

Electronic Supplementary Information

Rheological phase reaction synthesis and electrochemical performance of rufigallol anode for lithium ion batteries

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Table S1. The most-advanced works summarized for carbonyl metal-organic materials as anodes for lithium ion batteries.

Materials	Electrode composition (active material /conductive additive/binder)	Stable charge capacity (mAh g ⁻¹) /Current density (mA g ⁻¹)	Initial capacity (mAh g ⁻¹) /Current density (mA g ⁻¹)	*Reference /year
Lithium Perylenetetracarboxylates (Li ₄ C ₂₄ H ₈ O ₈)	70:20:10	195 (25) 170 (50) 110 (400)	470 and 200 (25)	[1]/2013
Silver terephthalate (Ag ₂ C ₈ H ₄ O ₄)	60:30:10	171 (71) 161 (140) 122 (564)	650 and 210 (14)	[2]/2016
Zinc terephthalates (ZnC ₈ H ₄ O ₄)	60:30:10	330 (118)	626 and 237 (118)	[3]/2017
Aluminum fumarates (AlCl ₃ -FumA)	50:40:10	392 (37.5)	899 and 401 (37.5)	[4]/2017
Metal formates (Zn ₃ (HCOO) ₆)	70:15:15	550 (60)	1344 and 693 (60)	[5]/2010
Nickel naphthalenetetracarboxylates (Ni ₂ C ₁₄ H ₄ O ₈)	60:30:10	500 (100)	1823 and 982 (100)	[6]/2012
Lithium perylenetetracarboxylates (Li ₄ C ₂₄ H ₈ O ₈)	55:35:10	120 (24) 90 (240)	210 and 130 (24)	[7]/2015
Rufigallol-Li/Ni (Li ₄ NiC ₁₄ H ₂ O ₈)	60:35:5	530 (100) 420 (200) 300 (500)	1214 and 560 (100)	This work

