Supporting Information for

Confining Nano GeP in Nitrogenous Hollow Carbon Fibers towards Flexible and

High Performance Lithium-Ion Battery

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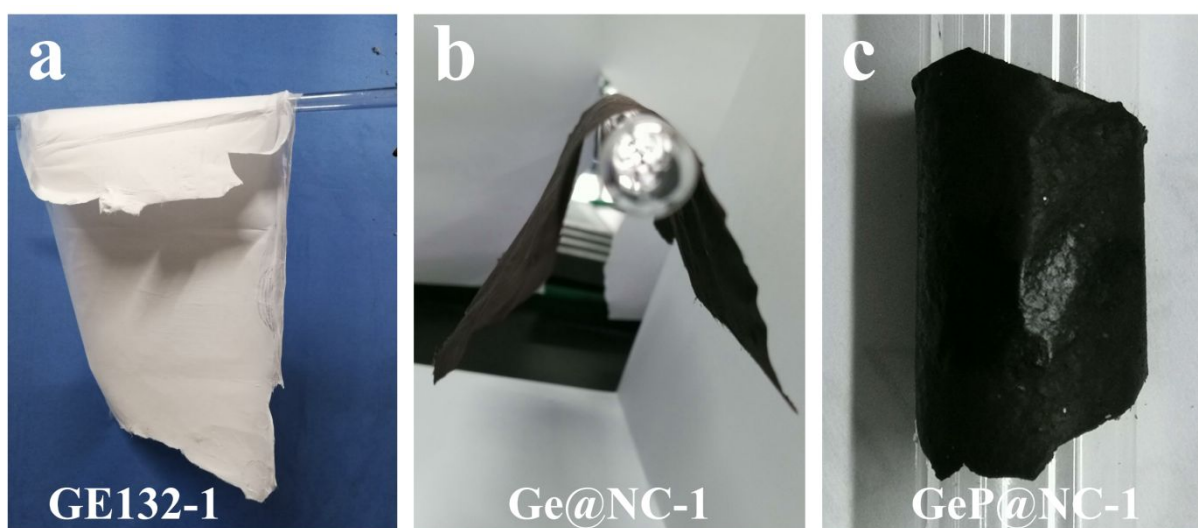
*: Corresponding authors, fdryan@kust.edu.cn (Dong Feng)

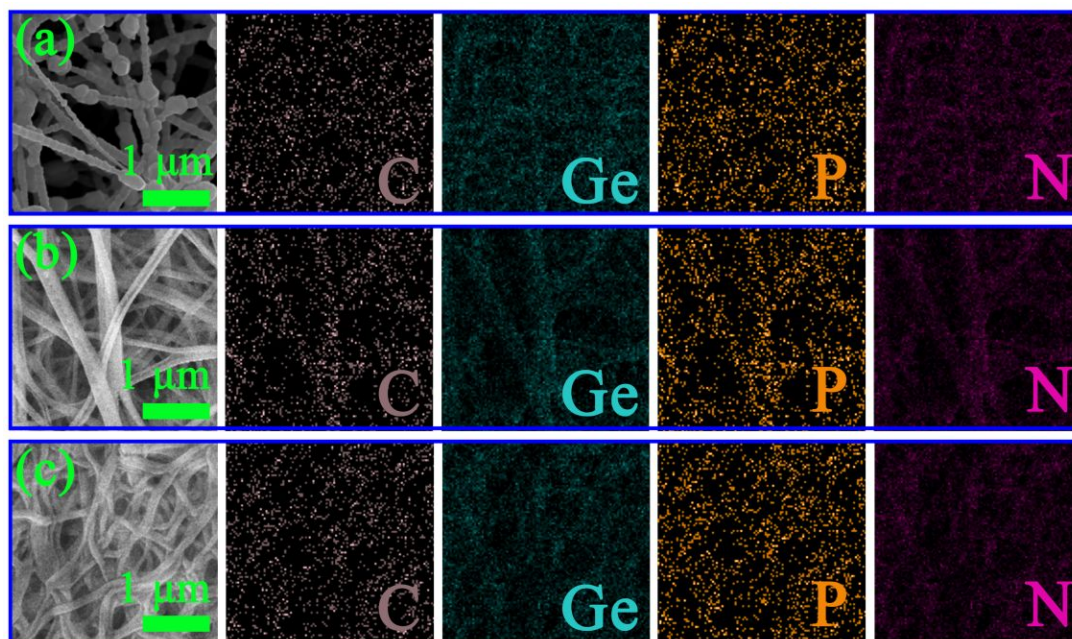Figure S1. Digital photos of GeP@NC-*x*. (a) *x*=0, (b) *x*=1, (c) *x*=2.

