

Supporting Information

An Edible Triboelectric Nanogenerator for Babycare Application

Kang Yan^{a†}, Xiao Li^{a†}, Xiao-Xiong Wang^{a*}, Miao Yu^c, Zhiyong Fan^b, Seeram
Ramakrishna^d, Han Hu^e and Yun-Ze Long^{a*}

^a *Collaborative Innovation Center for Nanomaterials & Devices, College of Physics,
Qingdao University, Qingdao 266071, China*

^b *Department of Electronic & Computer Engineering, The Hong Kong University of
Science & Technology, Kowloon, Hong Kong, China*

^c *Department of Mechanical Engineering, Columbia University, New York, NY 10027,
USA*

^d *Center for Nanofibers & Nanotechnology, National University of Singapore,
Singapore*

^e *State Key Laboratory of Heavy Oil Processing, College of Chemical Engineering,
China University of Petroleum (East China), Qingdao, 266580, China*

[†]These two authors contributed equally to this work.

*Corresponding author. Tel: +86 139 5329 0681

E-mail: yunze.long@qdu.edu.cn (Y Long) or wangxiaoxiong69@163.com (X Wang)

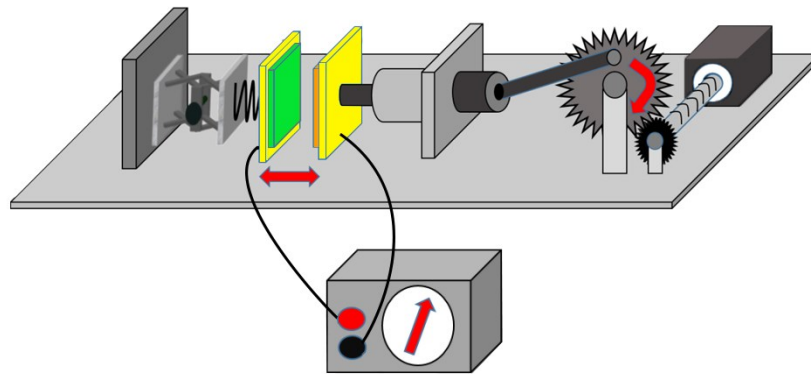


Figure S1 Schematic diagram of the TENG test set.

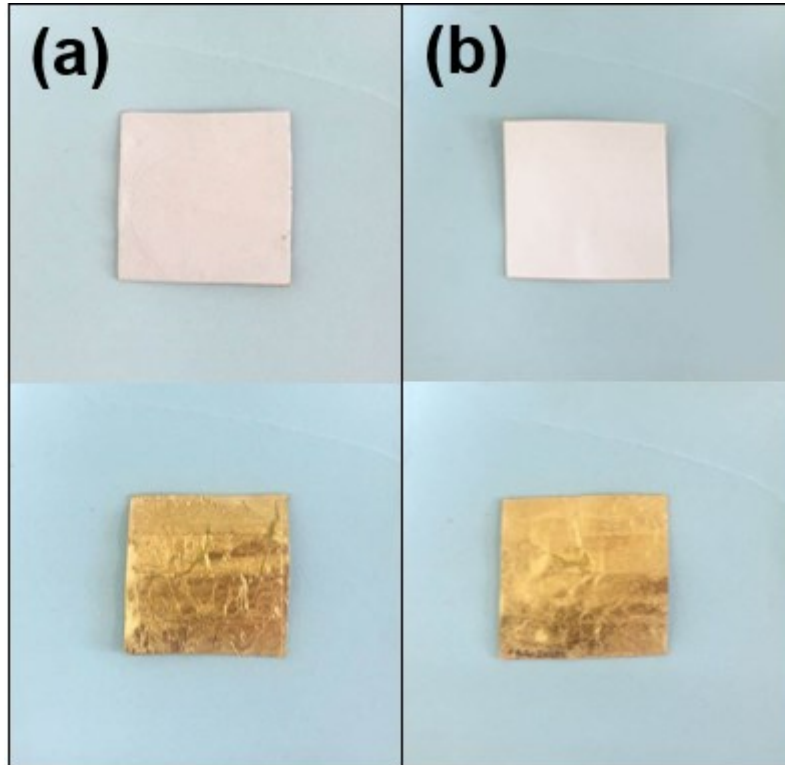


Figure S2 Physics diagram of TENG. (a) CMCS (b) CMC-Na



Figure S3 (a) Flexibility of CMCS fiber membrane. (b) Flexibility of CMC-Na fiber membrane.

