Supporting Information

A Facile Approach to $NiCoO_2$ Intimately Standing on Nitrogen Doped Graphene Sheets by One-step hydrothermal Synthesis for Supercapacitors

Yazhou Xu[a], Junchao Wei[a,b], Licheng Tan[a,b], Ji Yu[a], Yiwang Chen*[a,b]

[a]College of Chemistry/Institute of Polymers, Nanchang University, 999 Xuefu Avenue, Nanchang 330031, China

[b]Jiangxi Provincial Key Laboratory of New Energy Chemistry, Nanchang University, 999 Xuefu Avenue, Nanchang 330031, China

Corresponding author. Tel.: +86 791 83968703; fax: +86 791 83969561. E-mail: ywchen@ncu.edu.cn (Y. Chen)

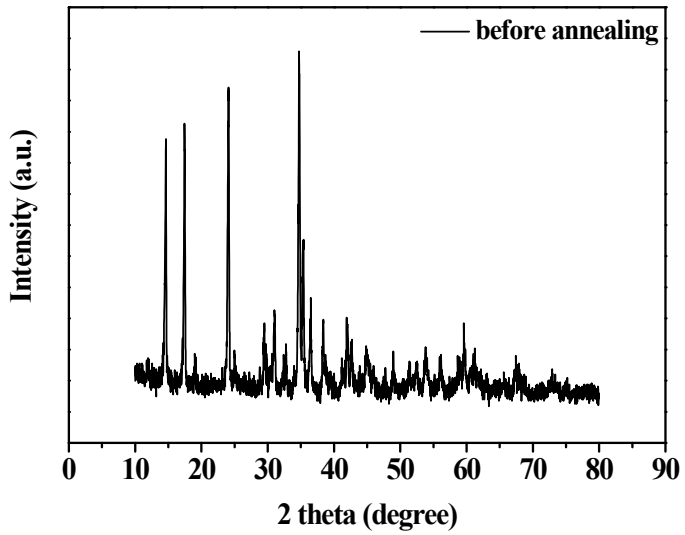


Figure S1. XRD pattern of the $NiCoO_2$-NRGO composites before annealing.

