Electronic Supplementary Information

Capacitive Deionization Using Symmetric Carbon Electrode Pairs

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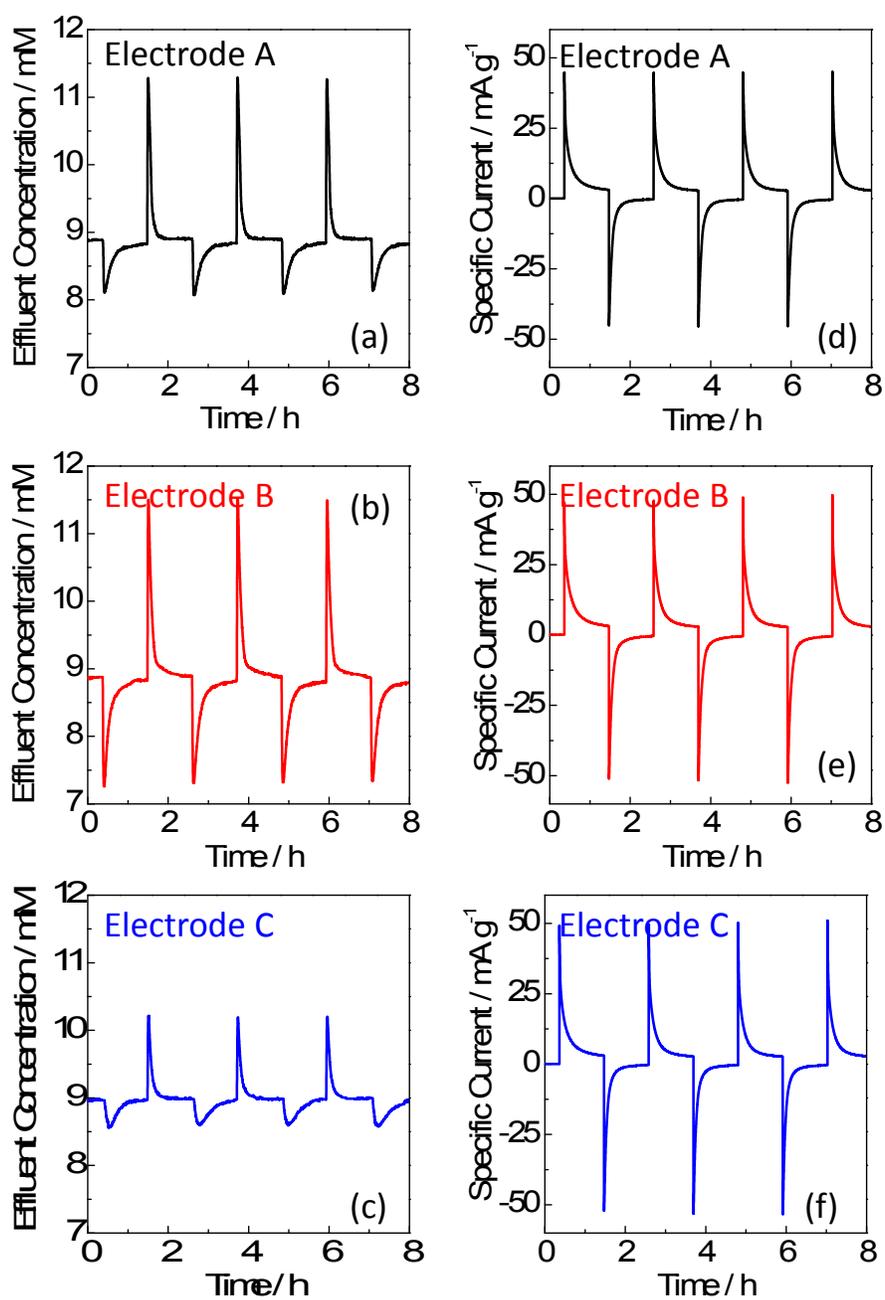
Figure S1. Profiles of (a)-(c) effluent concentration and (d)-(f) specific current at 0.8/0 V when a CDI cell was configured with electrode pairs A-C. It is noted that magnitude of the peak currents in (d)-(f) are very similar; therefore, conductivity/resistivity of the CDI cell configured with electrode pairs A-C is very similar.