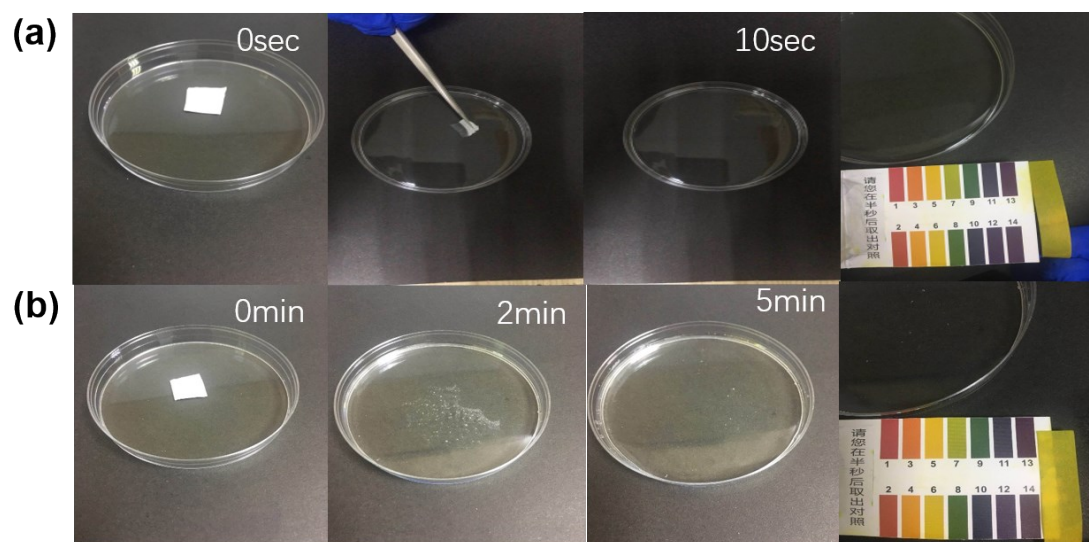


Figure S4 (a) Water solubility of CMCS fiber membrane. (b) Water solubility of CMC-Na fiber membrane.

