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Supplementary material to

Exploring the impact of Al-based electrolytes on the charge storage behaviour of vine shoots derived carbon

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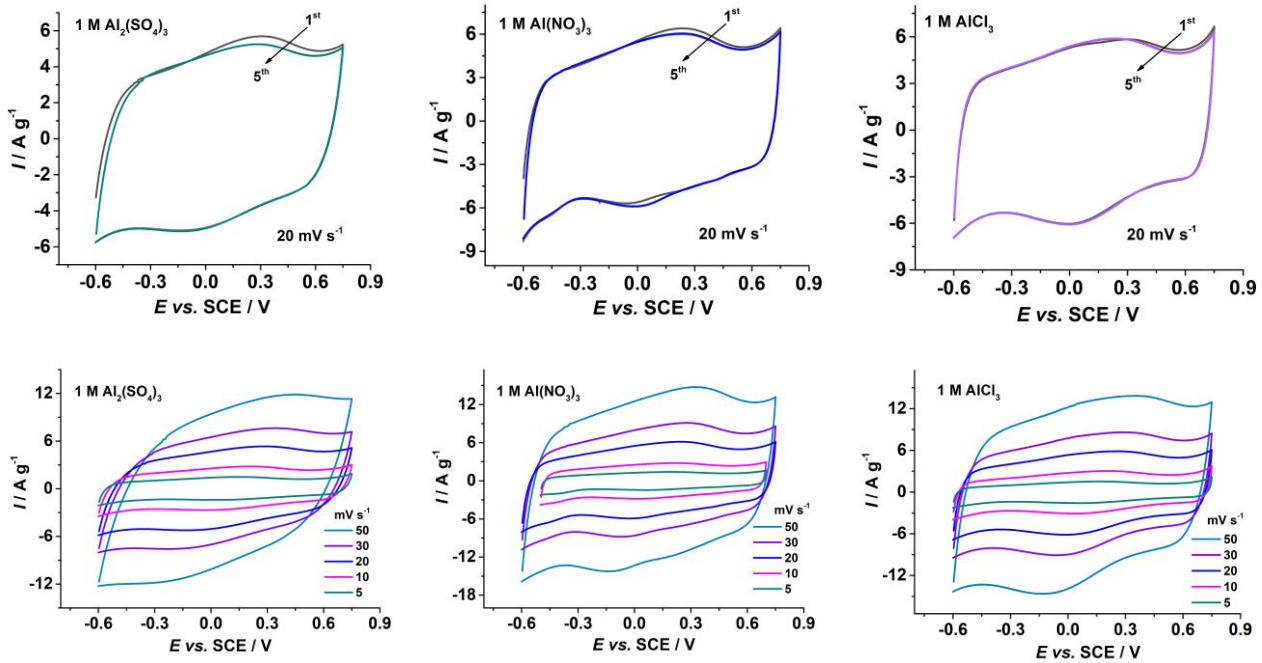

Figure S1. *Cyclic voltammograms of $AC_{vs}700$ in 1 M $Al_2(SO_4)_3$, $Al(NO_3)_3$ and $AlCl_3$ at a common scan rate 20 mV s^{-1} and at different scan rates*

