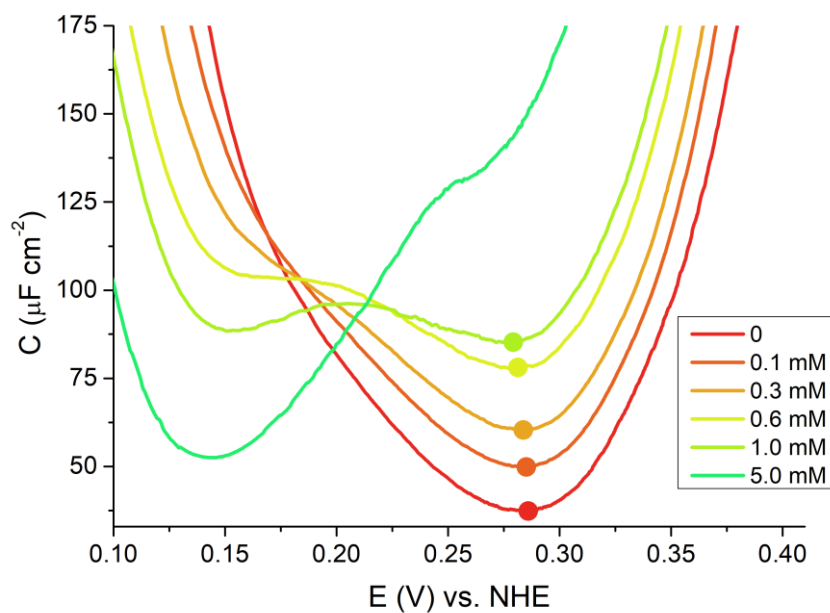* Corresponding author: m.koper@chem.leidenuniv.nl

Figure S1. Double layer capacitance curves of Pt(111) in 0.1 mM HF + x mM LiF on the NHE scale after correcting for the corresponding pH at different concentrations of LiF.
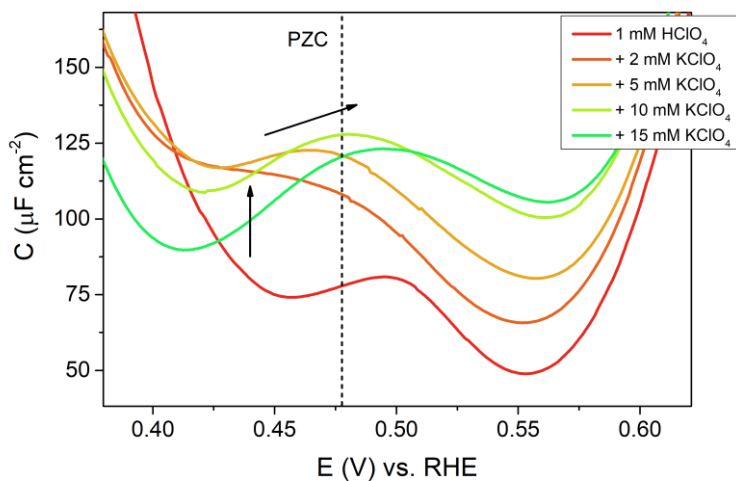
Figure S2. Capacitance curves of Pt(111) at 1 mM $HClO_4$ + x mM $KClO_4$ electrolyte (x = 0-15 mM).
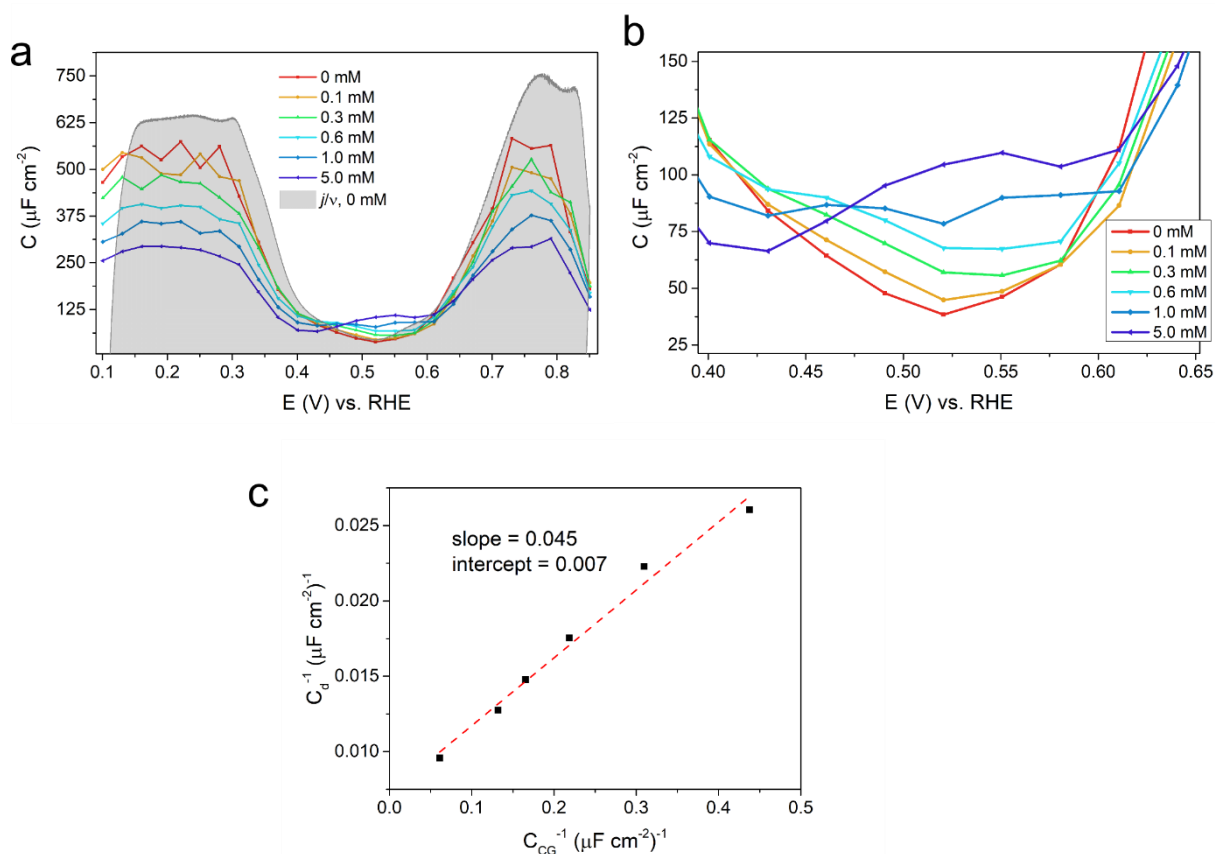

