

Supplementary Materials

Deposition of Pt Nanoparticles by Ascorbic Acid on Composite Electrospun Polyacrylonitrile-Based Carbon Nanofiber for HT-PEM Fuel Cell Cathodes

Igor I. Ponomarev¹, Kirill M. Skupov^{1,*}, Olga M. Zhigalina², Dmitry N. Khmelenin², Ivan I. Ponomarev¹, Elizaveta S. Vtyurina¹, Evgeny N. Cherkovskiy², Victoria G. Basu² and Alexander D. Modestov³

¹ A.N. Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences, Vavilova St., 28, bld. 1, 119334 Moscow, Russia

² A.V. Shubnikov Institute of Crystallography of Federal Scientific Research Centre “Crystallography and Photonics” of Russian Academy of Sciences, Leninsky Av., 59, 119333 Moscow, Russia;

³ A.N. Frumkin Institute of Physical Chemistry and Electrochemistry of Russian Academy of Sciences, Leninsky Av. 31, bld. 4., 119071 Moscow, Russia

Cyclic voltammetry

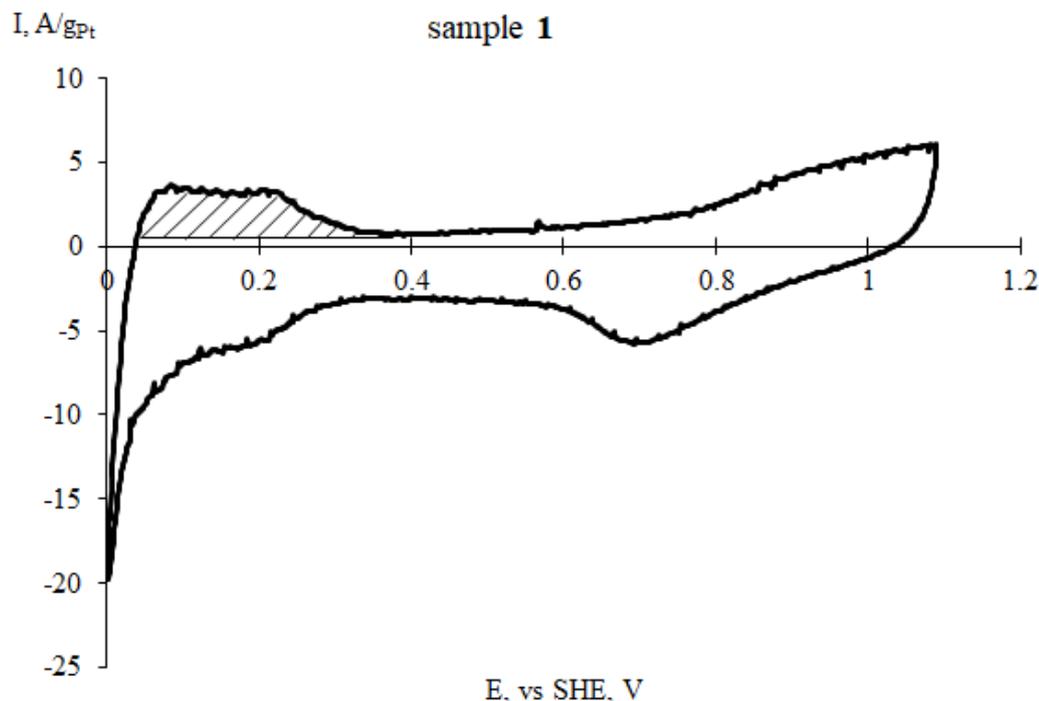


Figure S1. Cyclic voltammogram of sample 1. Dashed area was used for evaluation of Pt ECSA by electrochemical hydrogen adsorption/desorption method.

