Electronic Supplementary Information

for

Effect of different solvent ratio (ethylene glycol/water) on the preparation of Pt/C catalyst and its activity toward oxygen reduction reaction

Yan-Jie Wang,[a,b] Nana Zhao,[b] Baizeng Fang,[a] Hui Li,[*,c] Xiaotao T. Bi,[*,a] and Haijiang Wang[*,c]

[a]Department of Chemical and Biological Engineering, University of British Columbia, 2360 East Mall, Vancouver, BC, Canada, V6T 1Z3.

[b]Vancouver International Clean-Tech Research Institute Inc., 4475 Wayburne Drive, Burnaby, Canada, V5G 4X4.

[c]Electrochemical Materials, Energy, Mining and Environment, National Research Council Canada, 4250 Wesbrook Mall, Vancouver, BC, Canada, V6T 1W5.

Corresponding Authors

*Dr. Hui Li, Electrochemical Materials, Energy, Mining and Environment, National Research Council Canada, 4250 Wesbrook Mall, Vancouver, BC, Canada, V6T 1W5, Tel: 1-604-221-3000 (Ext 5592). E-mail: Hui.Li@nrc-cnrc.gc.ca

*Dr. Xiaotao Bi, Department of Chemical and Biological Engineering, University of British Columbia, 2360 East Mall, Vancouver, BC, V6T 1Z4, Canada. Tel: 1-604-822-4408. E-mail: xbi@chbe.ubc.ca

*Dr. Haijiang Wang, Electrochemical Materials, Energy, Mining and Environment, National Research Council Canada, 4250 Wesbrook Mall, Vancouver, BC, Canada, V6T 1W5, Tel: 1-604-221-3038. E-mail: Haijiang.Wang@nrc-cnrc.gc.ca

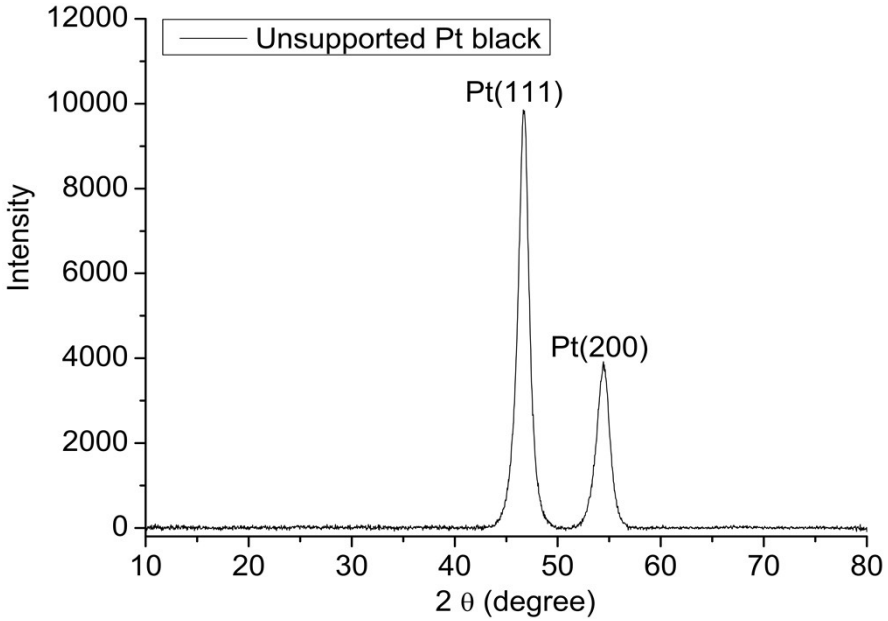

Figure S1. Typical XRD pattern for unsupported Pt black (BASF) (using Co Kα radiation as the X- ray source)

