

Supporting Information

Influence of γ -AlOOH Morphology on Composite Separator

Performance for Lithium-Ion Batteries

Xianghai Li, Xiaxia Yang, Shiyu Yan, Xiangyue Liu, Gang Yang*

State Key Laboratory of Materials-Oriented Chemical Engineering College of
Chemical Engineering, Nanjing Tech University, No. 30 Puzhu South Road, Nanjing
211816, China

*Corresponding author. E-mail address: yanggang@njtech.edu.cn

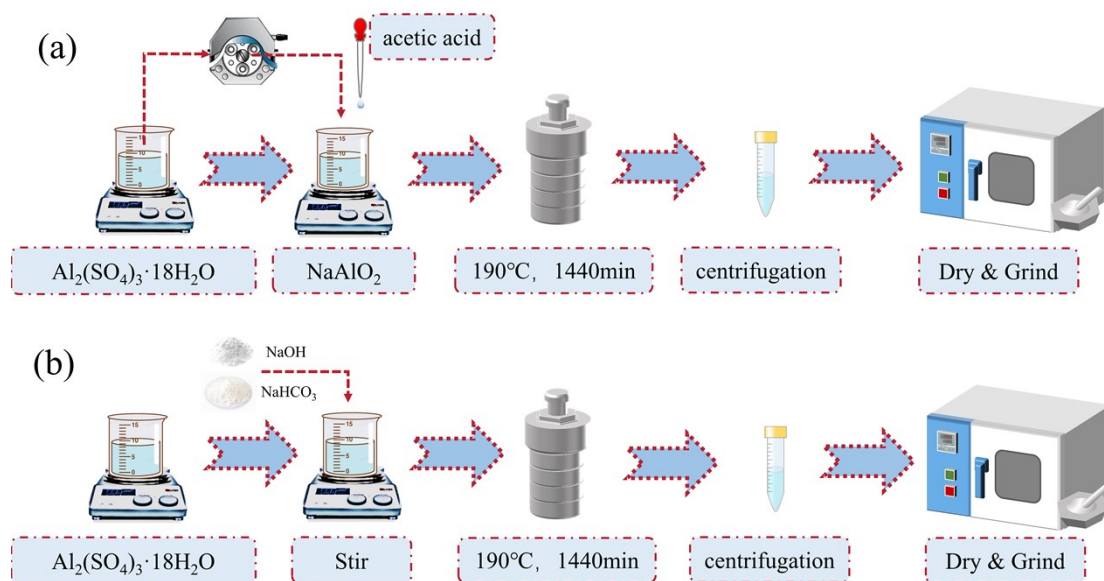


Figure S1 Preparation of γ -AlOOH with Different Morphology: (a) γ -AlOOH nanorods, (b) γ -AlOOH nanosheets

