



SDI Review Form 1.6

Journal Name:	Chemical Science International Journal
Manuscript Number:	Ms_CSIJ_41670
Title of the Manuscript:	Bentonite nanoclay assisted hydrophilic nylon fabrics
Type of the Article	Original Research Article

General guideline for Peer Review process:

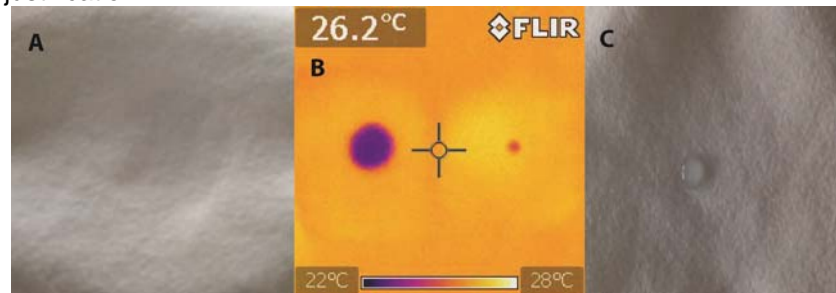
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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>(a) Is the subject matter appropriate for the Journal? Yes</p> <p>(b) Is the title reflects the contents adequately? No¹</p> <p>(c) Is the abstract informative? Yes</p> <p>(d) Is there any data which might be omitted? Yes²</p> <p>(e) Any apparent errors of fact or logic? Yes³</p> <p>(f) Any apparent lack of clarity? Yes⁴</p> <p>(g) Is the conclusions sound and justified? No⁵</p> <p>(h) Is appropriate reference to previous work given? No⁶</p> <p>(i) Is the quality of the presentation adequate? No⁷</p> <p>(j) Is the work contains new and original contributions? Yes</p> <p>¹ No coupling agent mentioned in the title.</p> <p>² Data of bentonite nanoclay properties not provided.</p> <p>³ Nylon is hygroscopic and hydrophilic in nature, why authors wanted to change its properties?</p> <p>⁴ The function of BNC is not clear because the coupling agent has played the important role.</p> <p>⁵ The conclusion is too short and not justified.</p> <p>⁶ The authors not cited many papers for supporting their results.</p> <p>⁷ The quality of the manuscript is quite low.</p>	<p>We would like to thank the referees for a thorough review and useful comments. All changes suggested by the reviewer have been incorporated. We hope that the referees would find them to be satisfactory. If there are further changes to be made, we will be happy to comply.</p> <p>1 With the coupling agent, title will be overlong.</p> <p>2 FTIR spectra of bentonite nanoclay and epoxy silane modified BNC are added in Fig. 2 (manuscript).</p> <p>3 Compared to polyester nylon is hydrophilic. However, we improved its water absorbency, spreading and drying by grafting BNC. By doing that we improved not only moisture absorbance but also moisture management which has great importance in garment industry. Further, Fig. 1. confirmed this justification.</p>  <p>Fig. 1. Immediate view of a water drop fallen on (A) pristine nylon, (C) BNC functionalized nylon and (B) images (A) and (C) through IR camera. In Fig. 1 A drop of water was dropped on pristine and BNC grafted nylon to demonstrate the superior wettability of modified nylon. An Infra-red (IR) image (Fig. 1.B) was taken to clearly demonstrate the spreading of a water drop on BNC grafted nylon. Hydrophilic nature of BNC attracts water while its excellent swelling capacity enhances spreading of water promoting the superior wettability of BNC grafted fabric.</p> <p>4 BNC exhibits high cation exchange capacity and high swelling capacity in relation to hydration. The structure of bentonite is composed of a three-layer platelet with an octahedral aluminum hydroxyl sheet sandwiched between two layers of silicon-oxygen tetrahedral. The nano size space between adjacent platelets of BNC comprises of exchangeable cations, which draw water, and form a rigid network made up of water layers. Hence, this nanospace is vital for BNC's incomparable hydrophilicity.</p> <p>5 Elaborated conclusion is added to the manuscript.</p> <p>6 Two references are added to the references.</p>
Minor REVISION comments	<p>The manuscript studies on the surface modification of the nylon by using coupling agent and BNC. The authors not give an extensive introduction regarding the BNC and coupling agent. This manuscript cannot attract interest of fabric researchers and it also cannot enhance the knowledge on biomimetic studies.</p>	



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<u>Optional/General</u> comments	I would not be glad to recommend the manuscript for publication because there are a lot of experimental and theoretical errors found in the manuscript, which cannot be corrected although the authors have used the state-of-the-art machines to characterize the samples.	