

B and N Co-Doped Wood Scrap Charcoal for Decorated Supercapacitor with High Conductivity

Gaojun Chen ¹, Yudong Li ², Enshan Han ¹, Ziqiang Zhang ¹, Xiaohui Yang ^{3,*},
Desheng Zhou ⁴ and Yanzhen He ^{1,*}

¹ School of Chemical Engineering and Technology,
Hebei University of Technology, Tianjin 300130, China

² Key Laboratory of Bio-Based Material Science & Technology, Northeast
Forestry University, Ministry of Education, Harbin 150040, China

³ Key Laboratory of Reservoir Aquatic Environment,
Chongqing Institute of Green and Intelligent Technology,
Chinese Academy of Sciences, Chongqing 400714, China

⁴ School of Energy Science and Engineering, Harbin Institute of Technology,
Harbin 150001, China

* Correspondence: yangxiaohui@cigit.ac.cn (X.Y.); yzhe87@163.com (Y.H.)

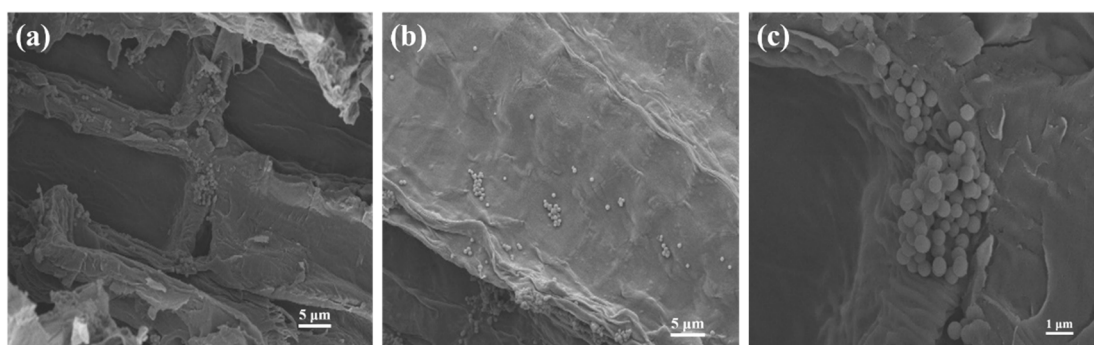


Figure S1 The SEM of polyaniline was impregnated into nature wood after aggregation

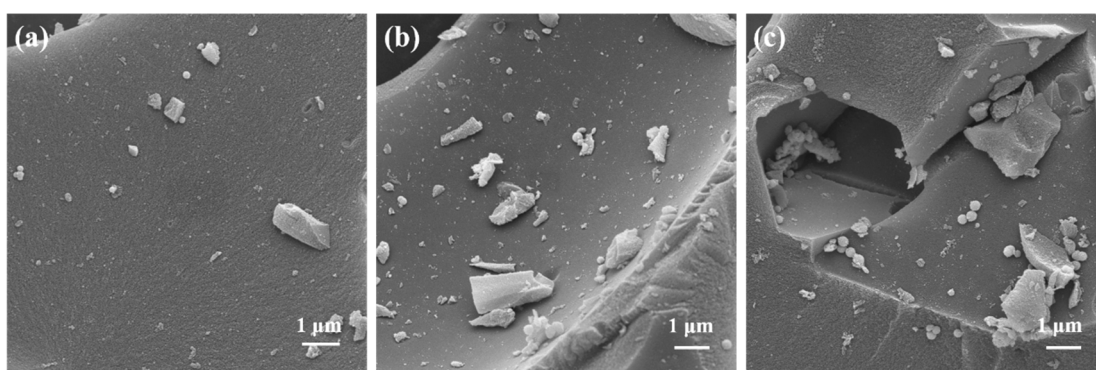


Figure S2 The SEM of the polyaniline aggregation after NW carbonized

Table S1 Table of element content distribution of samples

Sample Name	C1s	N1s	O1s	B1s
NCM	89.43	1.03	9.54	0
PNCM	87.76	1.18	11.06	0
BNPCM	88.77	1.20	7.79	2.24