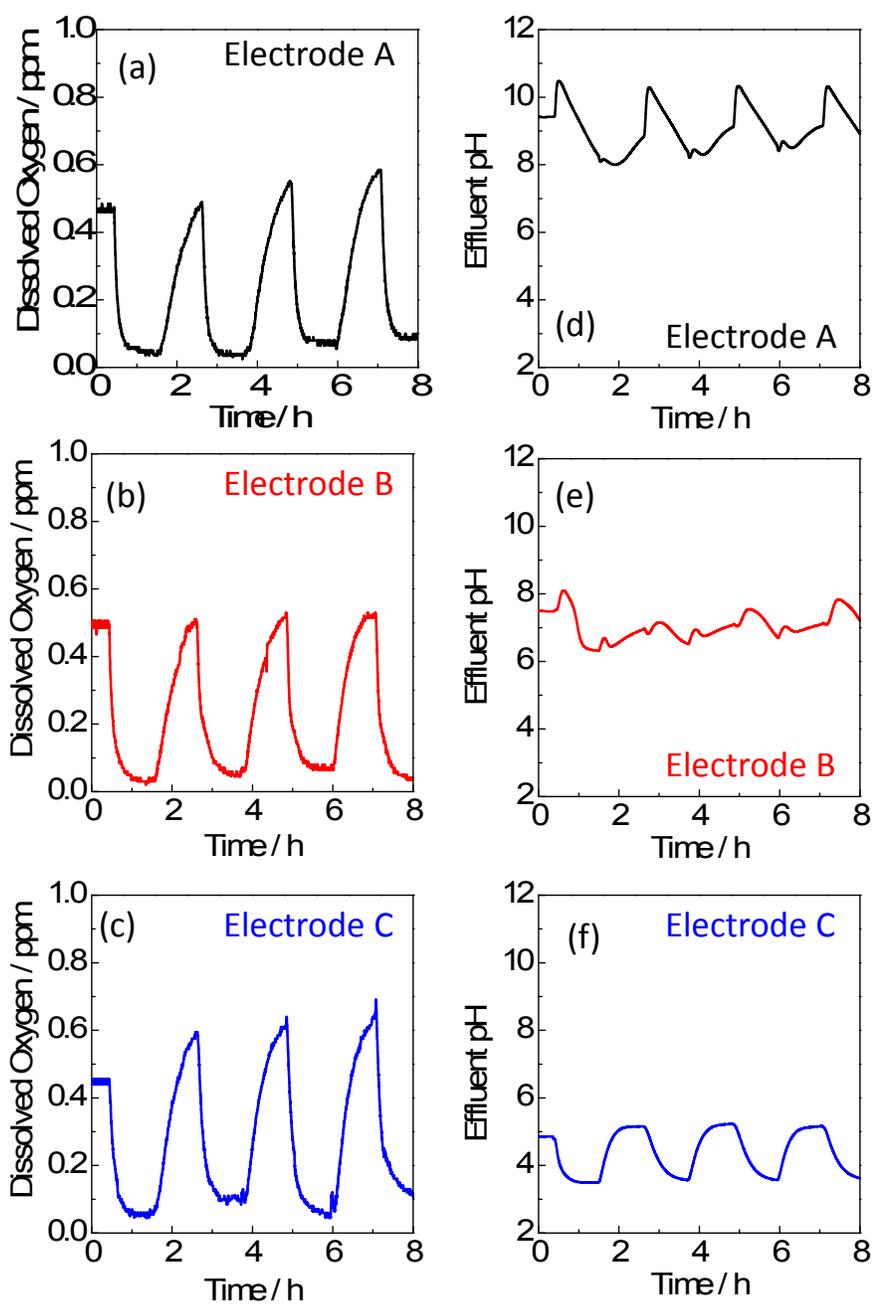
Figure S2. Profiles of (a)-(c) dissolved oxygen and (d)-(f) effluent pH at 0.8/0 V when a CDI cell was configured with electrode pairs A-C. Even though solution was kept deaerating during all of the tests, reductions in a small amount of dissolved oxygen was still detectable during 0.8 V charging.
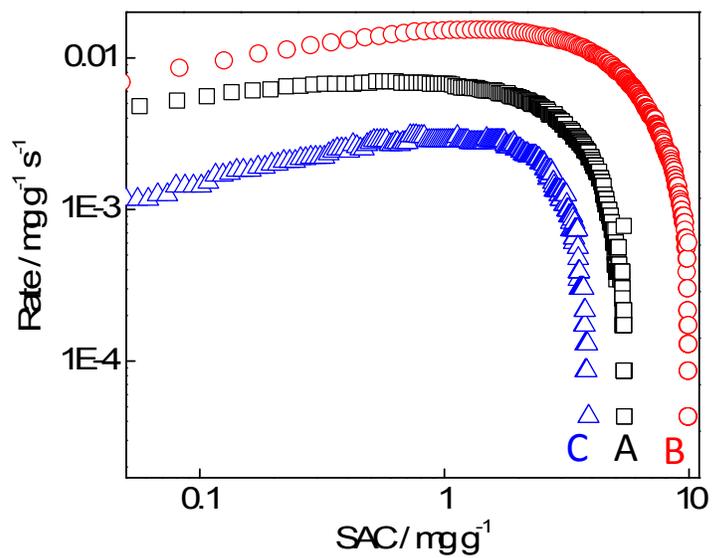
Figure S3. A CDI Ragone plot based upon the first adsorption half cycles in Fig. 5(a)-(c), suggesting a higher SAC and rate associated with electrode pair B in comparison of that for electrode pairs A and C.