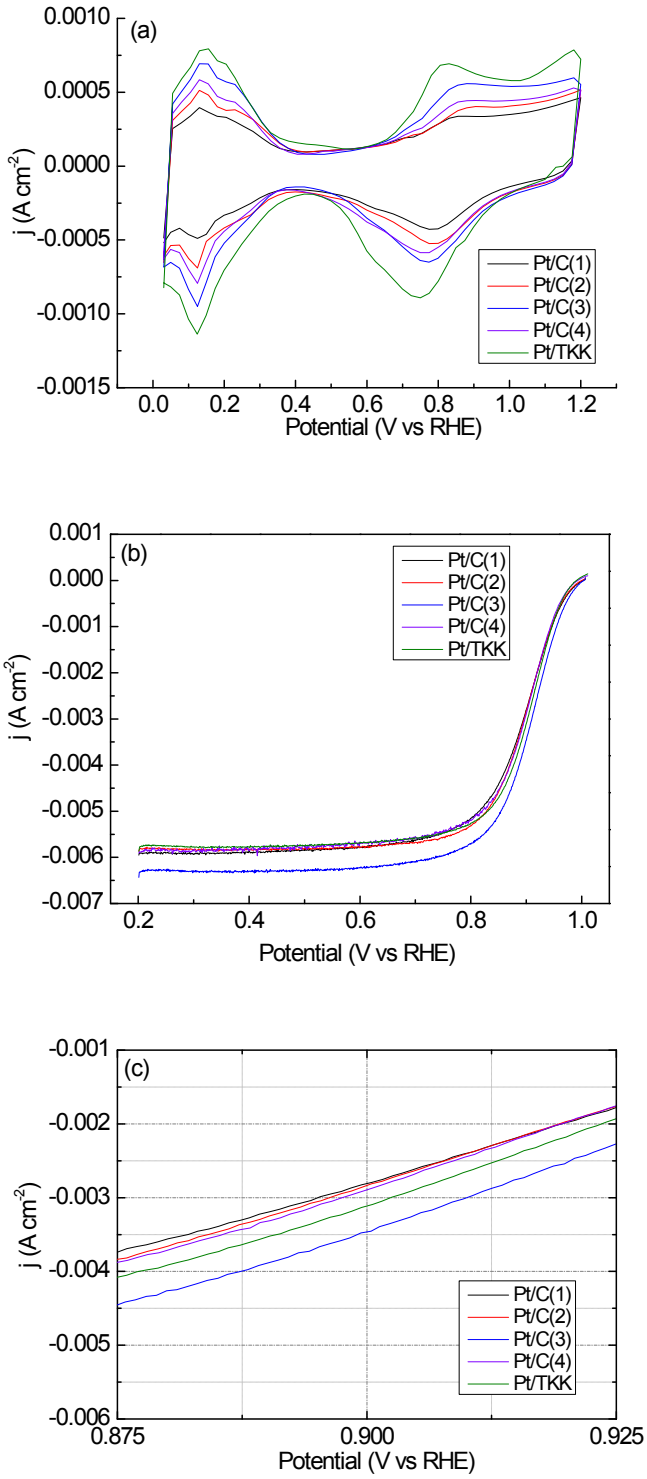

Figure S2. (a) Cyclic voltammograms, (b) linear sweep voltammograms, and (c) enlarged linear sweep voltammograms between 0.875 and 0.925 V obtained for various Pt/C catalysts.