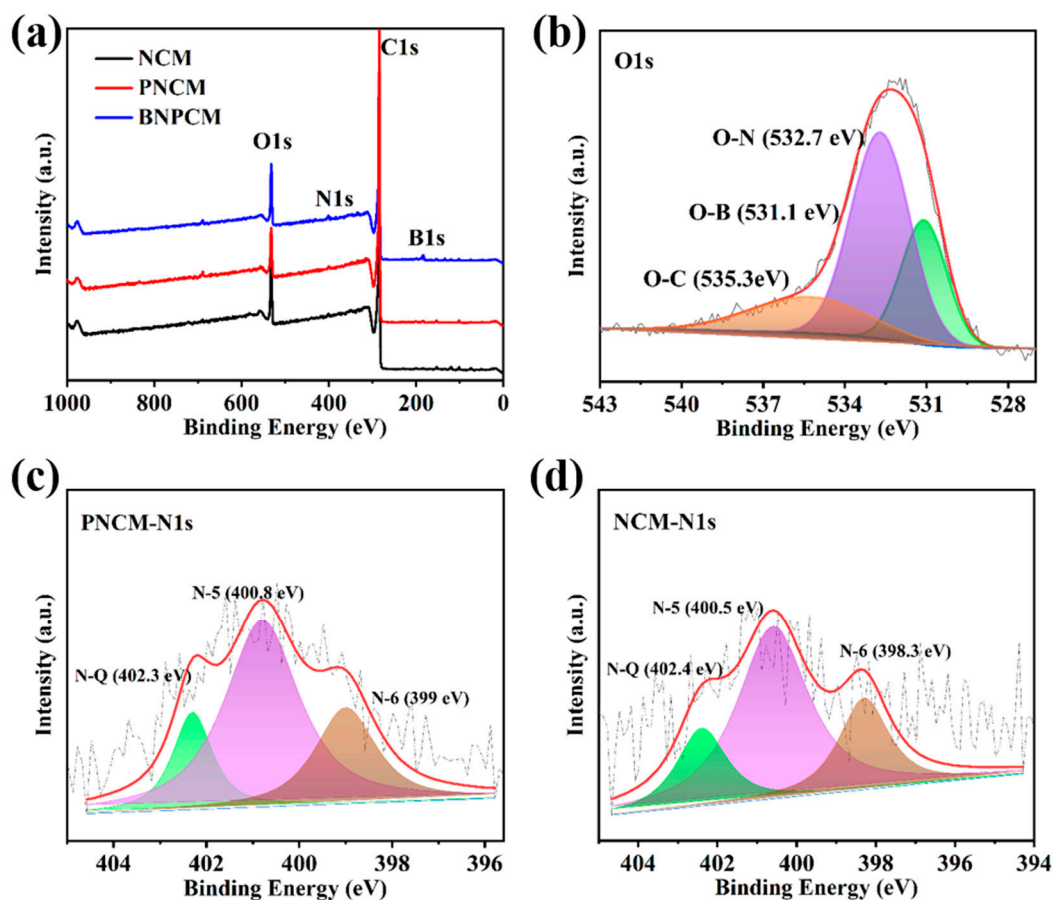


Figure S3 The XPS of the samples. (a) The full XPS survey spectrum of three samples, (b) the O1s high resolution spectra of BNPCM (c) the N1s high resolution spectra of PNCM. (d) the N1s high resolution spectra of NCM

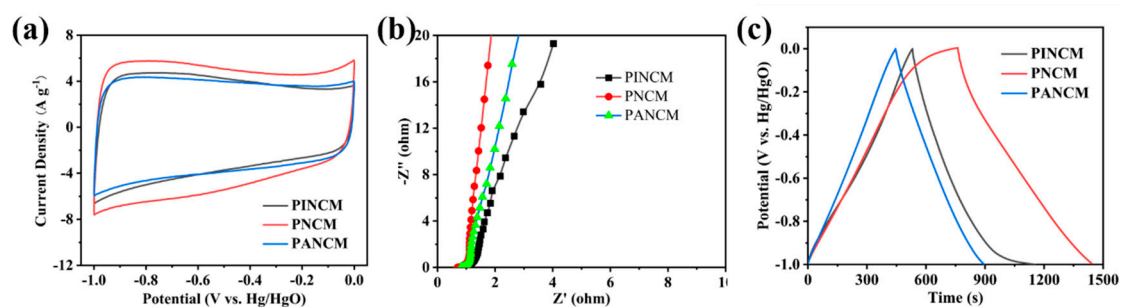


Figure S4 Comparison of electrochemical data of different introduction times of aniline

