

Supporting Information

Kinetics and Electrochemical Evolution of Binary Silicon-Polymer Systems for Lithium Ion Batteries

Changling Li,^a Chueh Liu,^b Kazi Ahmed,^b Zafer Mutlu,^a Yiran Yan,^a Ilkeun Lee,^c Mihrimah Ozkan^b and Cengiz S. Ozkan^{*a}

^aMaterials Science and Engineering Program, Department of Mechanical Engineering, University of California Riverside, CA 92521 (USA). Contact email: cozkan@engr.ucr.edu

^bDepartment of Electrical and Computer Engineering, Department of Chemistry, University of California, Riverside, CA 92521 (USA).

^cCentral Facility of Advanced Microscopy and Microanalysis, Analytical Chemistry Instrumentation Facility, University of California, Riverside, CA 92521.

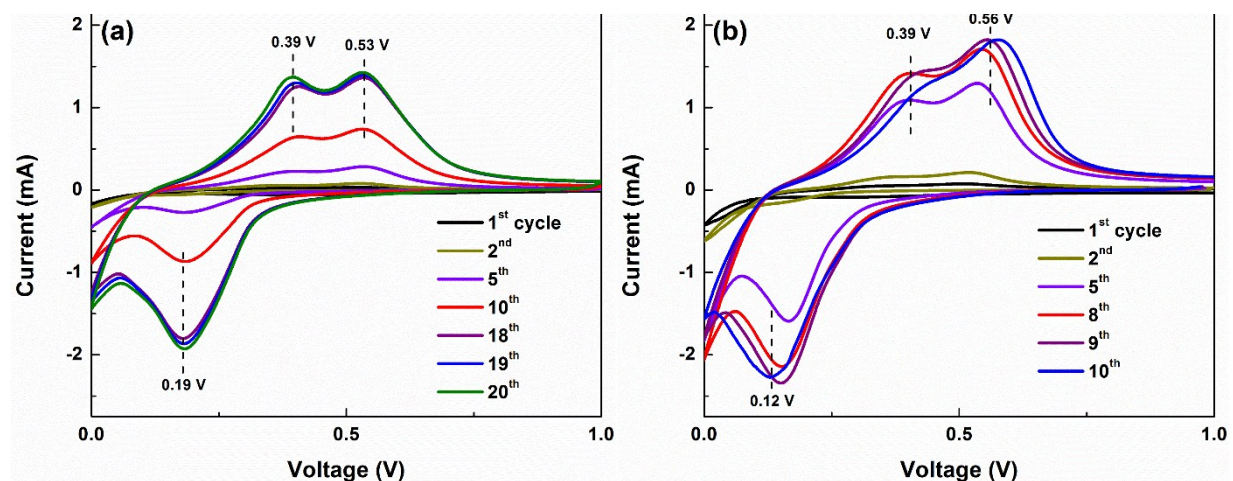


Fig. S1 (a-b) Cyclic voltammetry characteristics of Si-PANI and Si-PAA electrodes, respectively.

