Electronic Supplementary Information

Synthesis and electrochemical performance of $xLiV_3O_8 \cdot yLi_3V_2(PO_4)_3$/rGO composite cathode materials for lithium ion batteries

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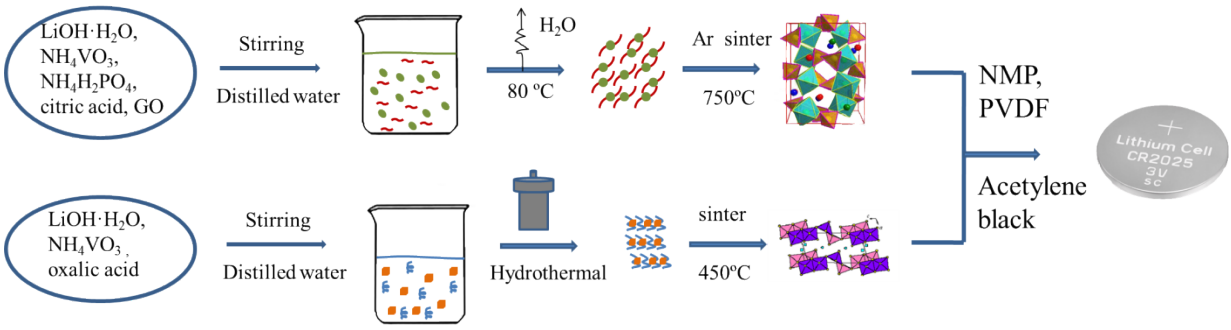


Scheme 1. Schematic illustration of synthetic process of xLVO·yLVP/rGO composites.

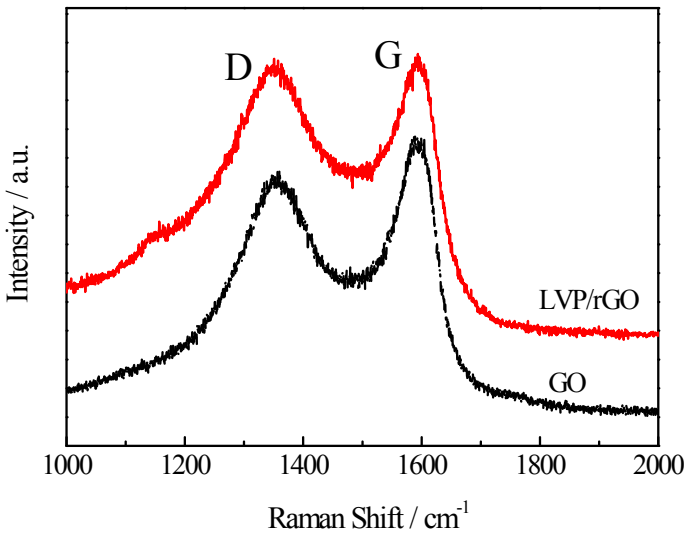
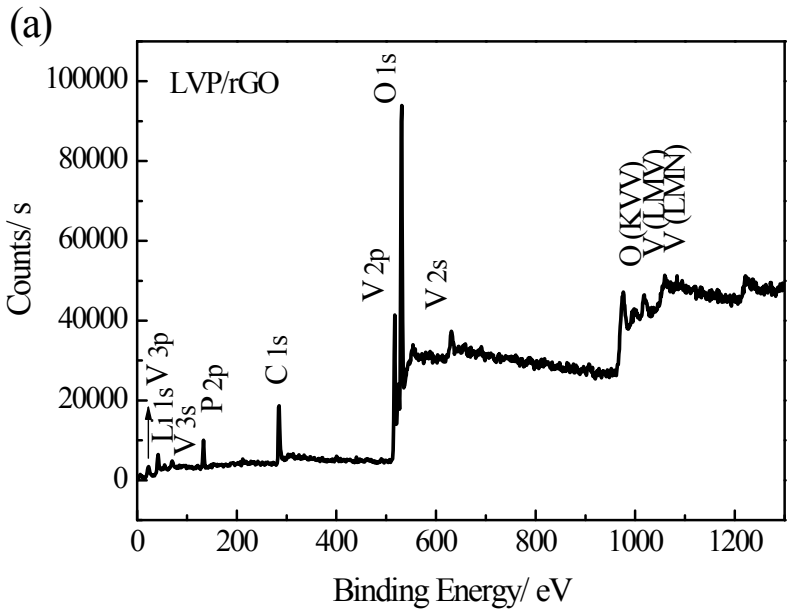
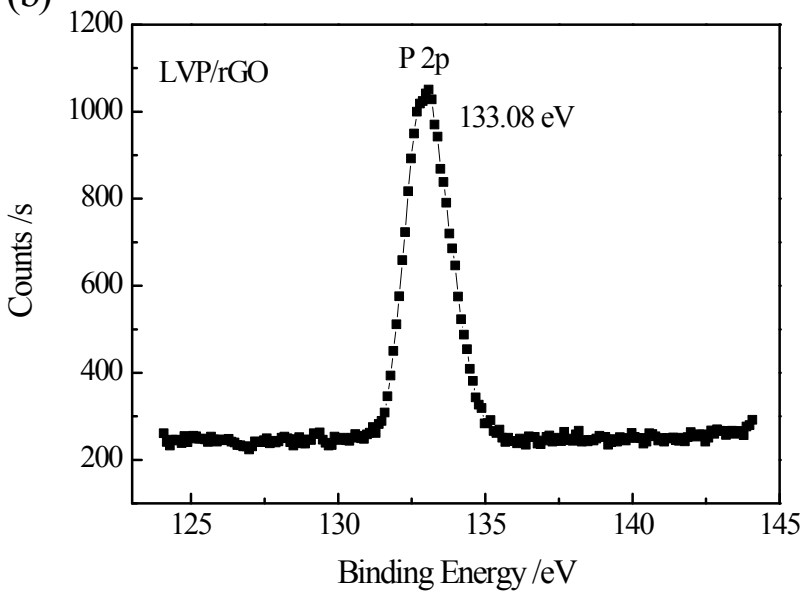


