Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A

Hybrid Energy Storage: High Voltage Aqueous Supercapacitors based on Activated Carbon / Phosphotungstate Hybrid Materials

J. Suárez-Guevara[a], V. Ruiz [a]* and P. Gomez-Romero[a, b]*

Supporting information

[a] Centro de Investigación en Nanociencia y Nanotecnología, CIN2/ICN2 (CSIC). Campus UAB 08193 Bellaterra (Barcelona), Spain. E-mail: vanesa.ruiz@cin2.es pedro.gomez@cin2.es

[b] MATGAS Research Center. Campus UAB, 08193 Bellaterra (Barcelona), Spain.

Figure Captions

Figure S1.- FTIR spectra of pristine Activated Carbon (AC) and AC-PW_{12} materials prior to electrochemical cycling

Figure S2.- FTIR spectra of pristine Activated Carbon (AC) electrode (middle trace) and the same electrode after repeated cycling as positive electrode in a symmetric AC/AC supercapacitor cell (top trace). The asterisk marks a conspicuous new peak assigned to C=O indicative of carbon oxidation. Remarkably that peak is absent in the corresponding hybrid electrode AC-PW_{12} also cycled similarly as the positive electrode in a symmetric AC-PW_{12}/AC-PW_{12} cell.

Figure S1.- FTIR spectra of pristine Activated Carbon (AC), AC-PW_{12} materials prior to electrochemical cycling and phosphotungstic acid (H_3-PW_{12}).

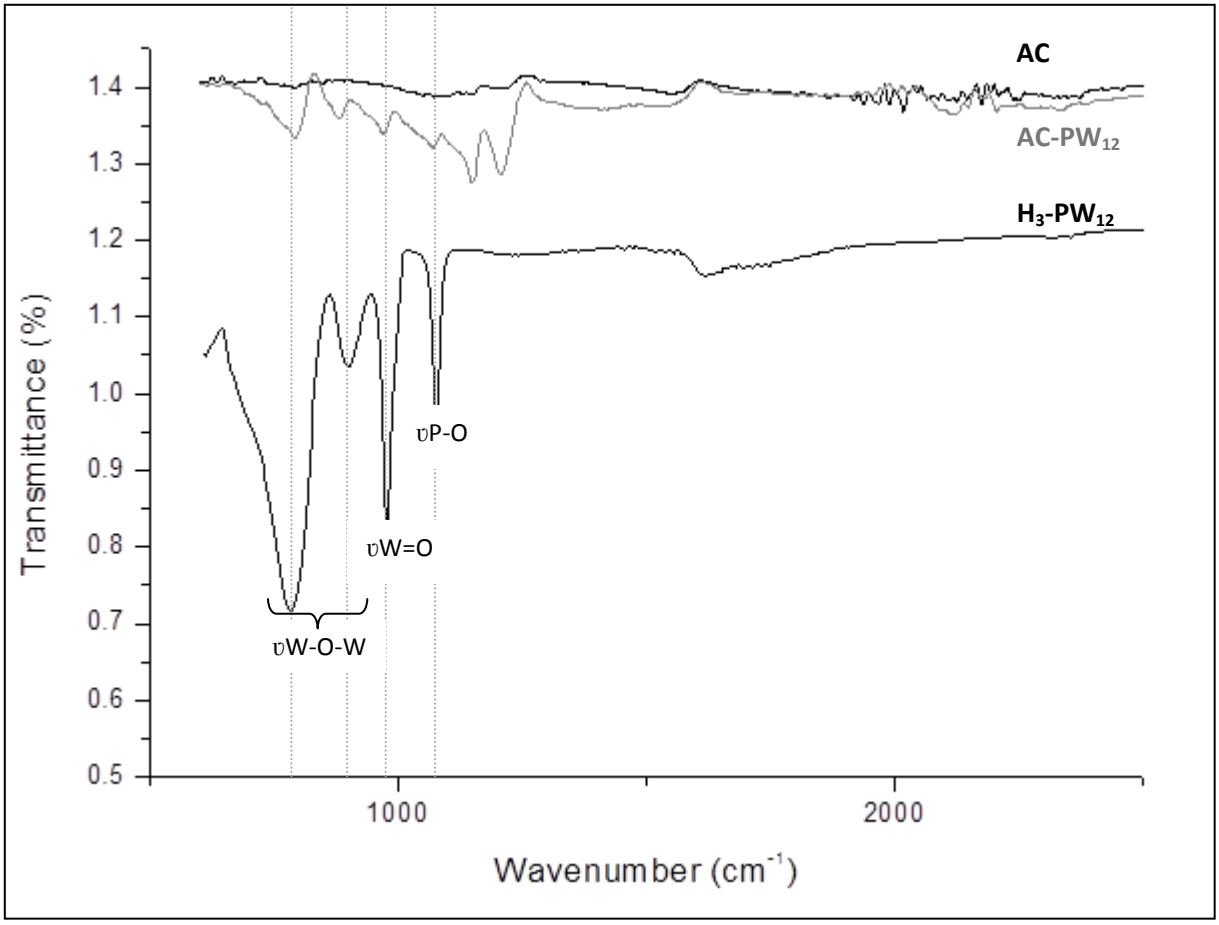

Figure S2.- FTIR spectra of pristine Activated Carbon (AC) electrode (middle trace) and the same electrode after repeated cycling as positive electrode in a symmetric AC/AC supercapacitor cell (top trace). The asterisk marks a conspicuous new peak assigned to C=O indicative of carbon oxidation. Remarkably that peak is absent in the corresponding hybrid electrode AC-PW_{12} also cycled similarly as the positive electrode in a symmetric AC-PW_{12}/AC-PW_{12} cell.