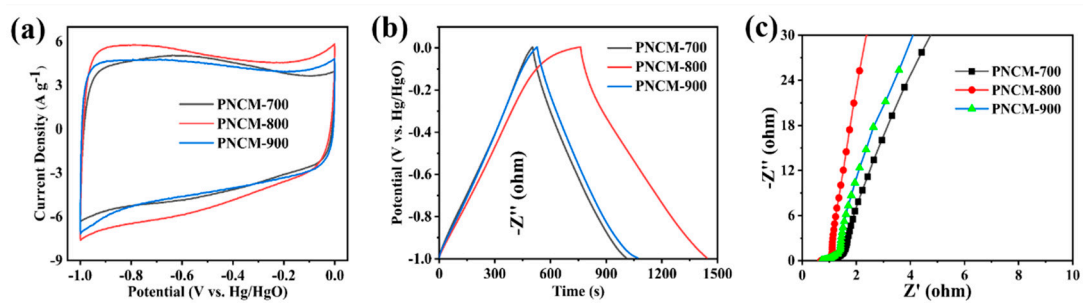


Figure S5 Comparison of electrochemical data of PNWC carbonized at 700°C, 800°C and 900°C

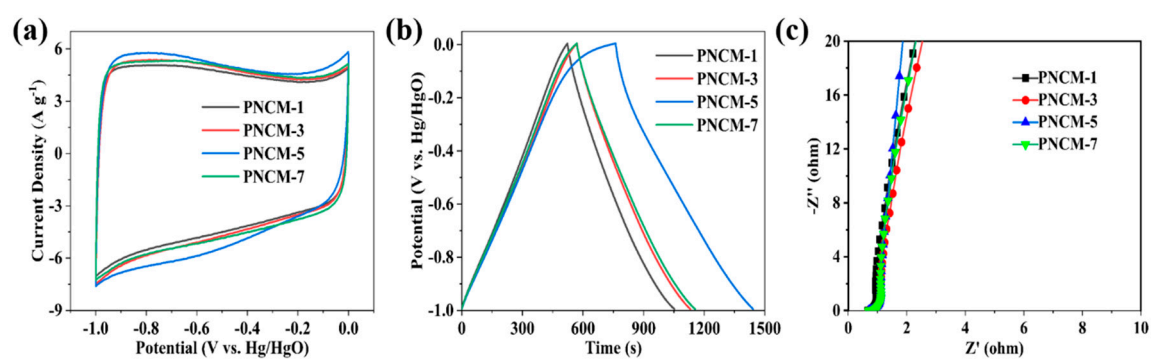


Figure S6 Comparison of electrochemical data of PNWC at C:KOH=1, 3, 5 and 7 respectively

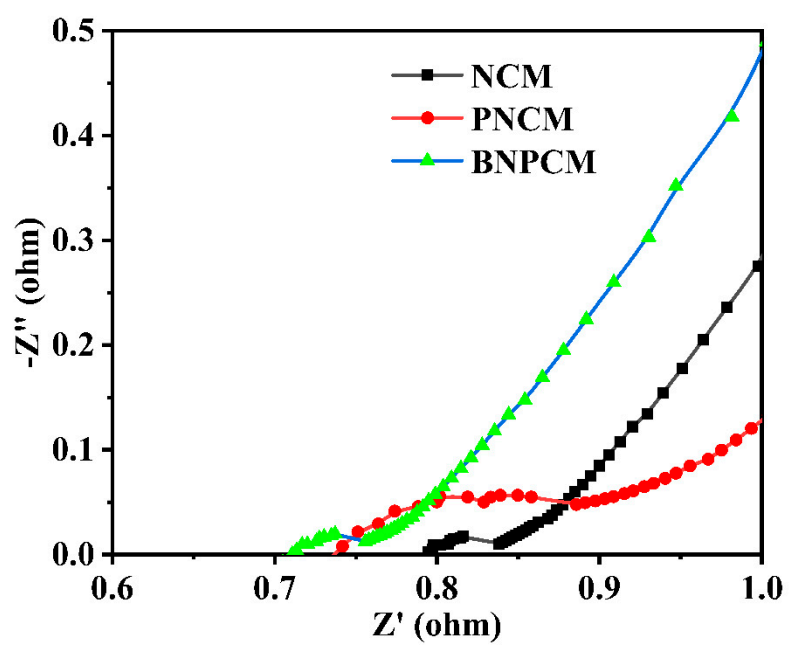


Figure S7 The enlarged view of high frequency region of Fig. 6(c)