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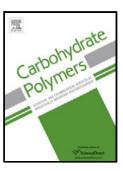
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ACCEPTED MANUSCRIPT

1	Nanostructured membranes based on native chitin nanofibers
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24	Abstract
25	Procedures for chitin nanofiber or nanocrystal extraction from Crustaceans modify the chitin
26	structure significantly, through surface deacetylation, surface oxidation and/or molar mass
27	degradation. Here, very mild conditions were used to disintegrate chitin fibril bundles and
28	isolate low protein content individualized chitin nanofibers, and prepare nanostructured high-
29	strength chitin membranes. Most of the strongly 'bound' protein was removed. The degree of
30	acetylation, crystal structure as well as length and width of the native chitin microfibrils in the
31	organism were successfully preserved. Atomic force microscopy and scanning transmission
32.	electron microscopy showed chitin nanofibers with width between 3 and 4 nm. Chitir

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