Figure S3. (a) Capacitance values of Pt (111) at pH 4 in 0.1 mM $HClO_4$ + x mM $NaClO_4$ electrolyte measured by Impedance technique at an applied fixed frequency of 18 Hz at different potentials. Shaded area is the overlay of capacitance curve obtained from cyclic

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voltammograms at the scan rate of 10 mV/s. (b) magnified double layer region and (c) PZ plot

obtained from the capacitance values at 0.52 V vs. RHE from the capacitance curves at 18 Hz.
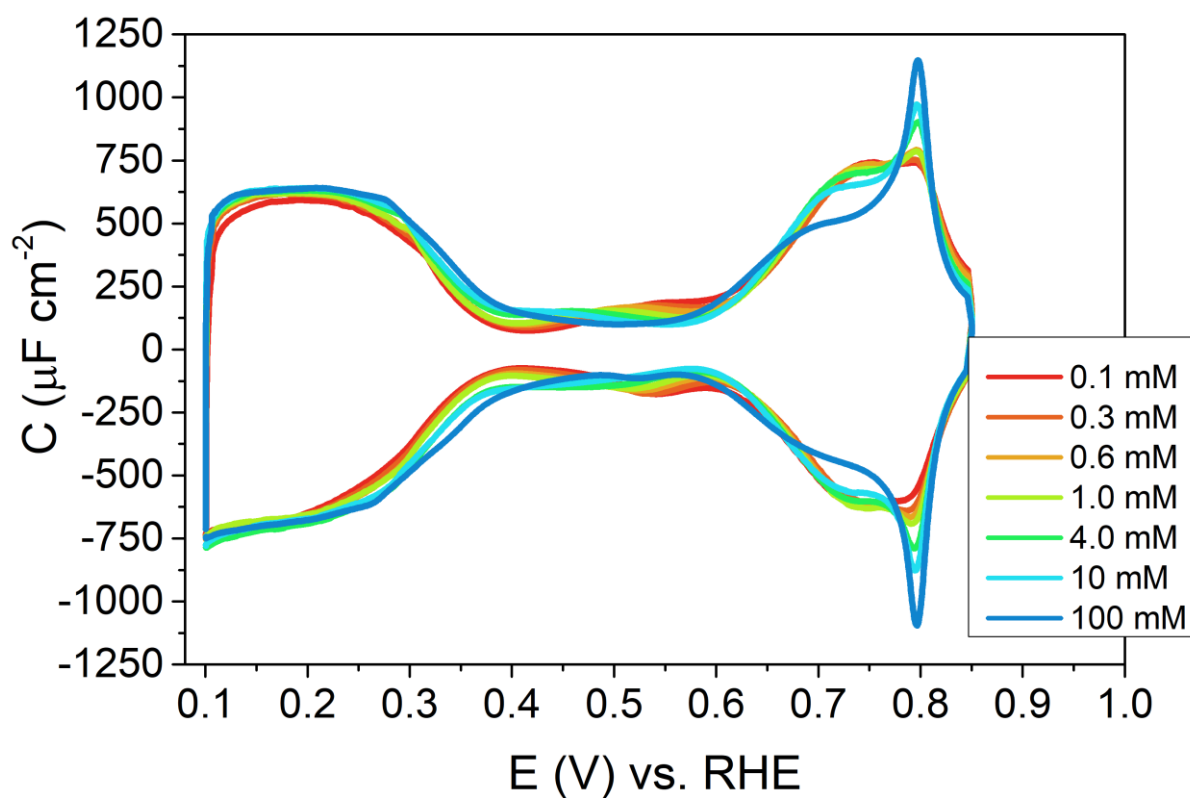

Figure S4. CV curves of Pt(111) in 5mM $CsClO_4$ + x mM $HClO_4$ (x = 0.1 to 100 mM).