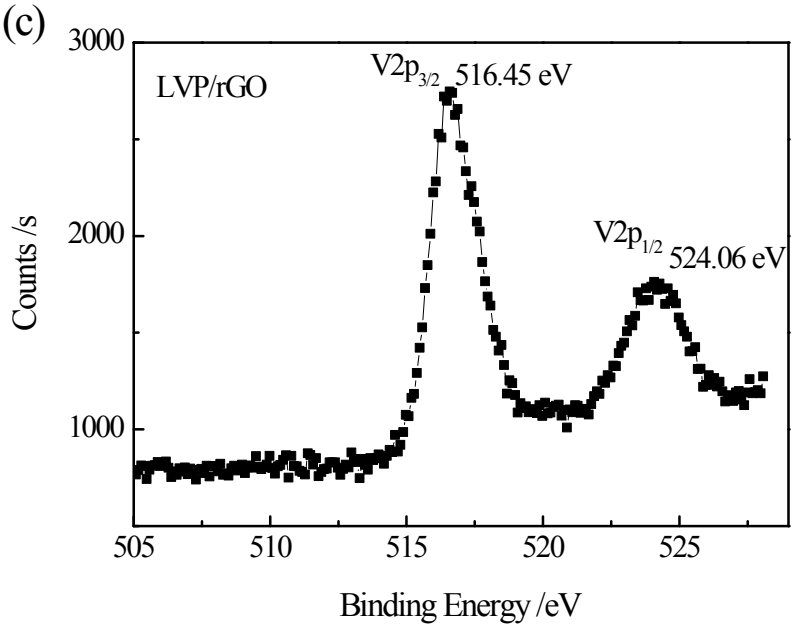
Figure S1 Raman spectra of LVP/rGO composite and GO.



