

## Supplemental information

### Sulfonated organosilica mesocellular foam for catalyzing bulky molecules

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#### *Chemical extraction of banana pseudo-stem fibers*

Dried banana pseudo-stem (20 g) was treated with 1 (wt) % NaOH aqueous solution at 80 °C for 5 h. Afterwards, the sample was immersed in 300 mL of 1 (wt) % NaOH aqueous solution containing 0.5 (wt) % H<sub>2</sub>O<sub>2</sub> at 60 °C for 5 h to further remove hemicelluloses and lignins. Finally, the sample was washed with DI water and dried in a hot air oven at 105 °C for 24 h.



Fig. S1 Digital photograph of the banana pseudo-stem fibers

The cellulose content was determined following the Kurschner-Hoffner approach. 1g of dried banana pseudo-stem was treated with 25ml of alcoholic nitric acid (4:1, v/v) solution under reflux for four cycles. After four cycles of treatment, the cellulose was washed, dried and weighed.