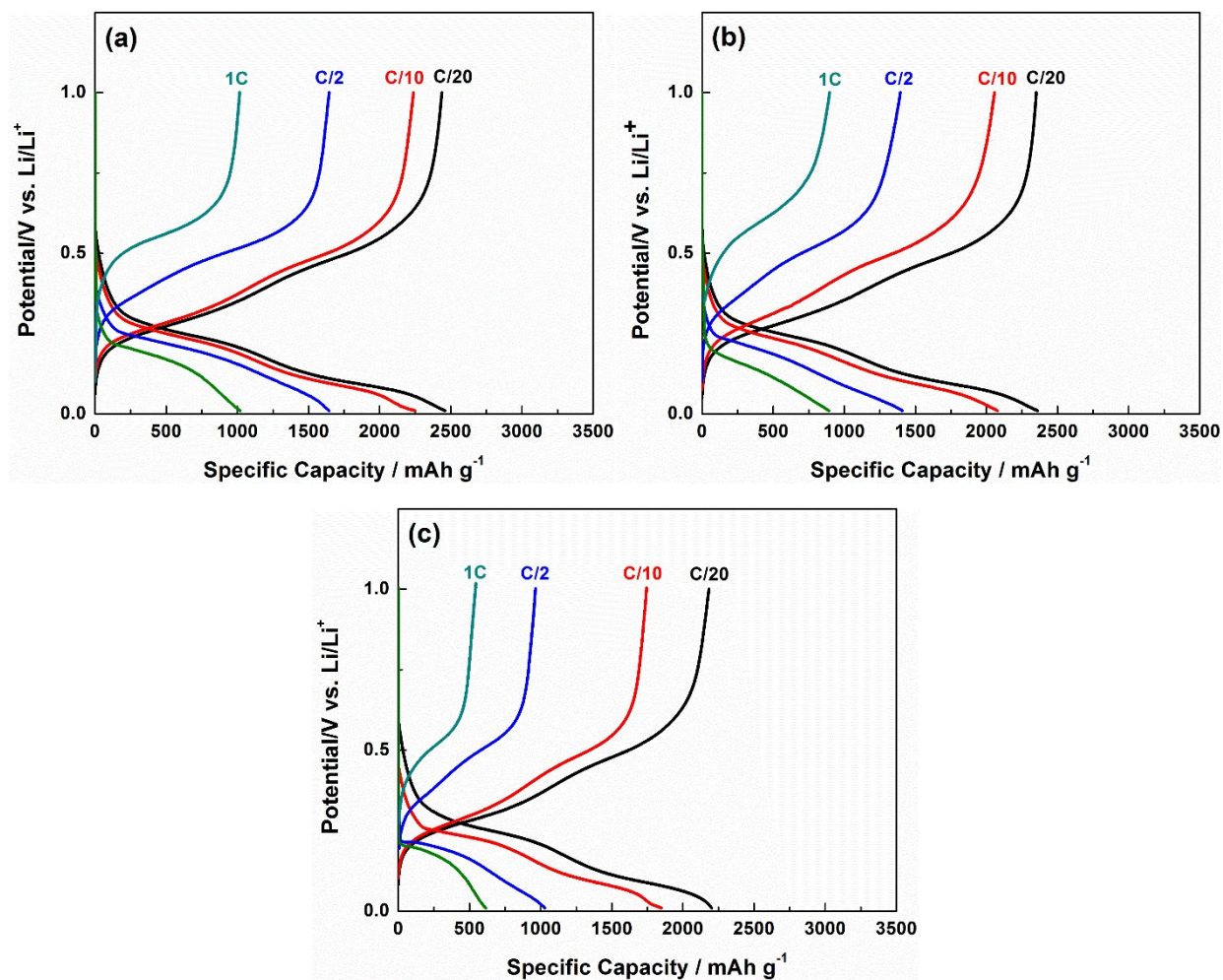


Fig. S2 (a-c) Galvanostatic charge-discharge profiles of Si-PPy, Si-PANI and Si-PAA at selected C-rates, respectively.

