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N-doped reduced graphene oxide aerogel coated on carboxyl-modified carbon fiber paper for high-performance ionic-liquid supercapacitors

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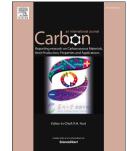
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1	N-doped Reduced Graphene Oxide Aerogel Coated on Carboxyl-modified Carbon
2	Fiber Paper for High-performance Ionic-liquid Supercapacitors
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15	
16	Abstract
17	Nitrogen-doped reduced graphene oxide aerogel (N-rGO aerogel) with high porosity and
18	ionic conductivity were synthesized by a hydrothermal reduction of graphene oxide with
19	hydrazine and following freezing-dry method. N-rGO aerogel was spray-coated on carboxyl-
20	modified carbon fiber paper with a hydrophilic surface and used as the supercapacitor
21	electrode. Not only can the N-rGO aerogel electrode accelerate the diffusion of the electrolyte
22	but also it can store electronic charge via a surface redox reaction due to the N-containing
23	groups. Among the electrolytes studied, the ionic liquid-based supercapacitor of the N-rGO

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