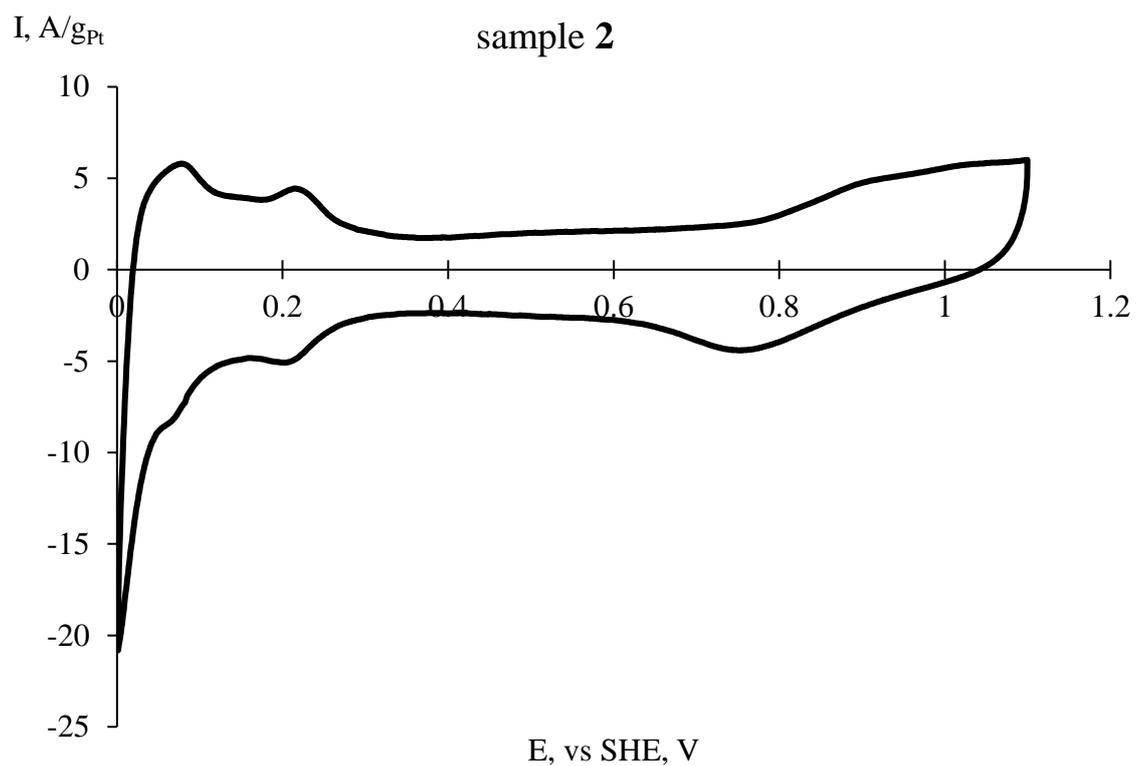


Figure S2. Cyclic voltammogram of sample 2.

