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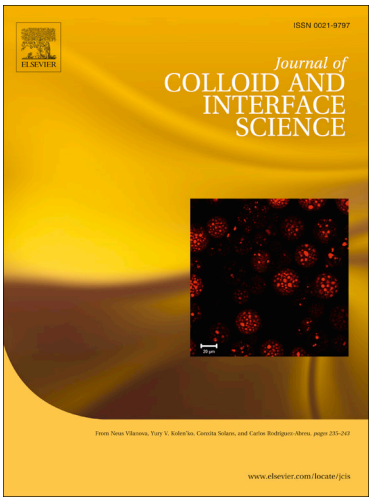


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# Ionic liquid directed construction of foam-like mesoporous boron-doped graphitic carbon nitride electrode for high-performance supercapacitor

Lirong Kong[a,b], Quanrun Chen[a], Xiaoping Shen[a,*], Guoxing Zhu[a], Jun Zhu[a]

[a] School of Chemistry and Chemical Engineering, Jiangsu University, Zhenjiang 212013, P. R. China.

[b] School of Material Science and Engineering, Jiangsu University, Zhenjiang 212013, P. R. China.

[*] Corresponding author. Email: shenxp@ujs.edu.cn, xiaopingshen@163.com

**Abstract**

Carbon materials with controllable hierarchically porous structure and high doping level are expect to exhibit superior energy storage performance when used as electrode materials for supercapacitors. Herein, we report the preparation of a novel foam-like boron-doped carbon nitride material with hierarchically porous structure and high doping contents of nitrogen (21.45±0.93 at%) and boron (6.46±0.60 at%). Due to the unique compositional and structural features, this material exhibits high energy storage performance, including a large specific capacitance of ~660.6 F $g^{-1}$ at 0.1 A $g^{-1}$ and a high capacitance retention after 10000 cycles. This study can provide new ideas for the development of carbon based electrode materials with unique hierarchically porous structure and improved doping level.