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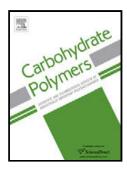
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ACCEPTED MANUSCRIPT

1	An approach for reinforcement of paper with high strength and barrier properti
2	es via coating regenerated cellulose
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9	Highlights
10	Reinforced paper was successfully fabricated via coating regenerated cellulose.
11	The composite paper shows excellent tensile strength and barrier property.
12	The composite paper exhibits strong water-resistant and shape-retaining properties.
13	ABSTRACT
14	The applications of cellulose are increasing rapidly attributing to their
15	biodegradability and renewability. However, most of these cellulose-based materials
16	possess poor mechanical performance, which restrict their advanced applications. In
17	this study, a facile method was applied to fabricate composite paper with excellent
18	mechanical and barrier properties via simple coating dissolved cellulose in ionic
19	liquid. Subsequently, the surface wettability, oxygen permeability and mechanical
20	properties of the resulting composites were investigated. Remarkable, both the dry
21	and wet tensile strength of the composite papers was dramatically increased up to 101
22	and 14.17 MPa, which was greater than controlled paper (63.98 and 1.15 MPa).
23	Moreover, with only 2 % weight loading of regenerated cellulose, million times
24	decline of oxygen permeability coefficient was obtained. Though the composite
25	papers showed enhanced hydrophilicity, it exhibited strong water-resistant and shape-

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