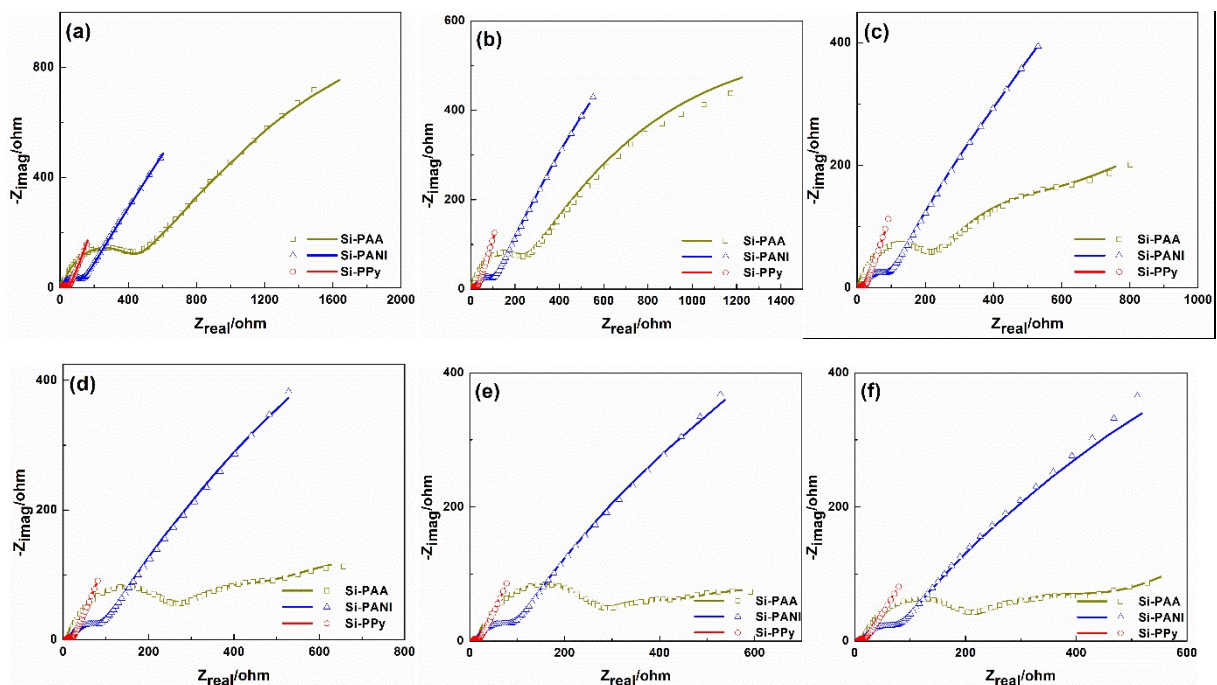


Fig. S3 (a-f) Nyquist plots of Si-PPy, Si-PANI and Si-PAA anodes from 2nd to 7th cycle.

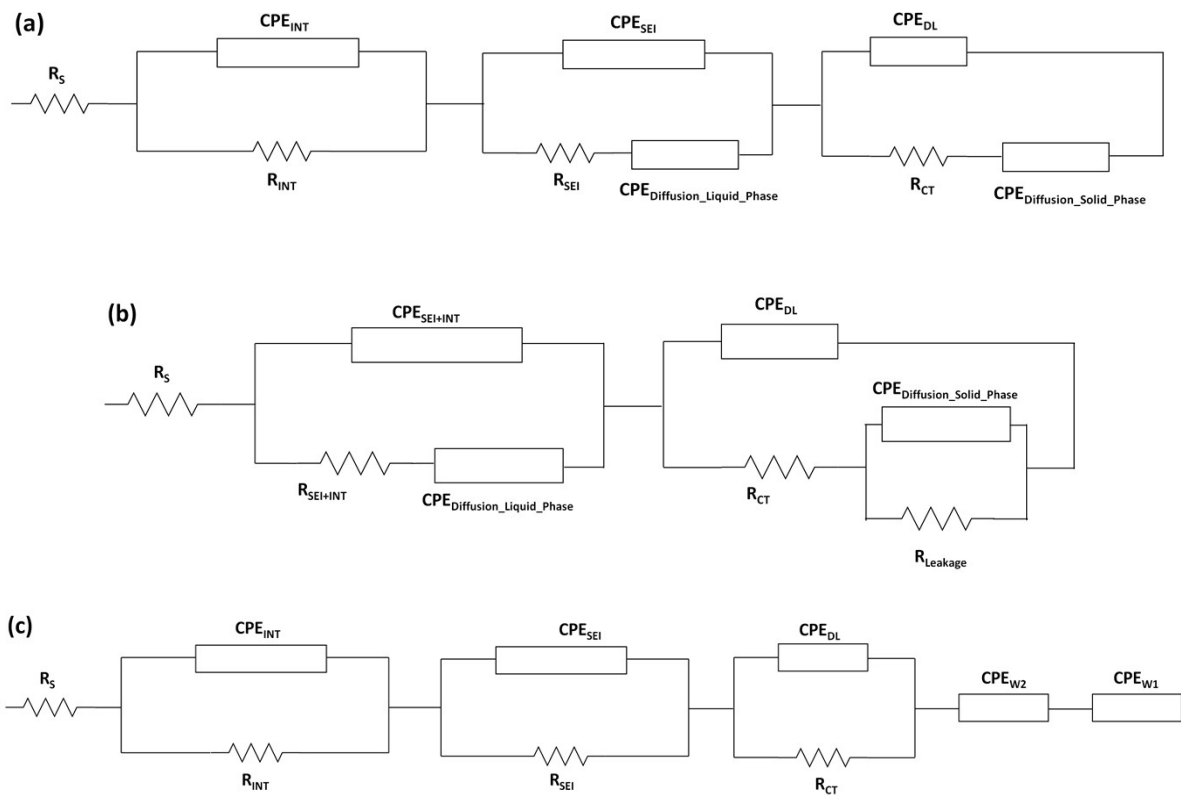


Fig. S4 (a-c) Equivalent circuit of Si-PPy, Si-PANI and Si-PAA anodes used to produce fitted model data, respectively.