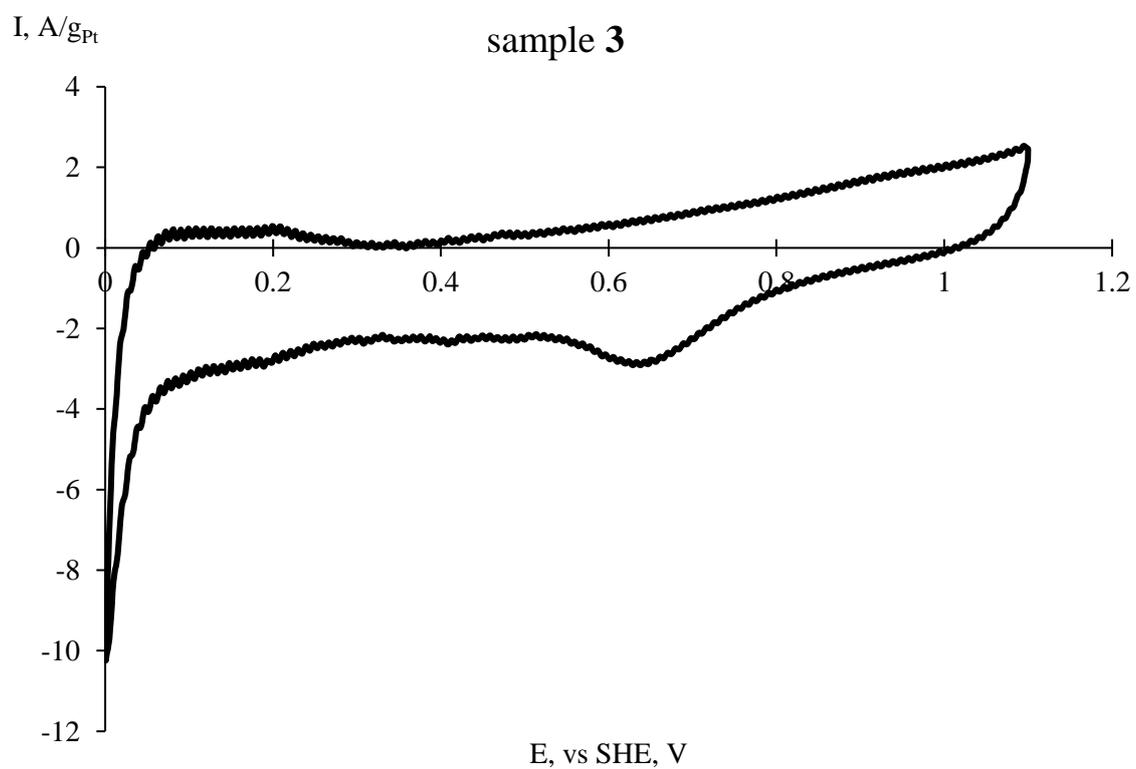


Figure S3. Cyclic voltammogram of sample 3.

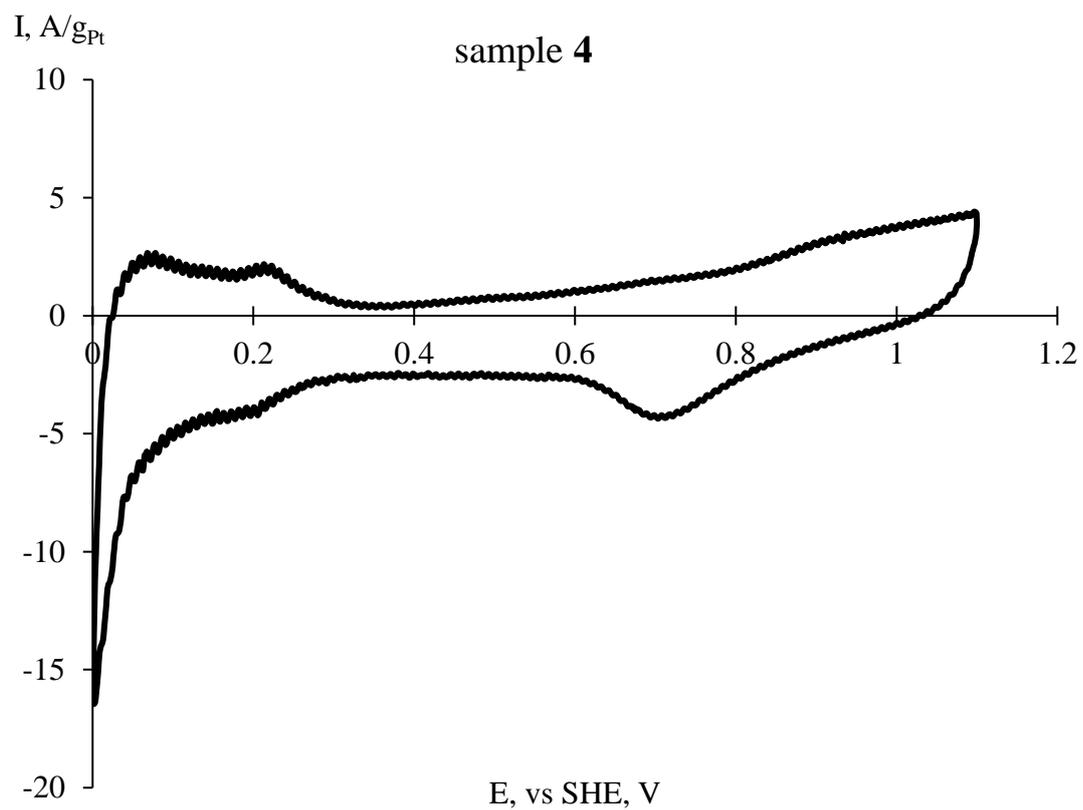


Figure S4. Cyclic voltammogram of sample 4.

