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Electronic Supporting Information

New Insights on the Discharge Mechanism of Silicon – Air Battery Using Electrochemical Impedance Spectroscopy

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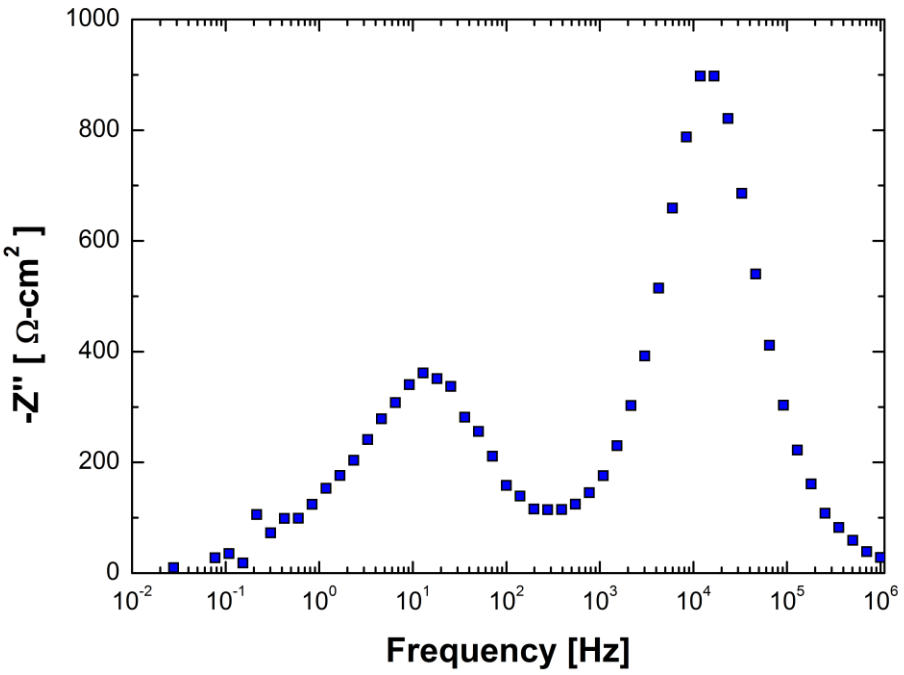

Fig. S1. Bode plot of Si – air cell after discharge capacity of 20.5 mAh at 0.3 mA/cm^2.

Fig. S1 shows a representative Bode plot, imaginary part of impedance vs. frequency, taken from symmetric Si – air cell, with n^{++} wafer. The values of ω_m for the calculation of the "real" capacities C_{sc} and C_p from the pseudo-capacities and $\tilde{C}_{sc}$ and $\tilde{C}_p$, respectively. The two maxima are clearly distinguished, where the maximum at low frequencies is attributed to the porous layer capacitance, and the maximum at high frequencies is attributed to the space charge capacitance.