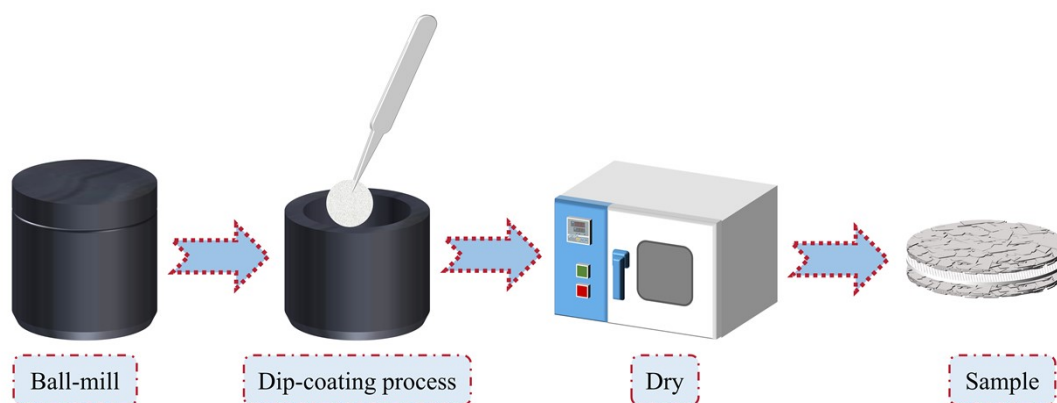


Figure S2 Preparation of γ -AlOOH-coated Celgard separator

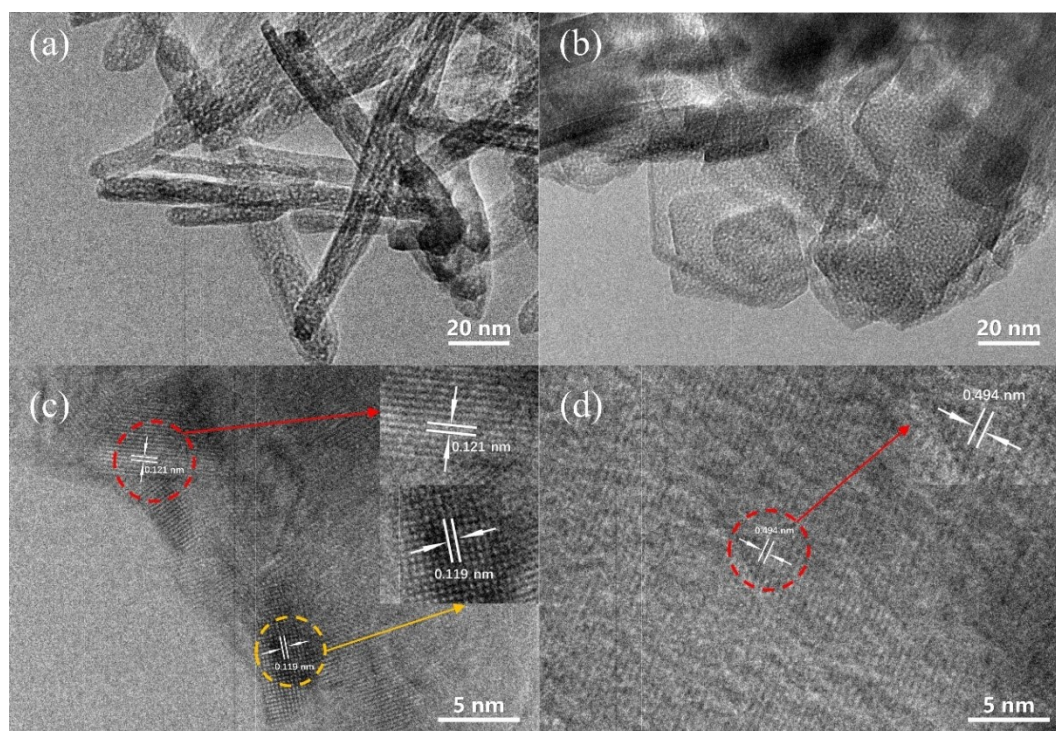


Figure S3. TEM and HRTEM images of γ -AlOOH with different morphologies: (a, c) γ -AlOOH nanorod, (b, d) γ -AlOOH nanosheet

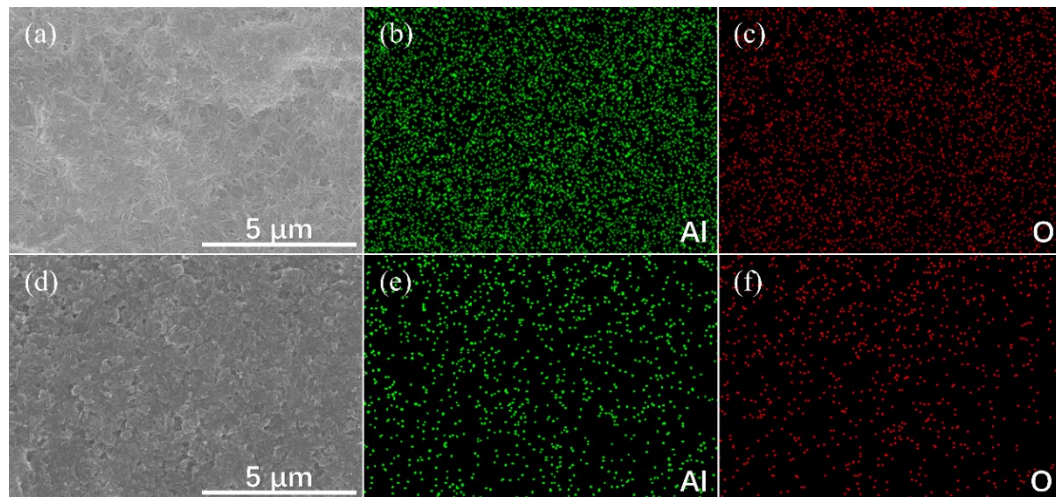


Figure S4 EDS elemental mapping of the γ -AlOOH-coated separators: (a-c) Celgard2325-nanorod, (d-f) Celgard2325-nanosheet