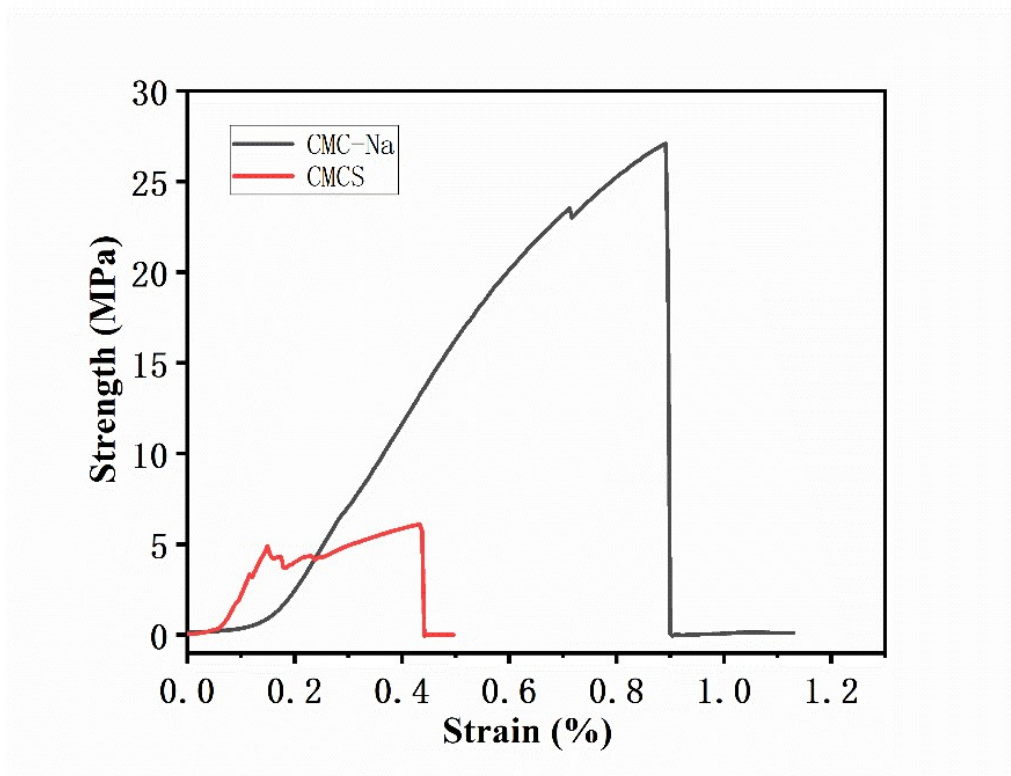


Figure S5 Tensile properties of CMCS fiber membrane and CMC-Na fiber membrane.

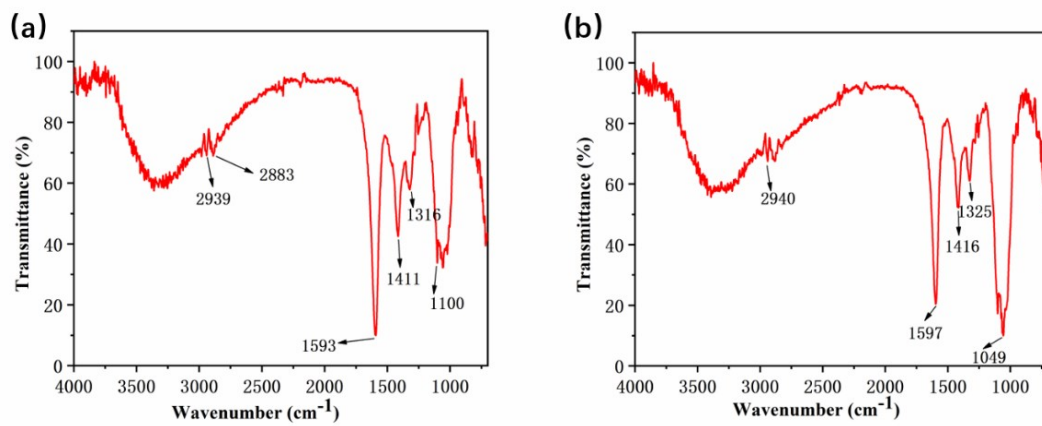


Figure S6 FTIR spectra of the nanofiber membranes. (a) FTIR spectra of CMCS nanofiber membrane. (b) FTIR spectra of CMC-Na nanofiber membrane.

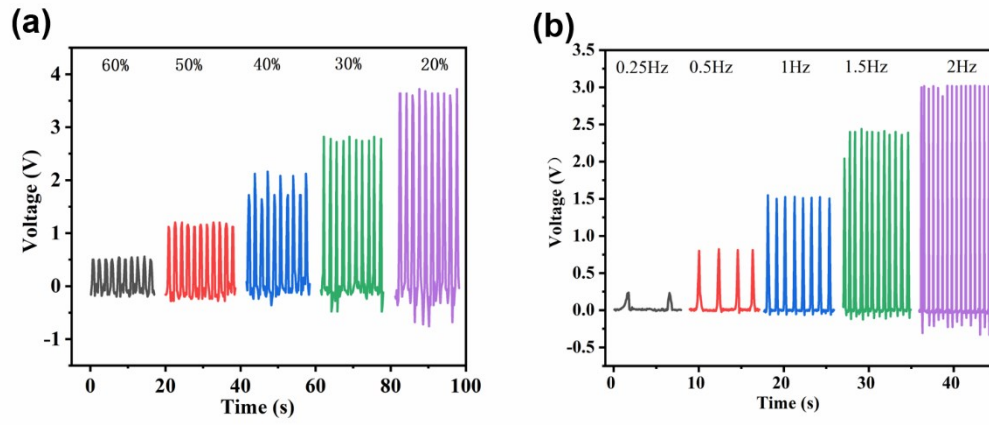


Figure S7 The open circuit voltage of TENG under different (a) ambient humidity, (b) impact frequency.