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Morphology Regulation of Ga particles from Ionic Liquid and their Lithium Storage Properties

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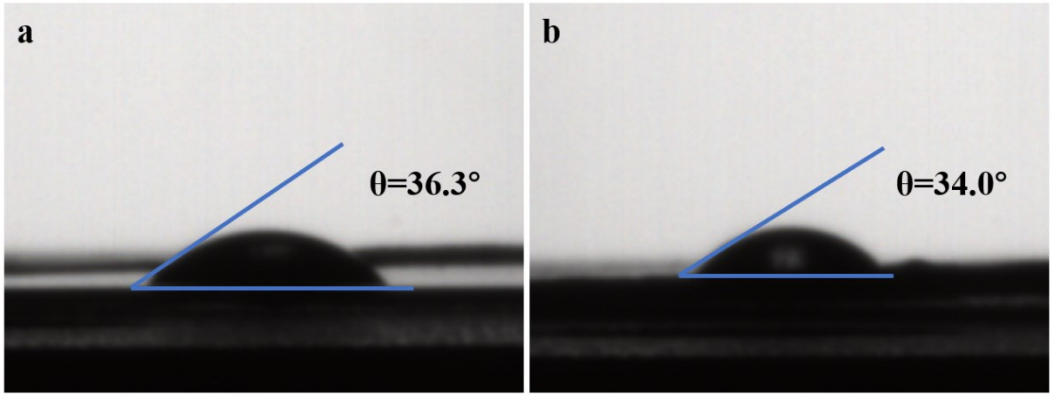

Figure S1 Contact angle between the electrolyte and Ni substrates:

(a) without $AlCl_3$; (b) adding 0.75 mol/L $AlCl_3$

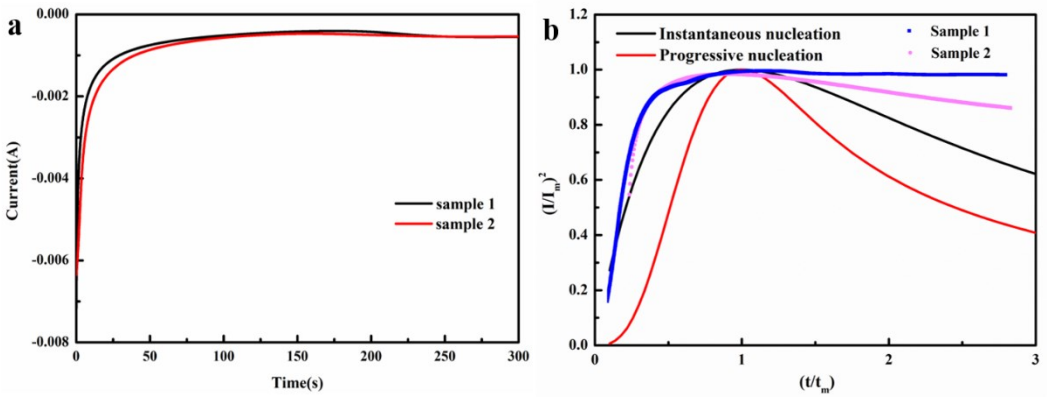

Figure S2 Ga electrodeposited from the various electrolytes: (a) I~t curves (black: sample1, red: sample 2), (b) Nondimensional relationship of I^2/I_m^2~t/t_m

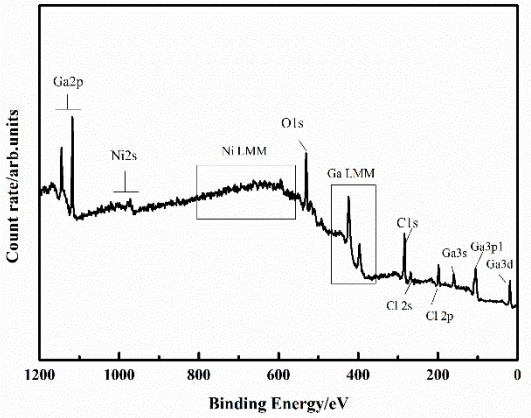

Figure S3 XPS spectrum of a gallium film on Ni substrate

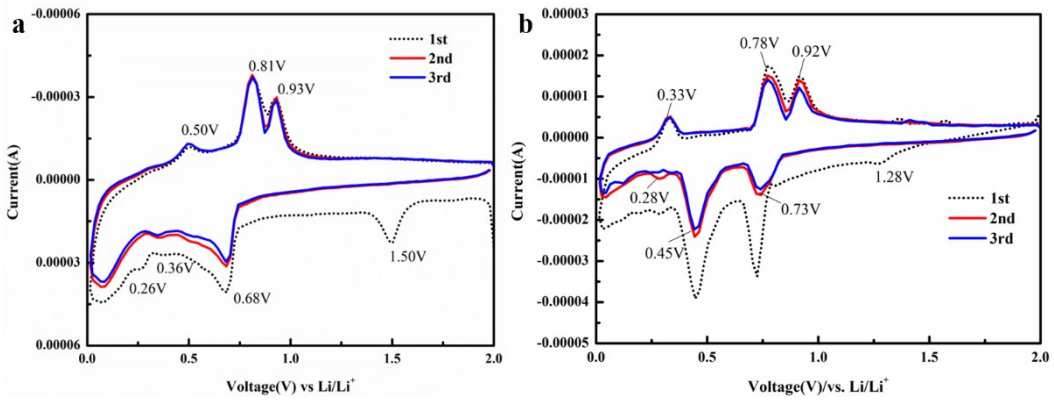

Figure S4 CV curves in Li-ion battery: (a) samples 1 and (b) sample 2

Table S1 The fitting parameters of samples

Samples	Rs	CPE-1	CPE-P	Rct	W1-R	W1-T	W1-P
Sample 1	3.804	3.13E-5	0.69235	112.3	22810	184	0.58156
Sample 2	3.89	2.6451E-6	0.85404	57.74	213.9	0.33775	0.36782