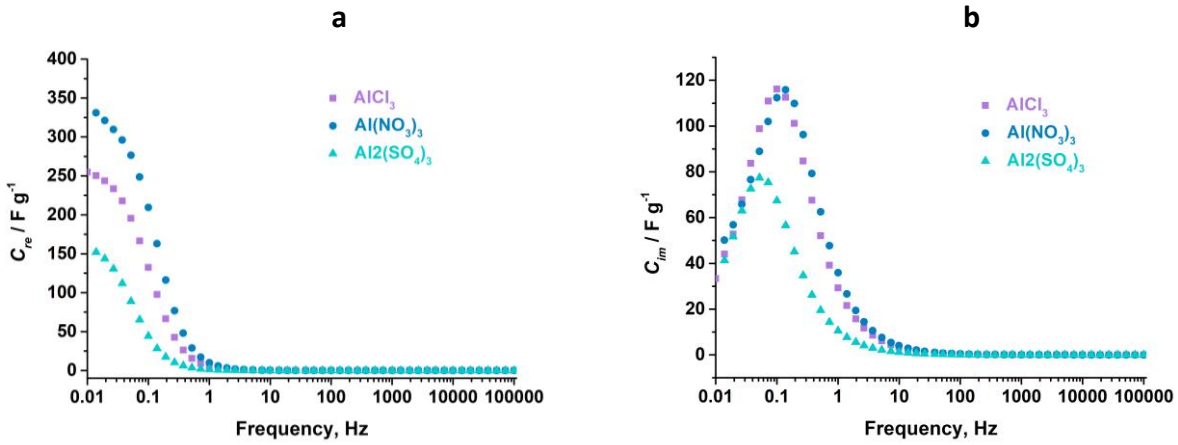

Figure S2. *a -real and b - imaginary part of the capacitance as the function of the frequency plot of $AC_{vs}700$ pristine electrode in 1 M aqueous solutions of $Al_2(SO_4)_3$, $Al(NO_3)_3$ and $AlCl_3$ measured in a three-electrode cell*

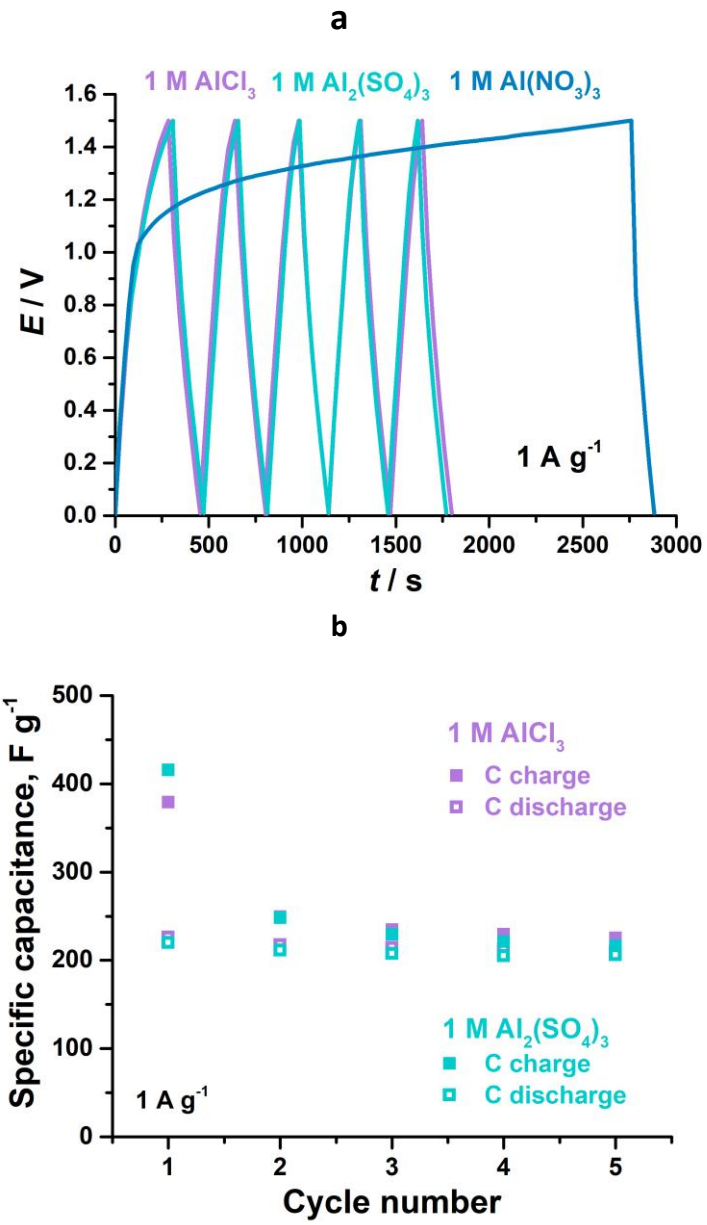

Figure S3. *a - charge/discharge curves of $AC_{vs}700$ cells in different Al-based electrolytes and b - the specific capacitance of $AC_{vs}700$ electrode in $Al_2(SO_4)_3$ and $AlCl_3$*