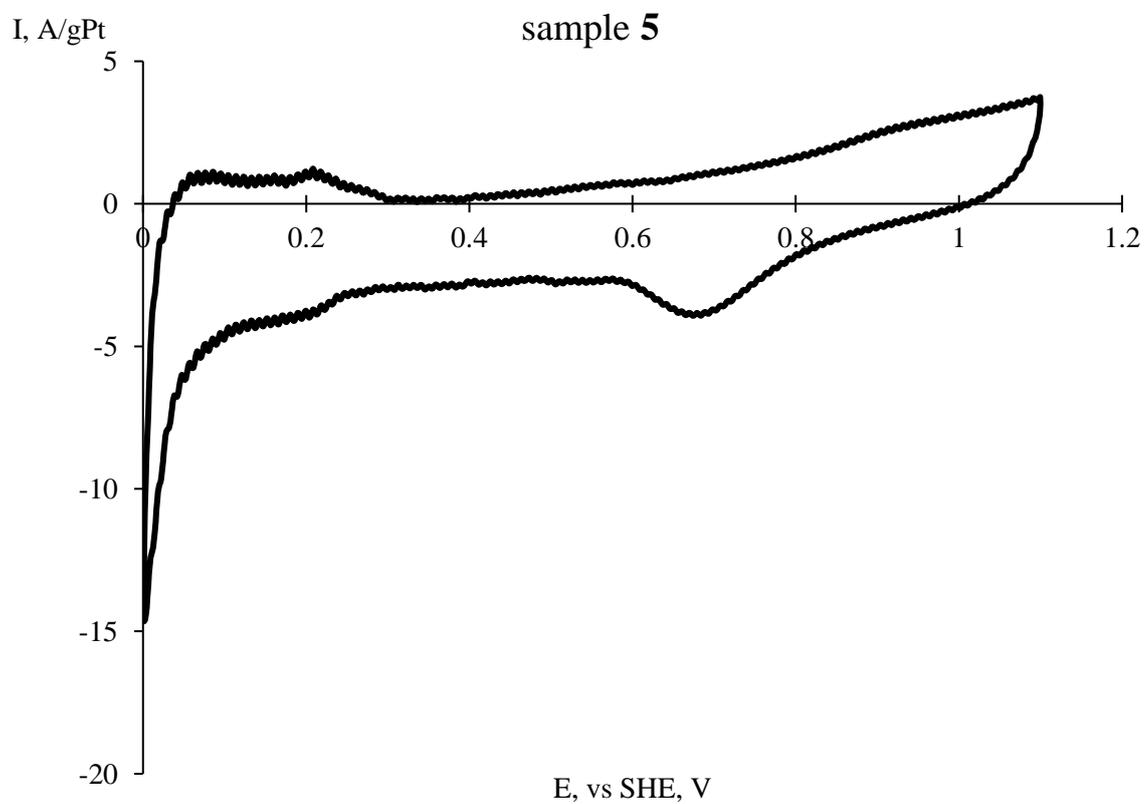


Figure S5. Cyclic voltammogram of sample 5.