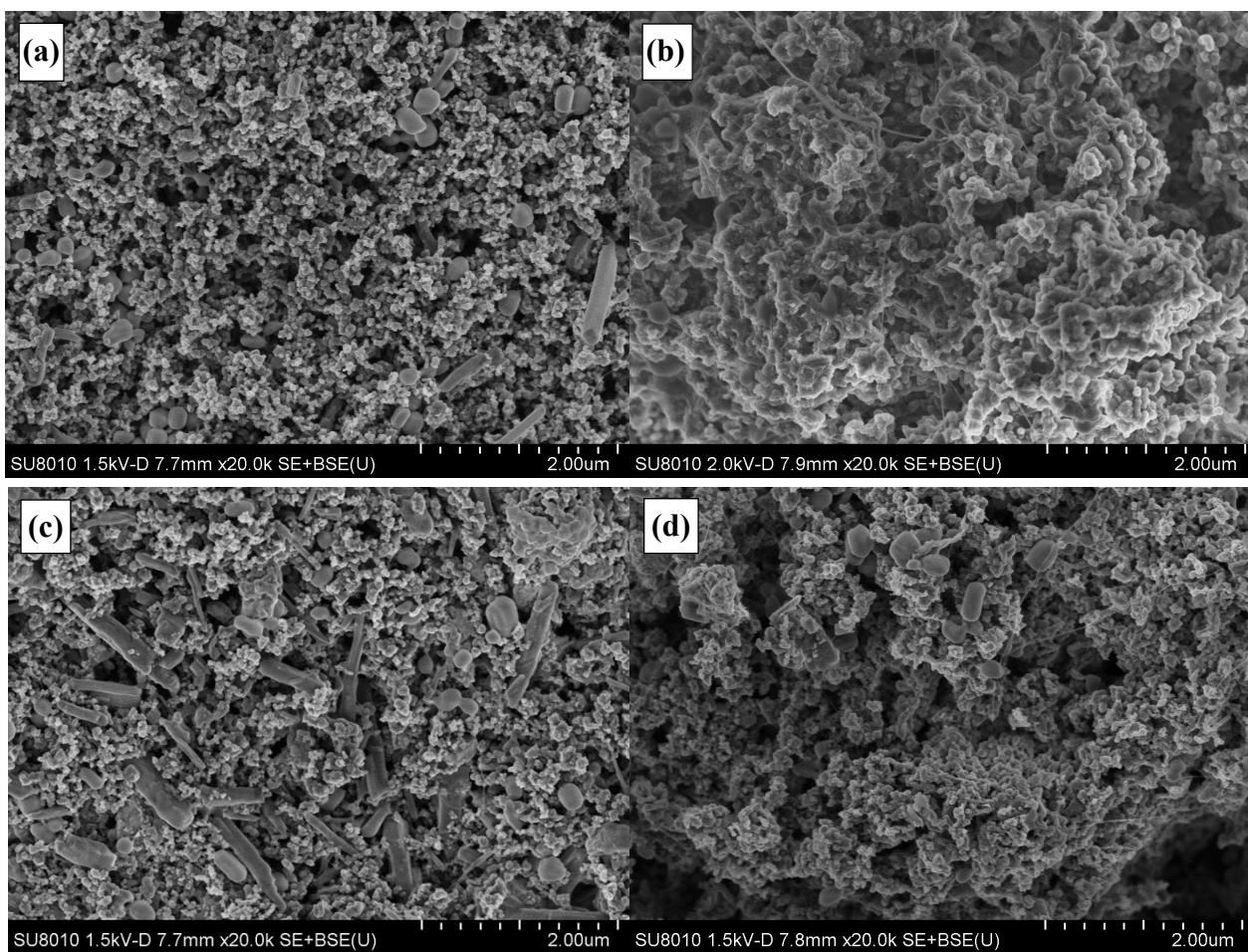


Figure S1. SEM images of fresh electrode (a) and the retrieved electrode (b) after 200 cycles at 500 mA g^{-1} of rufigallol; SEM images of fresh electrode (c) and the retrieved electrode (d) after 200 cycles at 500 mA g^{-1} of R-LN.

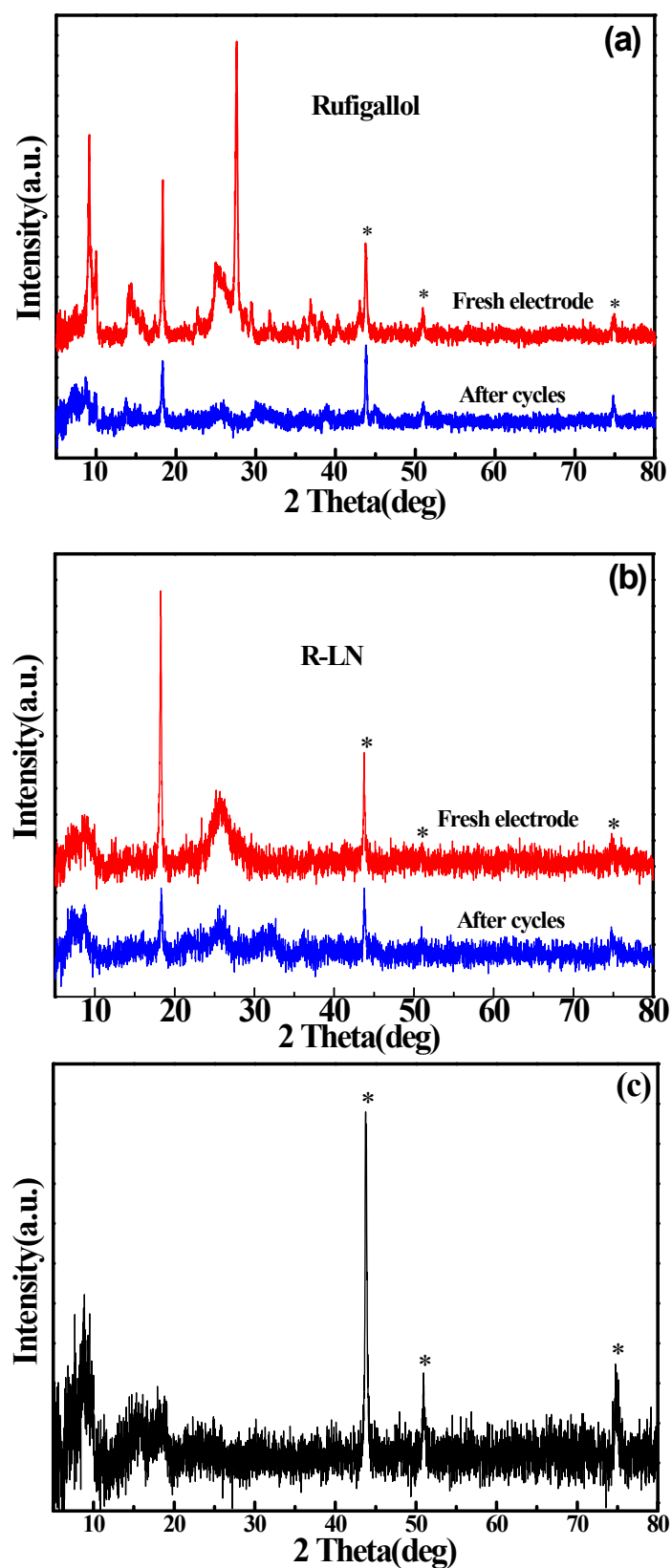


Figure S2. XRD patterns of fresh electrode and the retrieved electrode after 200 cycles at 500 mA g^{-1} of rufigallol (a) and R-LN (b). There are three typical peaks at 43.8°, 50.9° and 74.8°, corresponding to the stainless steel mesh current collector (shown in c).

***References:**

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