**Additional file**



Figure S1. Optical density of the *Chlorella vulgaris* culture at 660 nm as a function of time.



Figure S2. Weight gain of MOI monomer on SF fibers as a function of reaction time. The weight gain of SF fibers after MOI modification was calculated as follows: weight gain (wt%) = 100 × (W2-W1)/W1, where W1 and W2 are the dried original SF fibers and MOI-modified SF fibers, respectively.