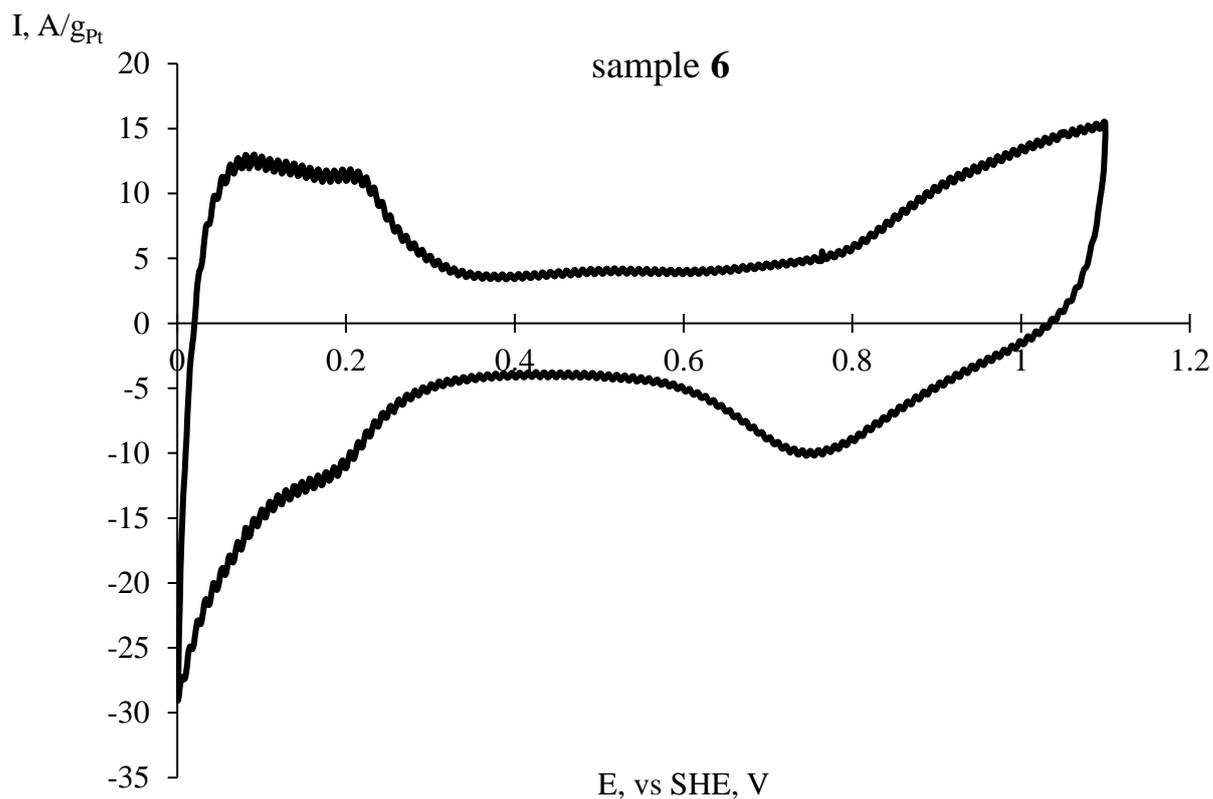


Figure S6. Cyclic voltammogram of sample 6.

