

## Supplementary Information

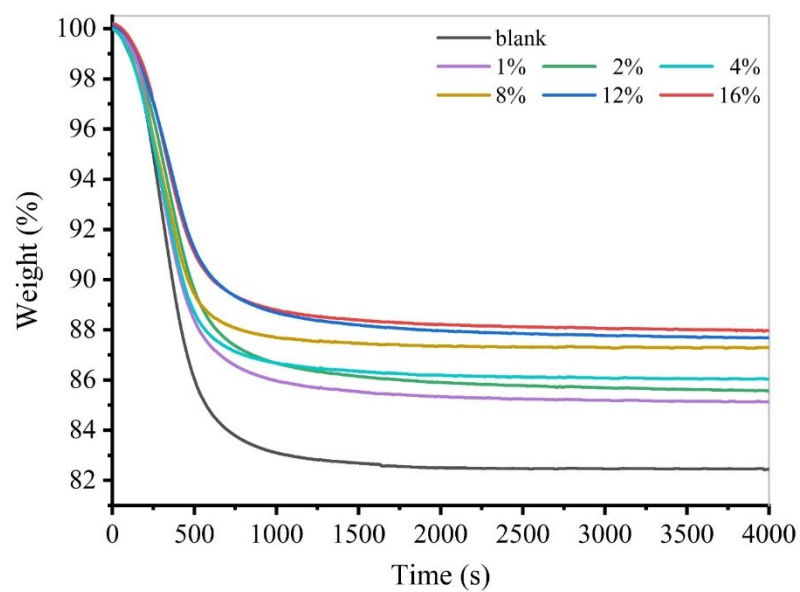
### Structure and properties of chitosan/sodium dodecyl sulfate composite films

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Table S1 The weight loss of composite films with various SDS concentrations at  
different stage.

Weight loss(%) at different temperature	140 °C	200 °C	300 °C	600 °C
Blank	18.1383	23.6064	51.8562	68.2447
4%	6.4793	7.8142	57.5293	64.4812
8%	6.1744	7.5111	57.2501	63.9344
16%	4.2294	5.6831	52.1126	57.8248



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20 Figure S1. Water content of the composite films with various SDS concentrations (Measured at a

21 constant temperature of 120°C using a thermogravimetric analyzer).

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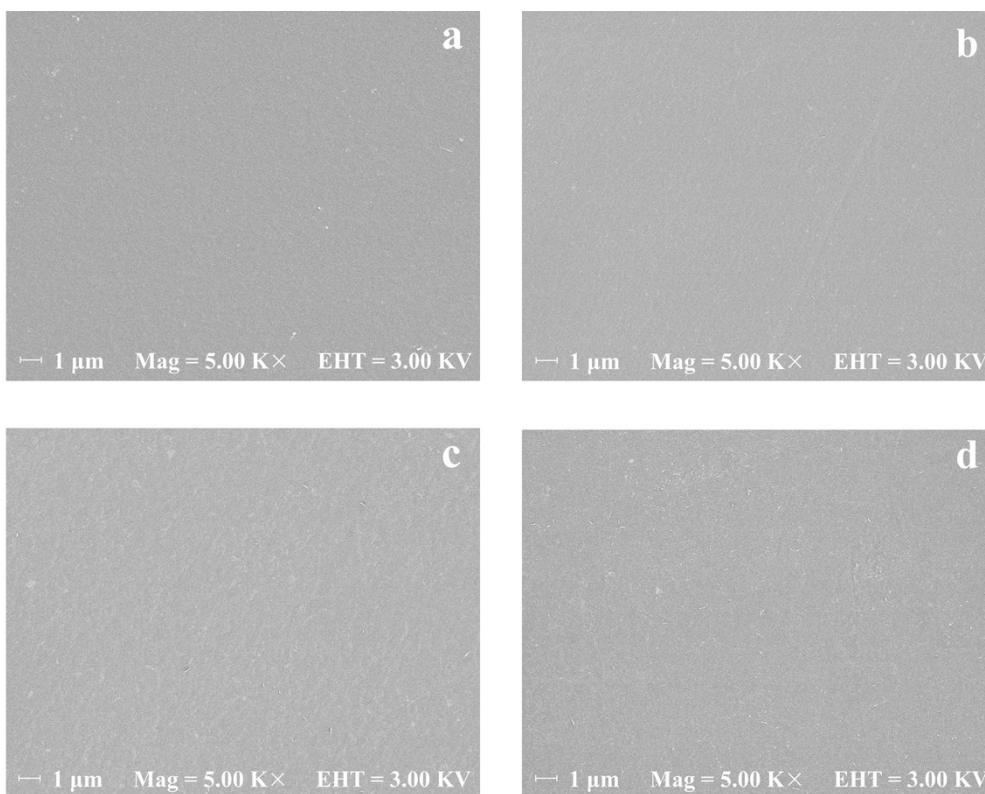
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32 Figure S2. SEM images of composite films with various SDS concentrations (a: blank; b: 4%; c:

33 8%; d: 16%).