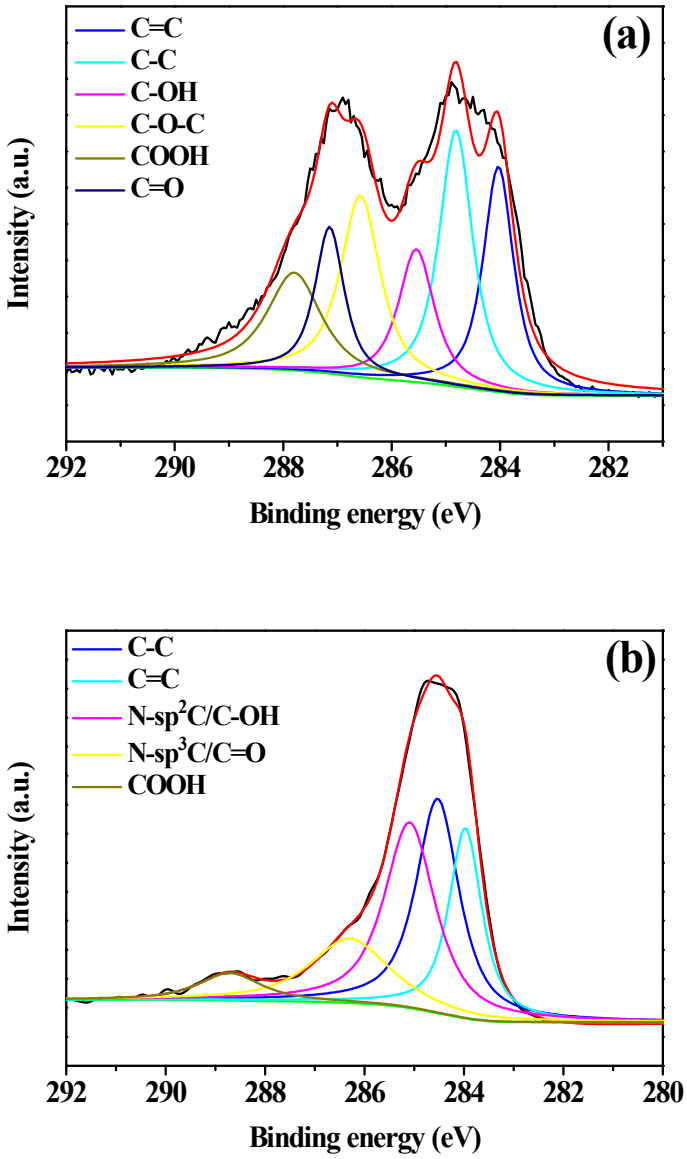
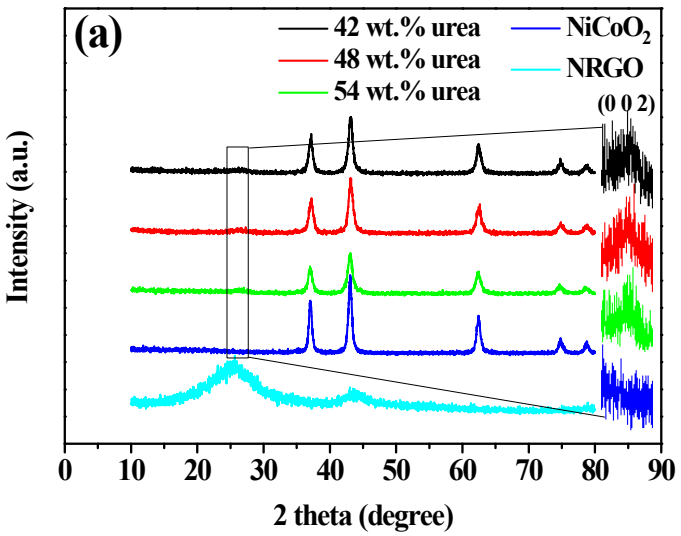
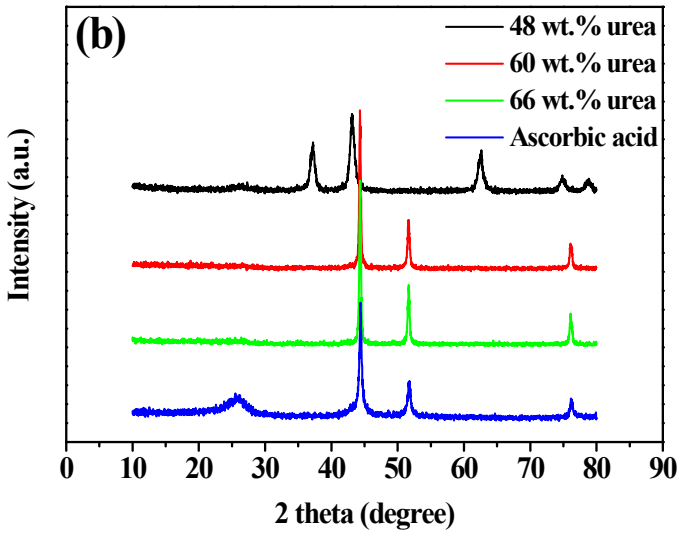
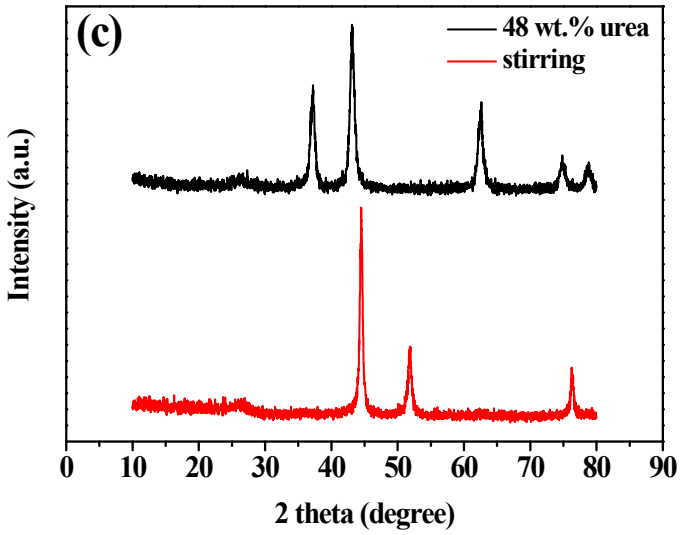
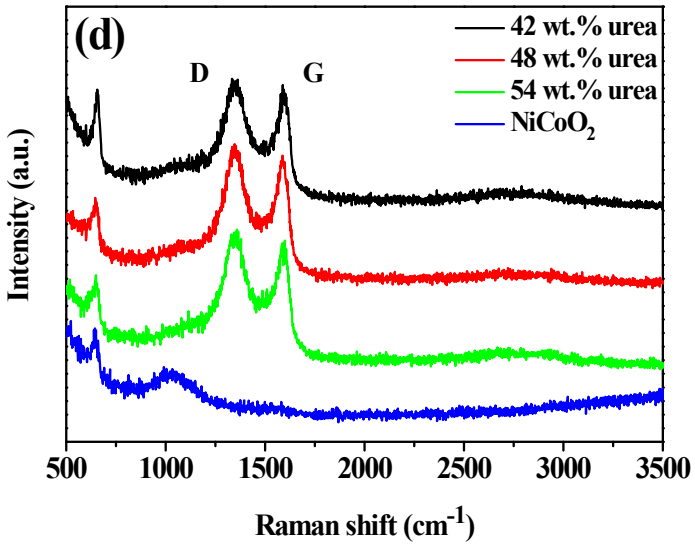