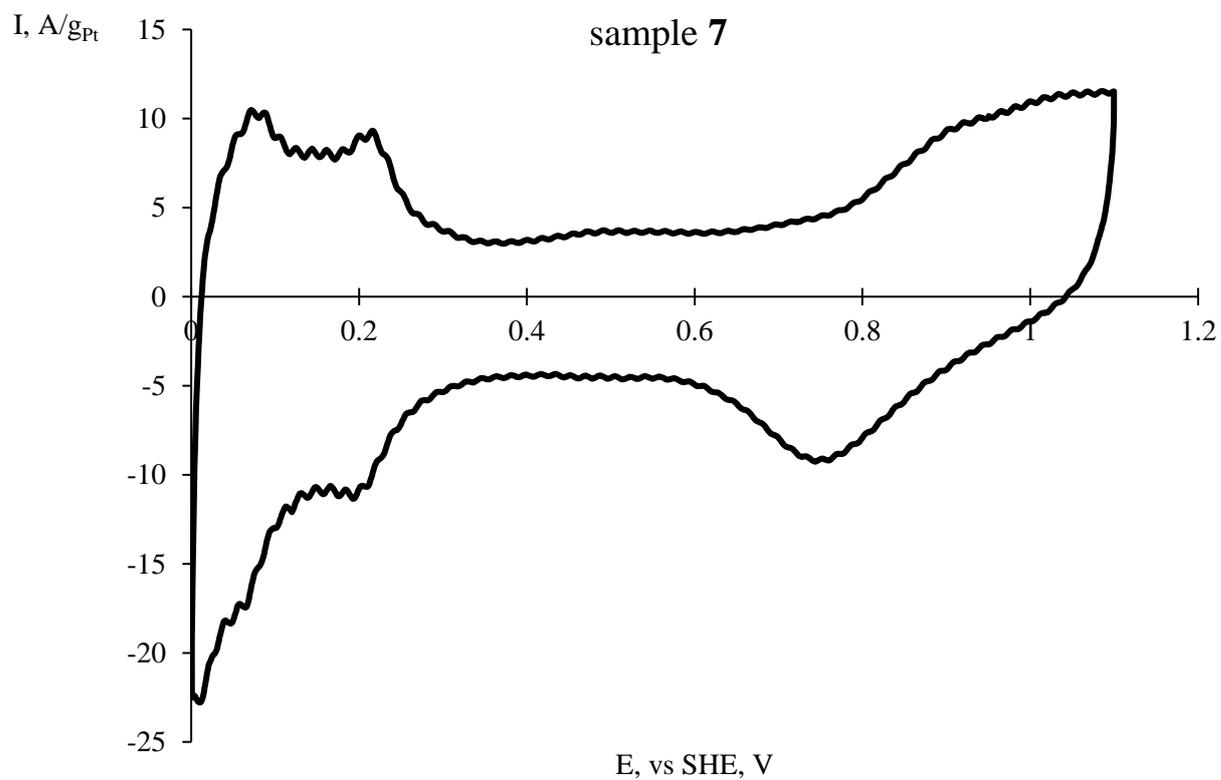


Figure S7. Cyclic voltammogram of sample 7.

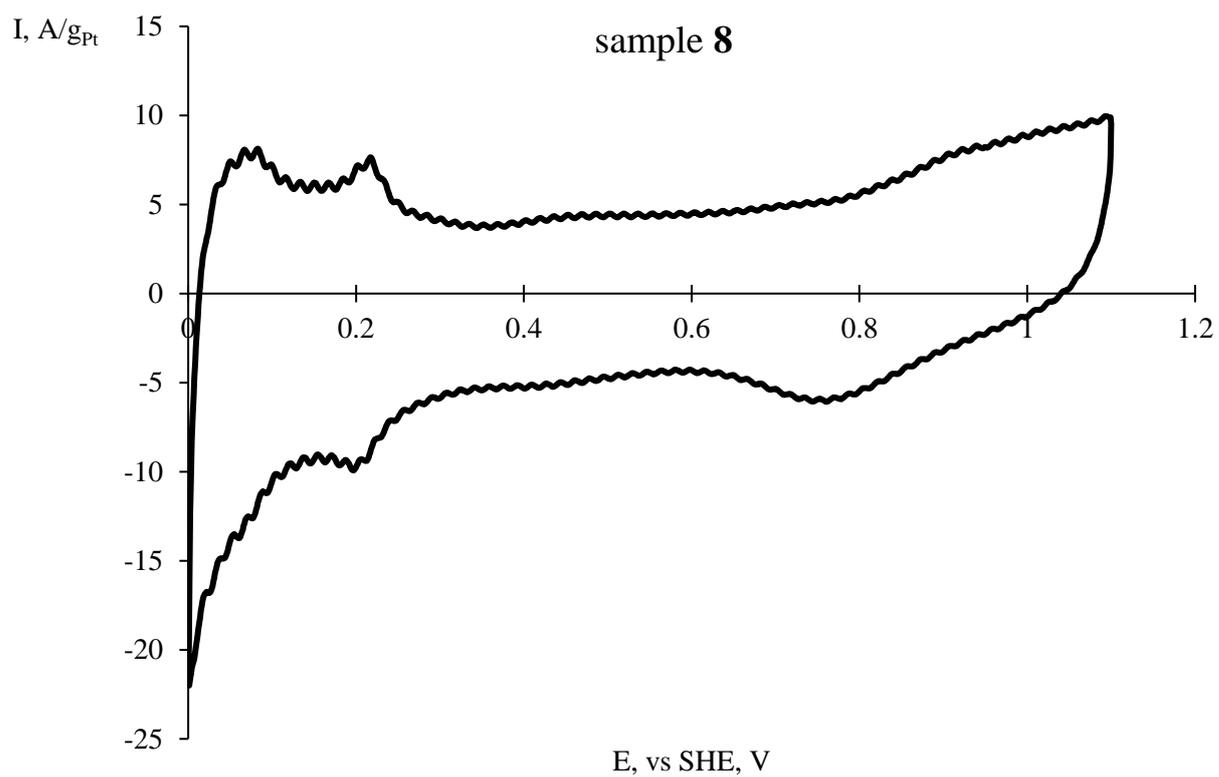


Figure S8. Cyclic voltammogram of sample 8.