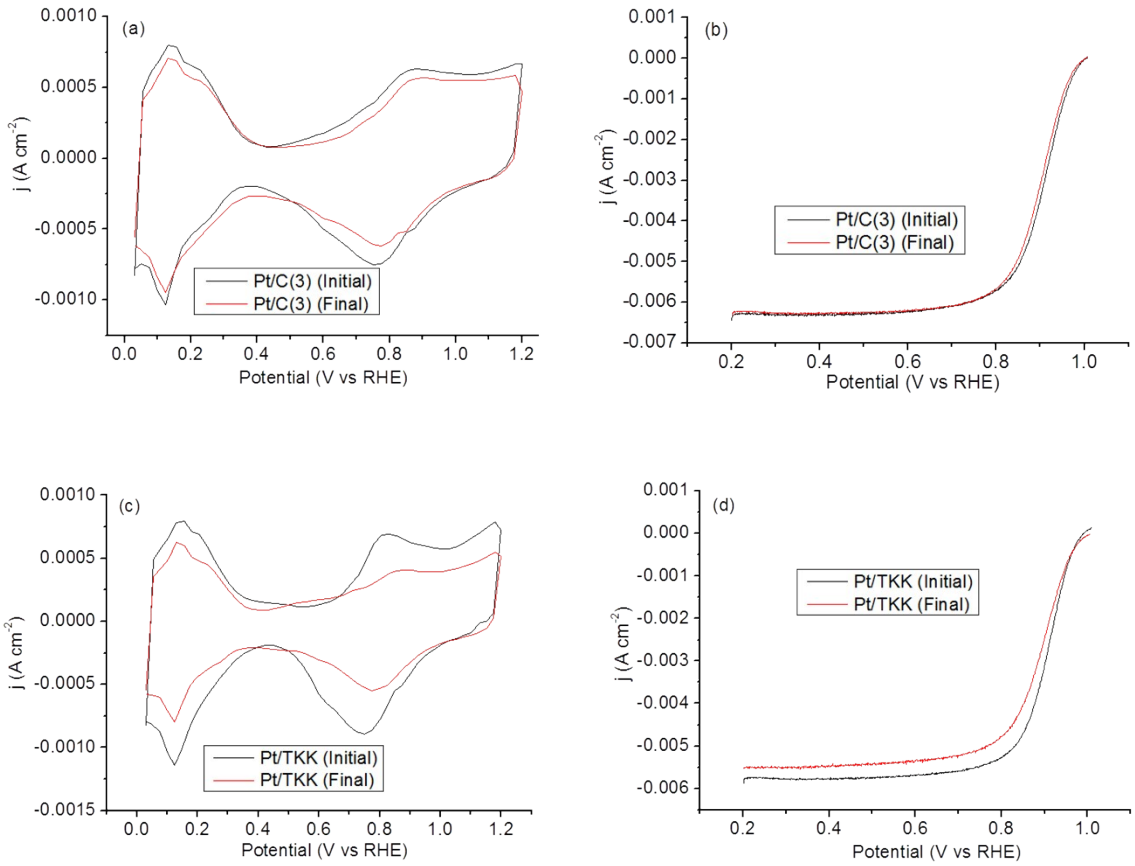

Figure S3. Cyclic voltammograms and linear sweep voltammograms for Pt/C(3) and commercial Pt/TKK before and after 500 continuous potential cycles from 0.6 to 1.0 V.

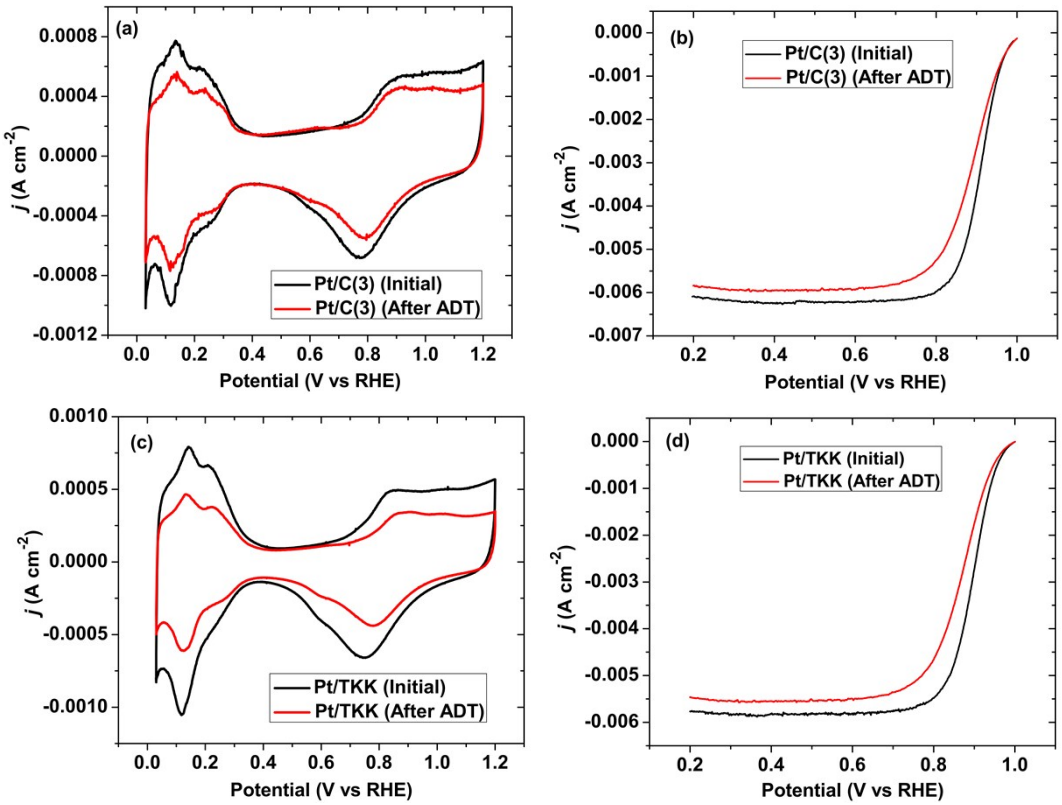

Figure S4. Cyclic voltammograms obtained at 20 mV/s and linear sweep voltammograms obtained at 1600 rpm and 5 mV/s for Pt/C(3) and commercial Pt/TKK before and after ADT (ADT: accelerated durability test, 500 continuous potential cycles from 0.6 to 1.4 V at 50 mV/s).