(b)


LVP/rGO
P 2p
133.08 eV
Counts /s
Binding Energy /eV
1200
1000
800
600
400
200
125
130
135
140
145

(c)


LVP/rGO
V2p3/2 516.45 eV
V2p1/2 524.06 eV
Counts /s
Binding Energy /eV
3000
2000
1000
505
510
515
520
525

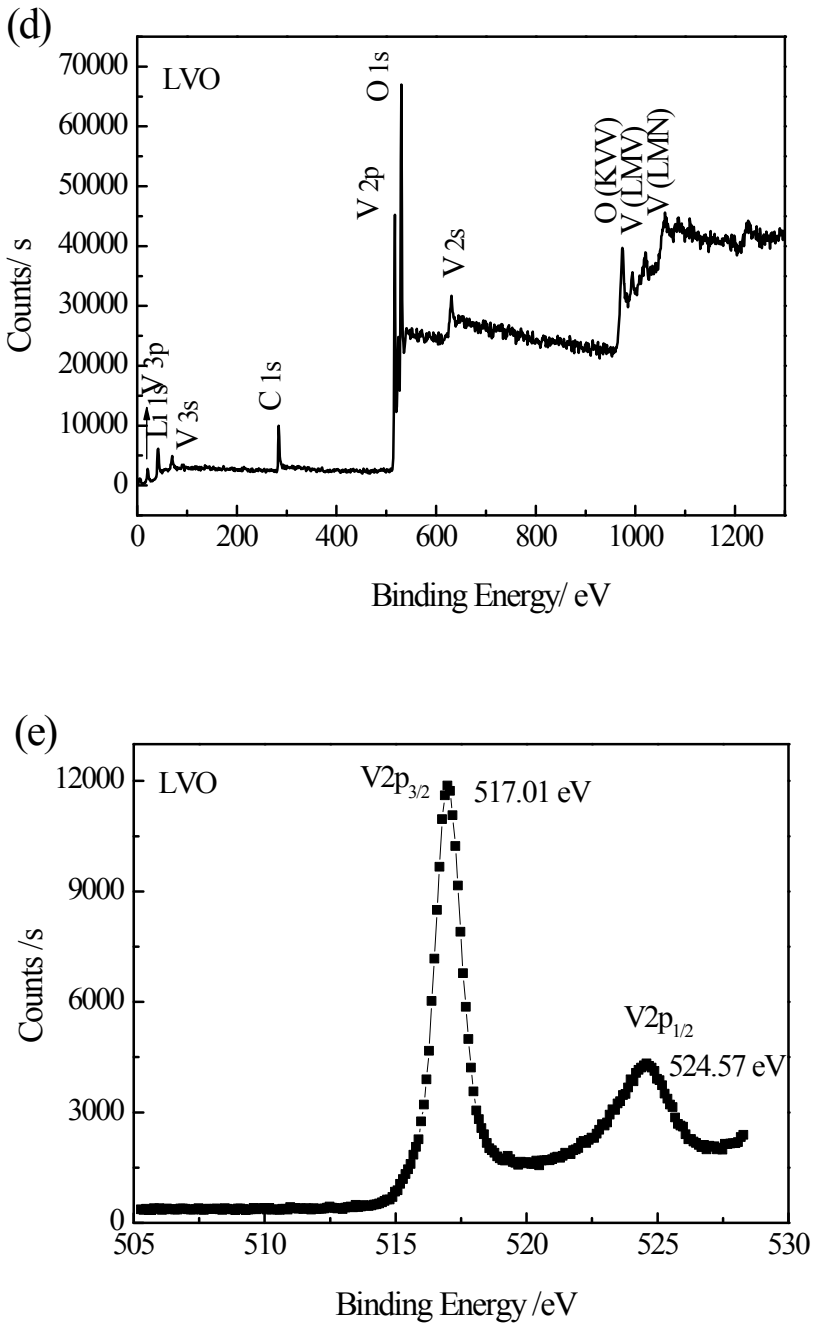


Figure S2. XPS spectra of LVP/rGO and LVO powders: (a) full-spectrum of LVP/rGO; (b) core-level spectrum of P2p in LVP/rGO; (c) core-level spectrum of V2p in LVP/rGO; (d) full-spectrum of LVO; (e) core-level spectrum of V2p in LVO.