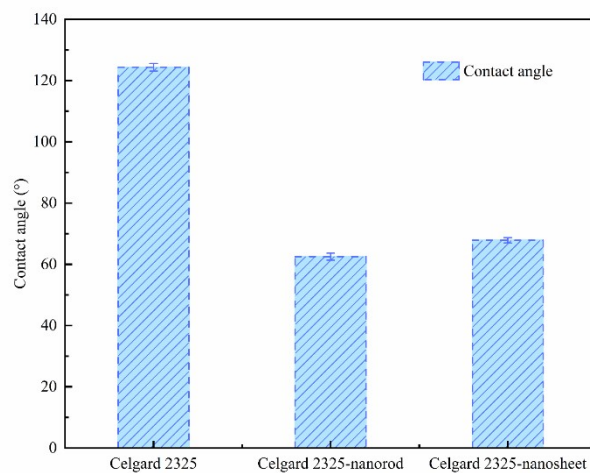


Figure S5 Electrolyte wettability of different separators

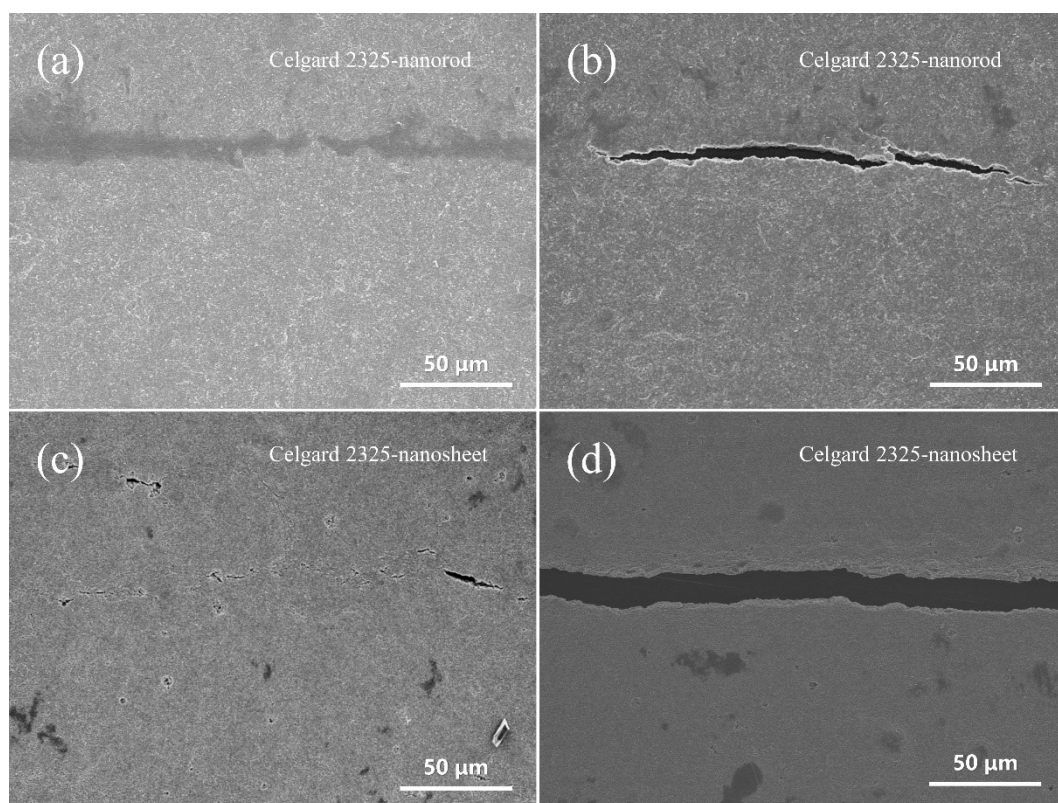


Figure S6 Repeated folding test of the separators: (a, c)100 times, (b, d)300 times

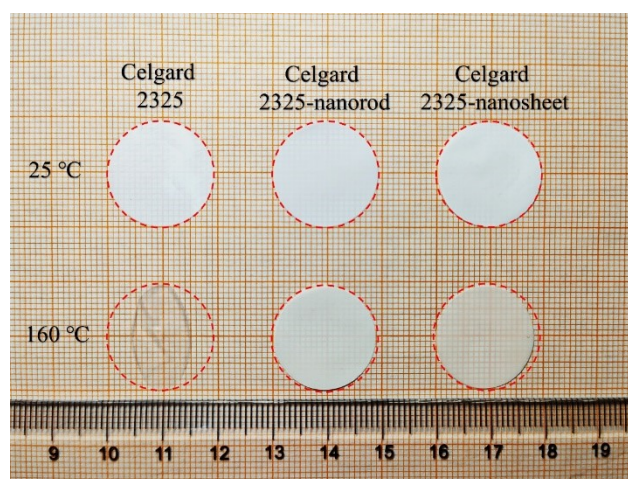


Figure S7 pictures after heat treatment at 25 °C, 160 °C for 1 h of separators.