

Supplementary Information

Germanium and Zinc Chalcogenides as Anode for High-Capacity and Long-Cycle Lithium Batteries

Xu Chen,^{†a} Jian Zhou,^{†a} Jiarui Li,^a Haiyan Luo,^a Lin Mei,^a Tao Wang,^{*a} Jian Zhu^{*a} and Yong
Zhang^{*b}

*a. State Key Laboratory for Chemo/Biosensing and Chemometrics, and College of Chemistry
Institution, Hunan University, Changsha 410082, China. E-mail: jzhu@hnu.edu.cn*

*b. Fujian Provincial Key Laboratory of Functional Materials and Applications, Xiamen University of
Technology, Xiamen 361024, China.*

† These authors contributed equally to this work.

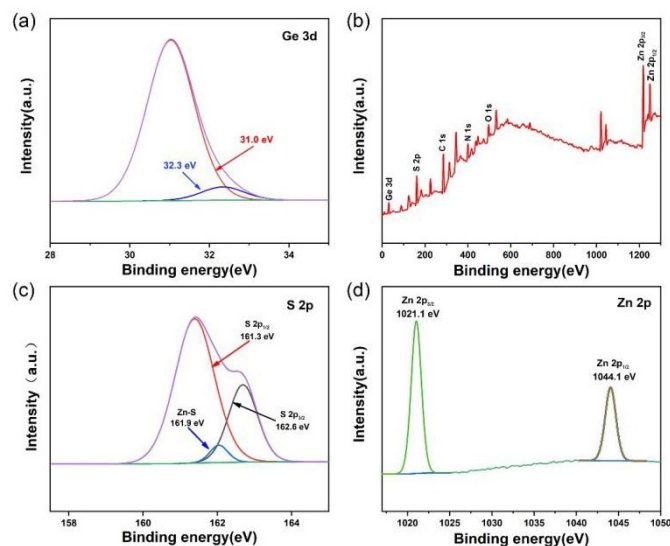


Fig. S1 XPS spectra of (b) survey, (a) Ge 3d, (c) S 2p and (d) Zn 2p of the GZRZC.

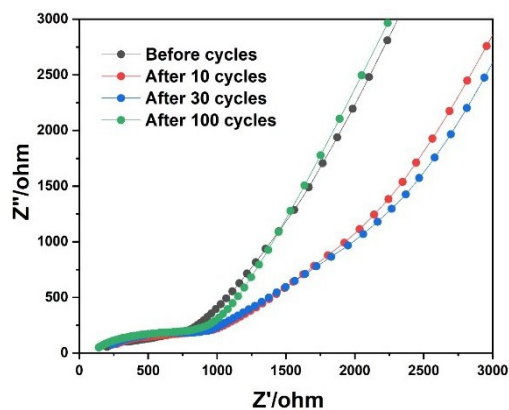


Fig. S2 Nyquist plots of GZC electrode for the first 30 cycles in LIBs.

Table S1. The atomic ratios of C, N, O, S, Zn and Ge elements in the GZRZC.

Element	Atomic (%)
C 1s	47.26
S 2p	19.92
N 1s	13.12
O 1s	9.55
Ge 3d	6.50
Zn 2p	3.64