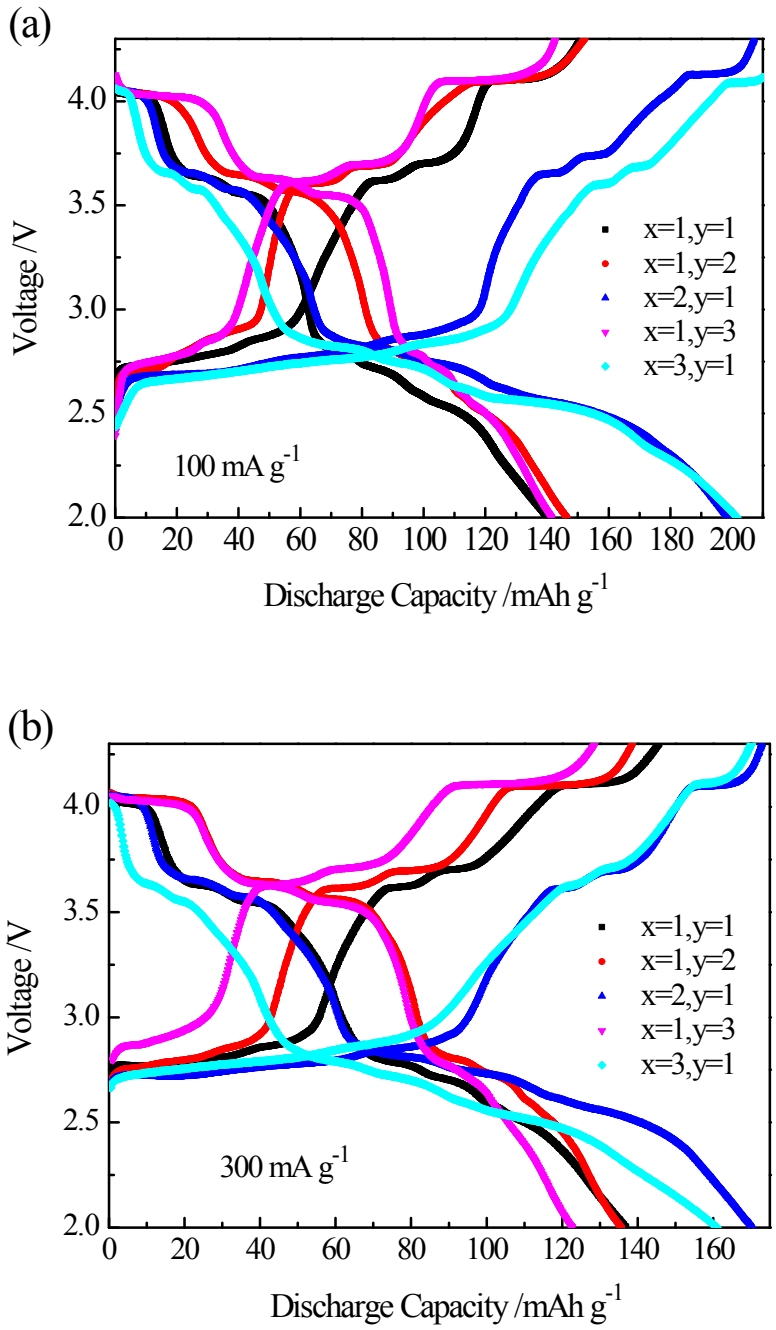


Figure S3. Charge-discharge curves of xLVO·yLVP/rGO (x: y= 2: 1, 3: 1, 1: 1, 1: 2, 1: 3) electrodes at different current densities: (a) 100 mA g^{-1}; (b) 300 mA g^{-1}.