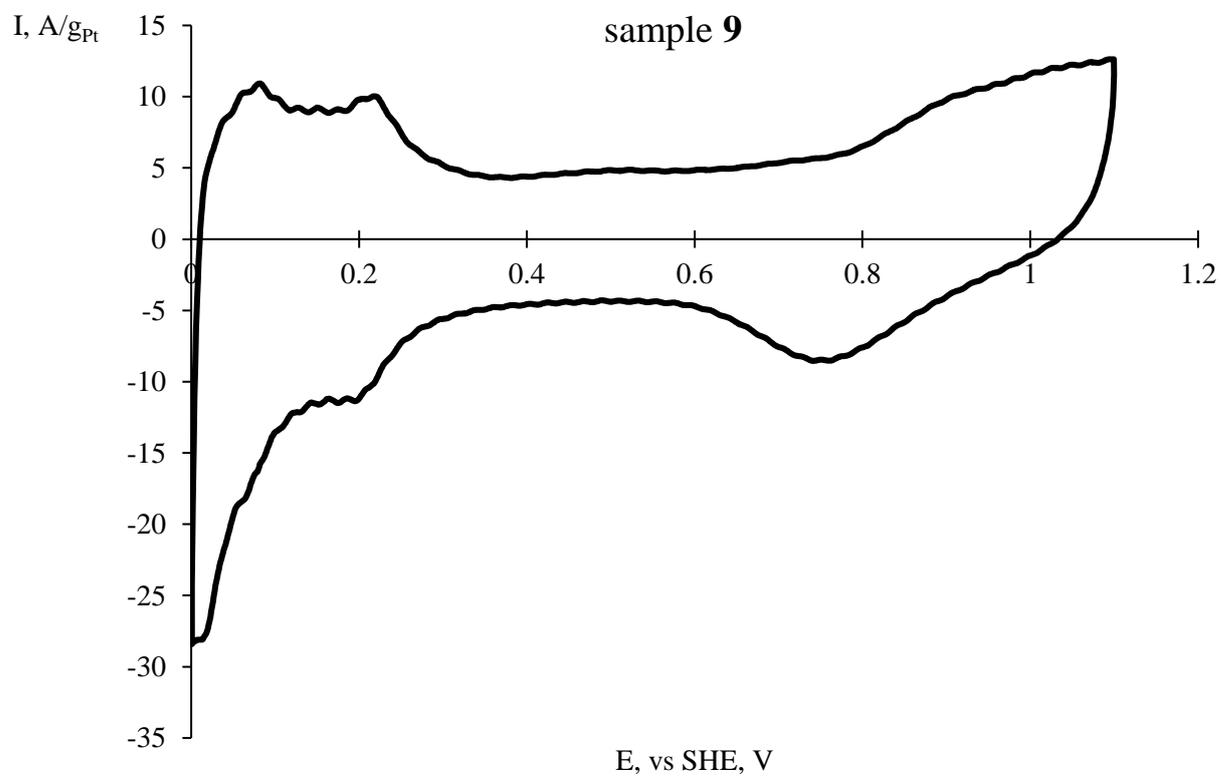


Figure S9. Cyclic voltammogram of sample 9.