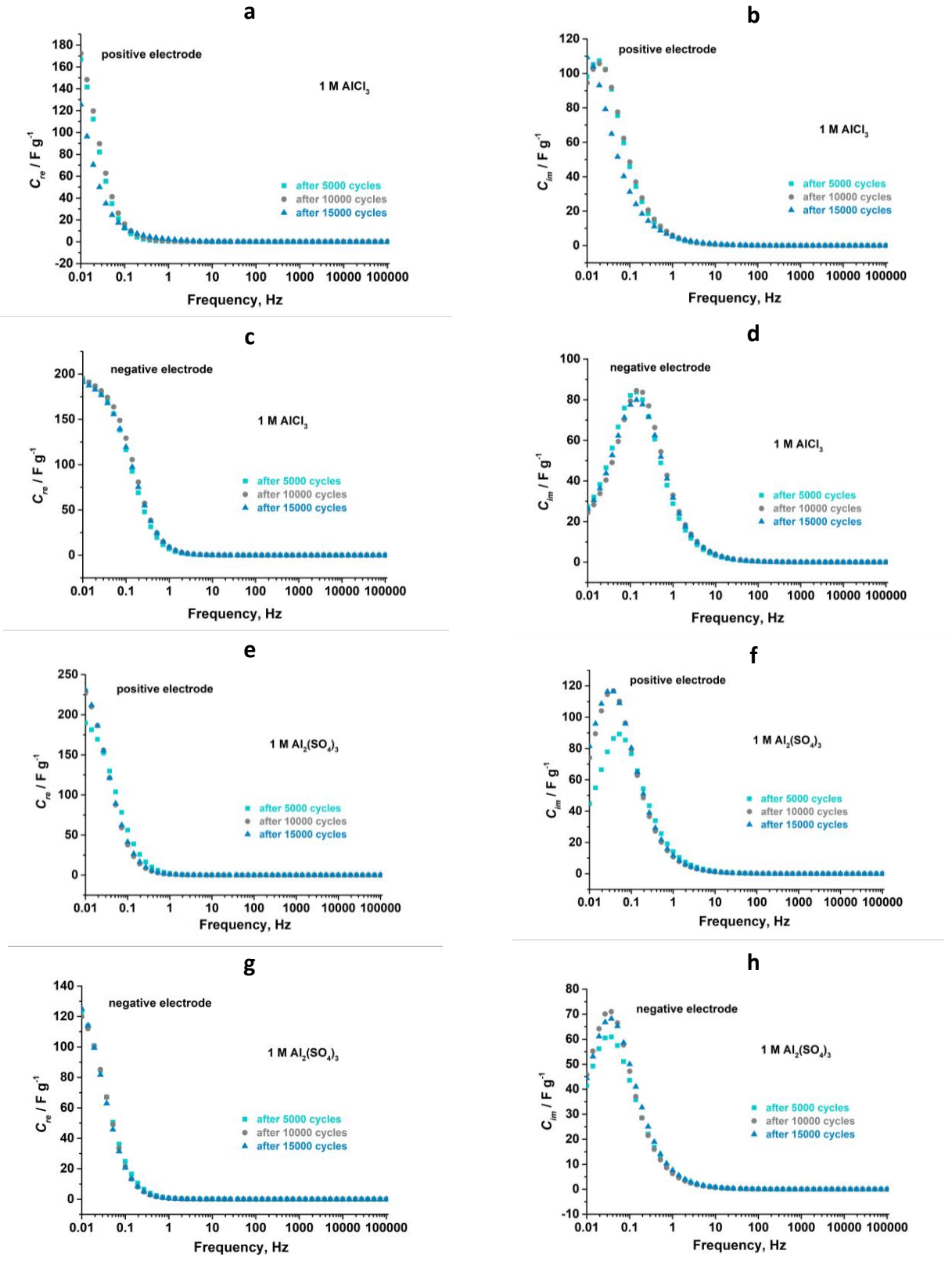

Figure S4. *Real and imaginary part of the capacitance as* the *function of the frequency plot of $AC_{vs}700$ positive and negative electrode after 5,000, 10,000 and 15,000 cycles in 1 M aqueous solutions of $AlCl_3$ (a, b, c, d) and $Al_2(SO_4)_3$ (e, f, g, h), measured in a three-electrode cell*