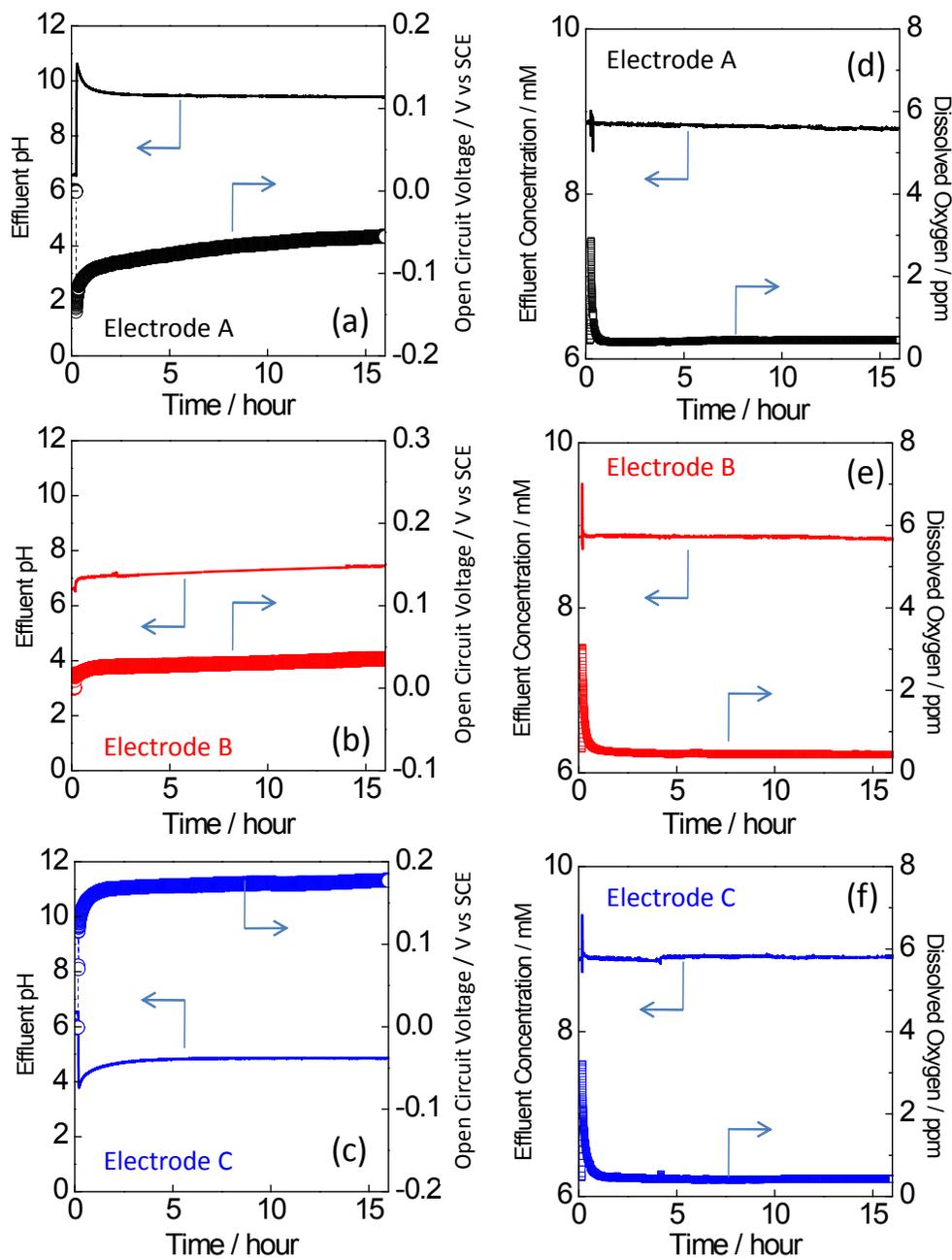
Figure S4 Profiles of (a)-(c) effluent pH and open circuit voltage and (d)-(f) effluent concentration and dissolved oxygen when a CDI cell was configured with electrode pairs A-C before CDI tests (or during wetting the electrodes).