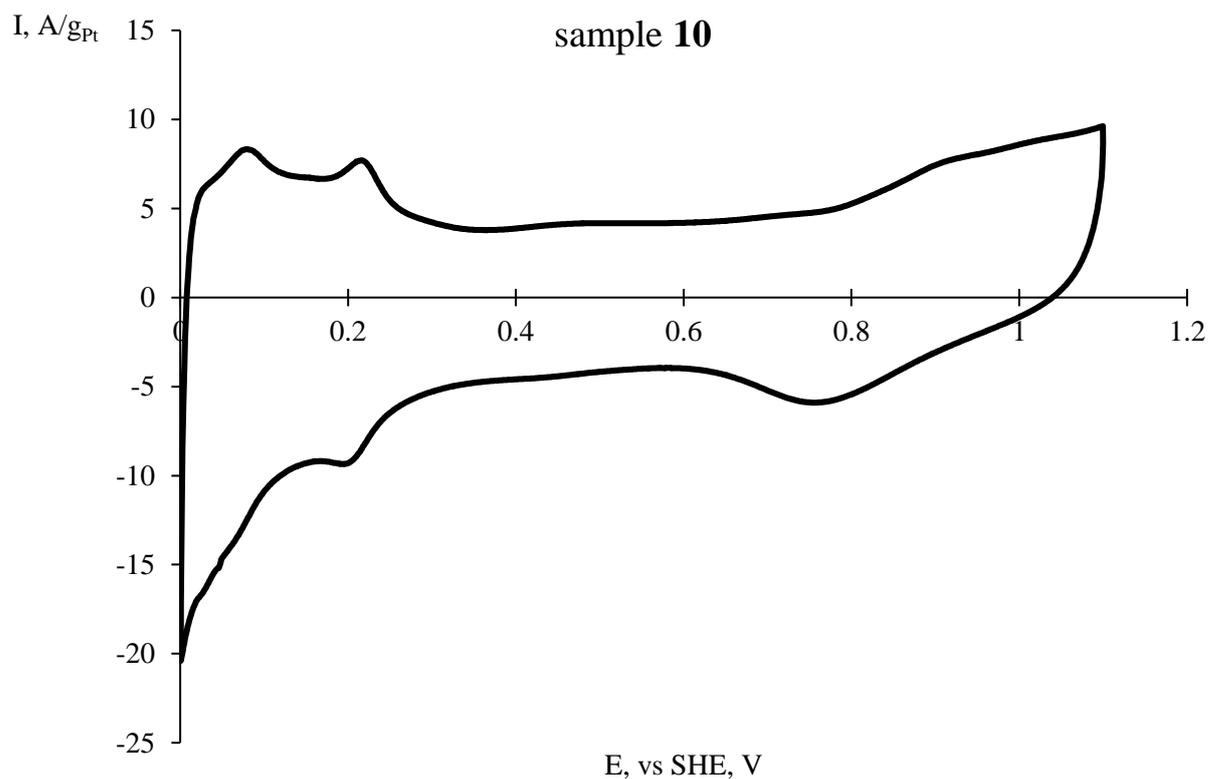


Figure S10. Cyclic voltammogram of sample 10.

HT-PEM fuel cell operation

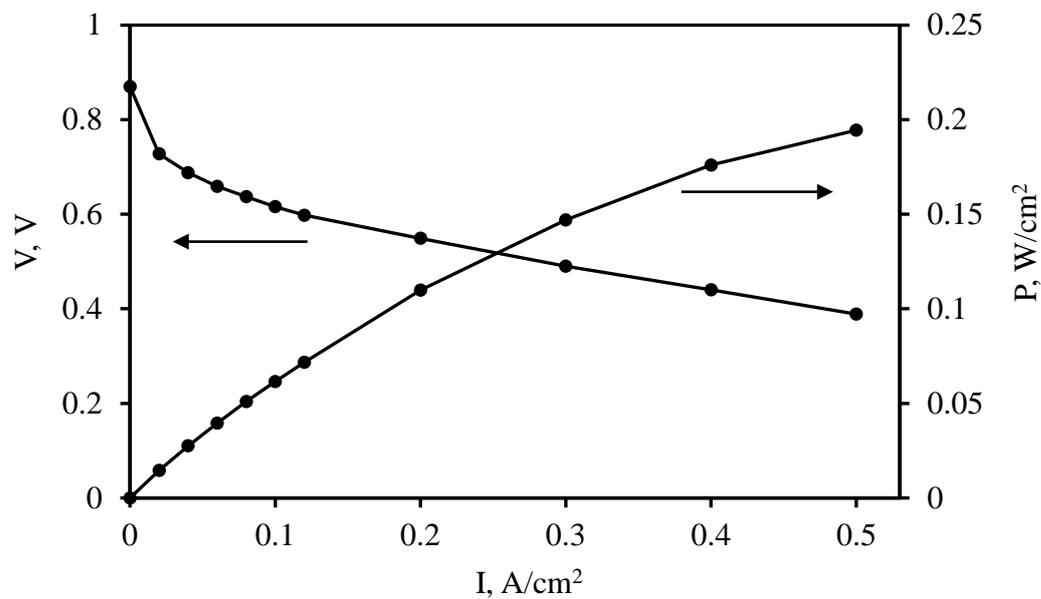


Figure S11. Polarization curve and power density data for the HT-PEM fuel cell with Pt/CNF cathode obtained by ascorbic acid assisted Pt deposition.