Figure S2. (a) High-resolution XPS spectra of C 1s for GO, (b) High-resolution XPS spectra of C 1s for NRGO.


(a)
42 wt.% urea
48 wt.% urea
54 wt.% urea
NiCoO2
NRGO
(0 0 2)
Intensity (a.u.)
0 10 20 30 40 50 60 70 80 90
2 theta (degree)


(b)
48 wt.% urea
60 wt.% urea
66 wt.% urea
Ascorbic acid
Intensity (a.u.)
0 10 20 30 40 50 60 70 80 90
2 theta (degree)


(c)
48 wt.% urea
stirring
Intensity (a.u.)
0
10
20
30
40
50
60
70
80
90
2 theta (degree)


(d)
D
G
42 wt.% urea
48 wt.% urea
54 wt.% urea
NiCoO2
Intensity (a.u.)
500
1000
1500
2000
2500
3000
3500
Raman shift (cm-1)

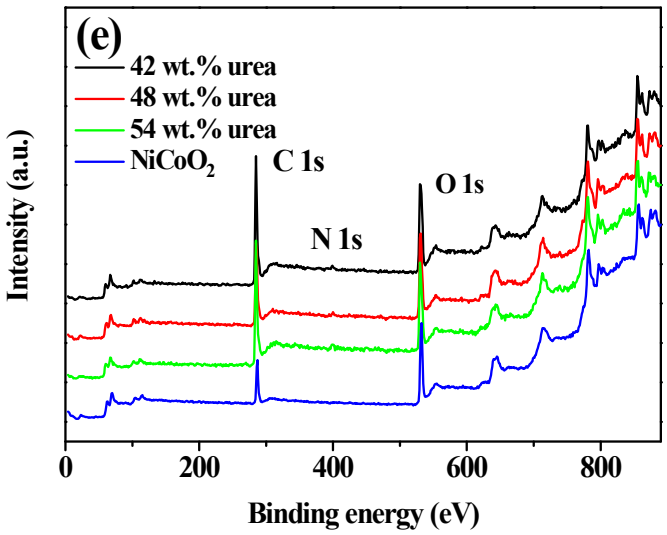


Figure S3. Structure characterization of the $NiCoO_2$ -NRGO composites with increasing weight rate of urea: (a) XRD pattern of the $NiCoO_2$ -NRGO composites with various weight rate of urea ranging from 42 wt.% to 54 wt.%, (b) XRD pattern of the NRGO-$NiCoO_2$ composites with various weight rate of urea ranging from 60 wt.% to 66 wt.% and the reduction of $NiCoO_2$ -NRGO composites through ascorbic acid, (c) XRD pattern of the $NiCoO_2$ -NRGO composites prepared through different methods, (d) Raman spectra of $NiCoO_2$-NRGO composites with various weight rate of urea, (e) XPS of $NiCoO_2$-NRGO composites with various weight rate of urea.