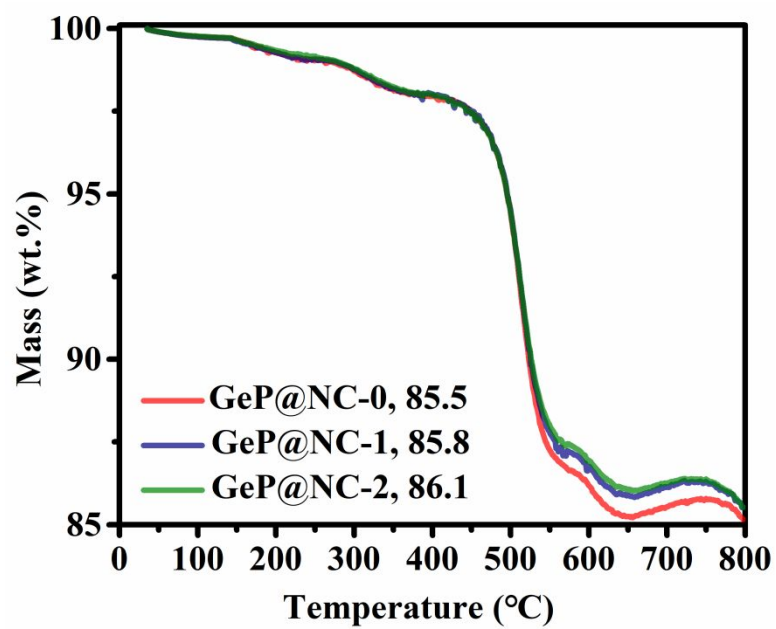Figure S2. SEM and C, Ge, P, N elements mapping images of GeP@NC-*x*. (a) *x*=0, (b) *x*=1, (c) *x*=2.

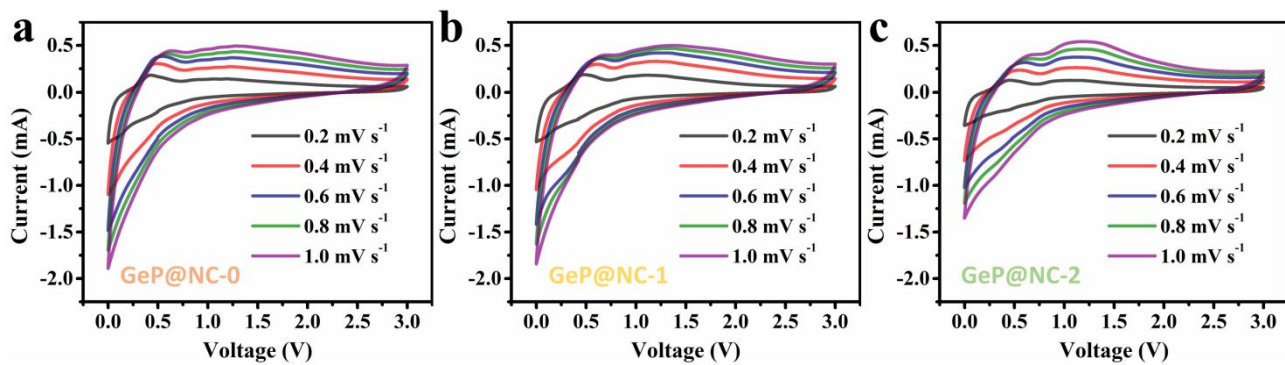Figure S3. TG analysis of GeP@NC-*x* samples.