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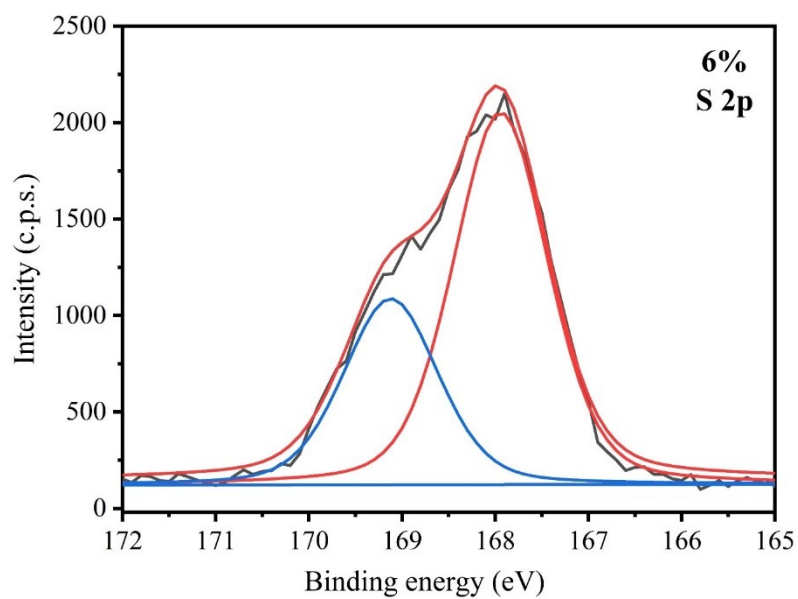


Figure S3. High resolution XPS spectra of S element for sample 6%.

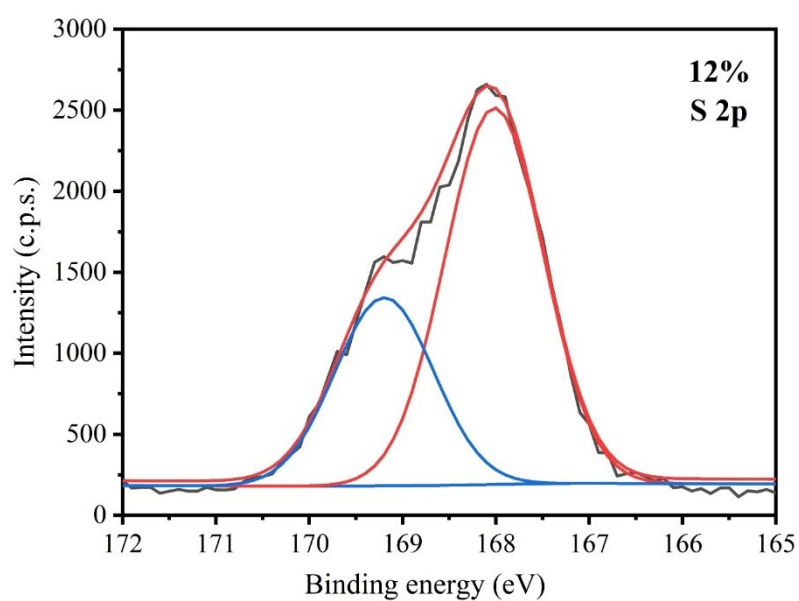
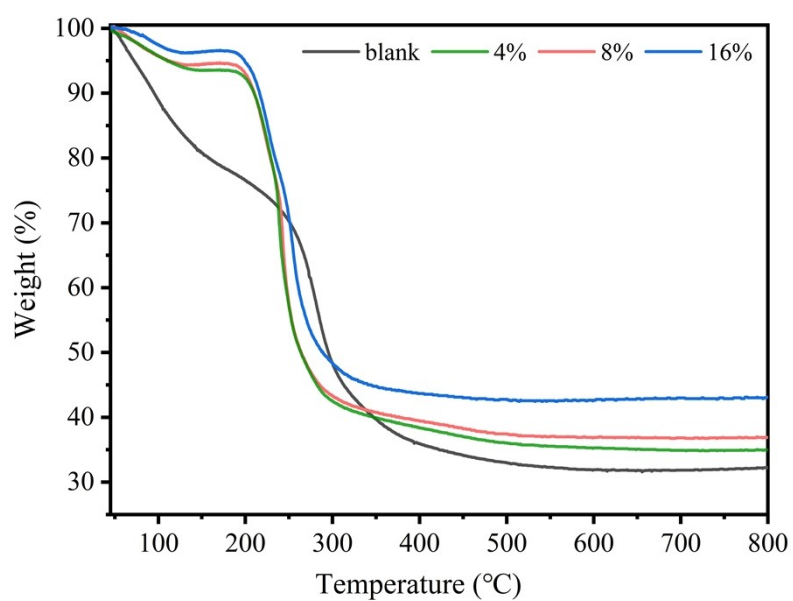


