Experimental and DFT study of thiol-stabilized Pt/CNTs catalysts


Fig. S1. CV curves of electrodes made from (a) Pt-SH-CNTs, (b) Pt/pristine-CNTs and (c) Pt/OH-CNTs catalysts at different CV cycles in N₂-purged 0.5 M H₂SO₄ solution at a 50 mV s⁻¹ scan rate.
The geometrical surface loss of Pt for Pt/SH-CNTs after 1500 CV AST is \(~40\%\) and \(22.3\%\) estimated from TEM images and the CV, respectively. The difference can be attributed to two electrochemical processes during AST test. The first one is attributed to Pt ECSA increase at the beginning stage of CV AST test due to the release of unclean Pt surface. It is evidenced by CV cycles broadening in Fig. S1. The second one is attributed to Pt ECSA decrease at the last stage of CV AST test due to carbon corrosion and Pt dissolution/Oswald ripening/aggregation.