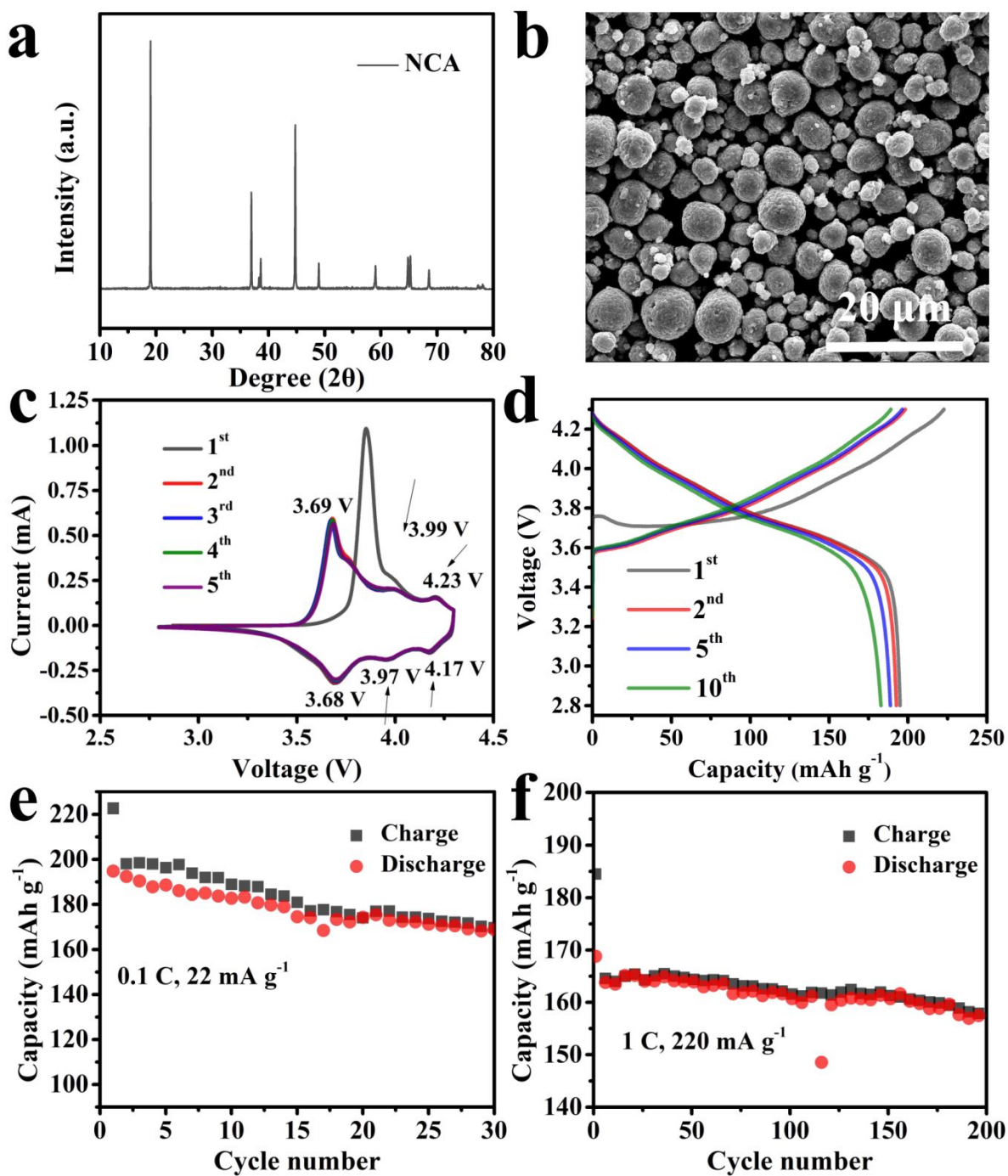Figure S4. Rate CV curves of GeP@NC-*x* under various scanning rate.

Figure S5. (a) XRD pattern, (b) SEM morphology, (c) CV curves, (d) discharge/charge profiles, and

(e, f) cyclic capacity of $LiNi_{0.8}Co_{0.15}Ai_{0.05}O_2$ cathode.

Table S1 The R_s, R_{ct}, R_f values of the EIS. Unit: Ω

Samples	R_s	R_{ct}	R_f	CPE$_P$		PE$_{ct}$		W (mMho*s^0.5)
				Yo (μMho*s^N)	N	Yo (μMho*s^N)	N	
GeP@NC-0	1.32	66.2	91.4	30.0	0.692	482	0.66	1.47
GeP@NC-1	1.13	22.4	110	557	0.531	4.91	0.594	43.0
GeP@NC-2	1.03	0.55	145	7.99	0.605	8.04	0.260	100.1