Figure S4. High resolution XPS spectra of S element for sample 12%.

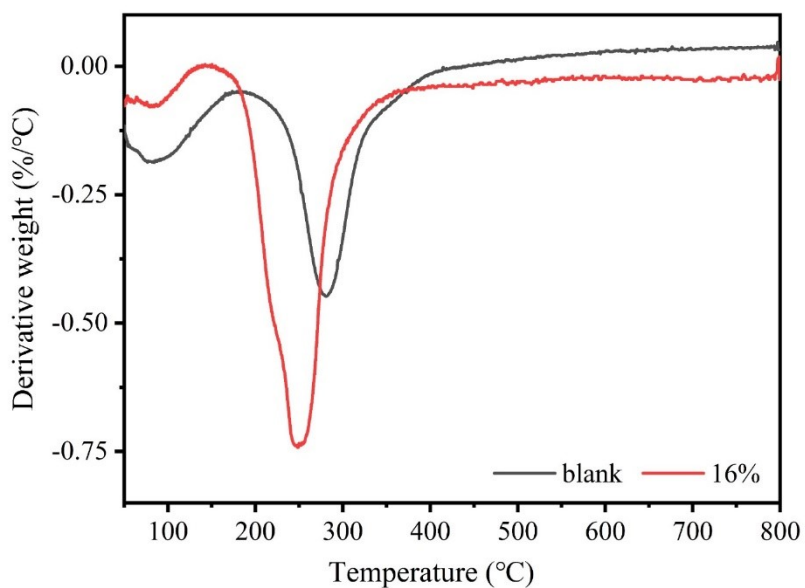


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50 Figure S5. Thermal performance characterization of composite films with various SDS

51 concentrations.

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54 Figure S6. The DTG thermograms of pure chitosan and composite film.

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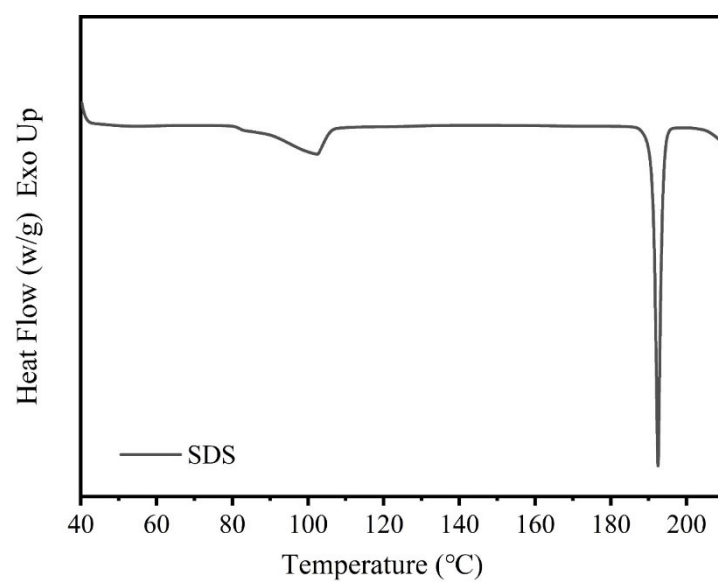


Figure S7. DSC thermograms of pure SDS