

Supplementary Information

Precision Synthesis of 3-Substituted Urushiol Analogues and the Realization of Their Urushiol-Like Performance

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1. FTIR spectra of UA0~3.

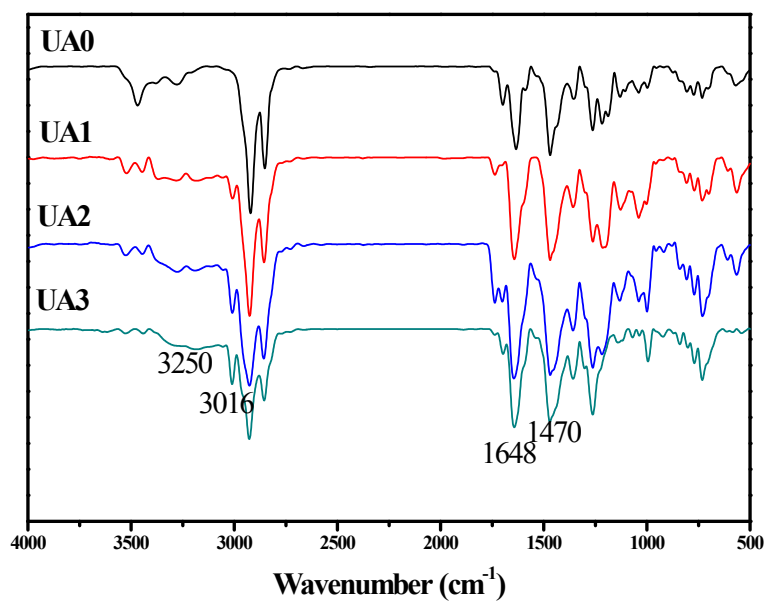


Fig. S1. FTIR spectra of UA0~3.

2. Cyclic voltammetry plots of UA1 and UA2.

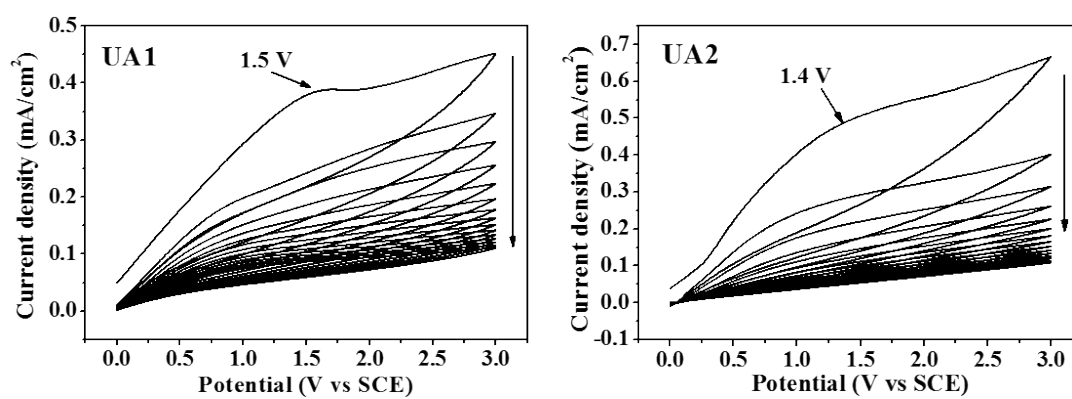
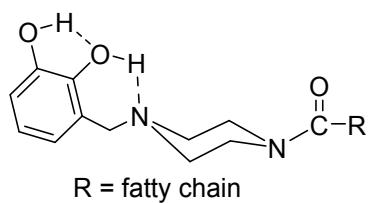
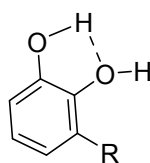


Figure S2. Cyclic voltammetry plots of UA1 and UA2 with successive 15 potential scan cycles in range of 0~3.0 V vs. SCE at scan rate 30 mV/s

3. The intramolecular H-bonding models of urushiol and UA0~3.



Intramolecular H-bonding model of UA0~3



Intramolecular H-bonding model of urushiol

Figure S3. Intramolecular H-bonding models of urushiol and UA0~3.

4. ATR-FTIR spectral comparison of UA0~2, UAm, and urushiol with their coatings.

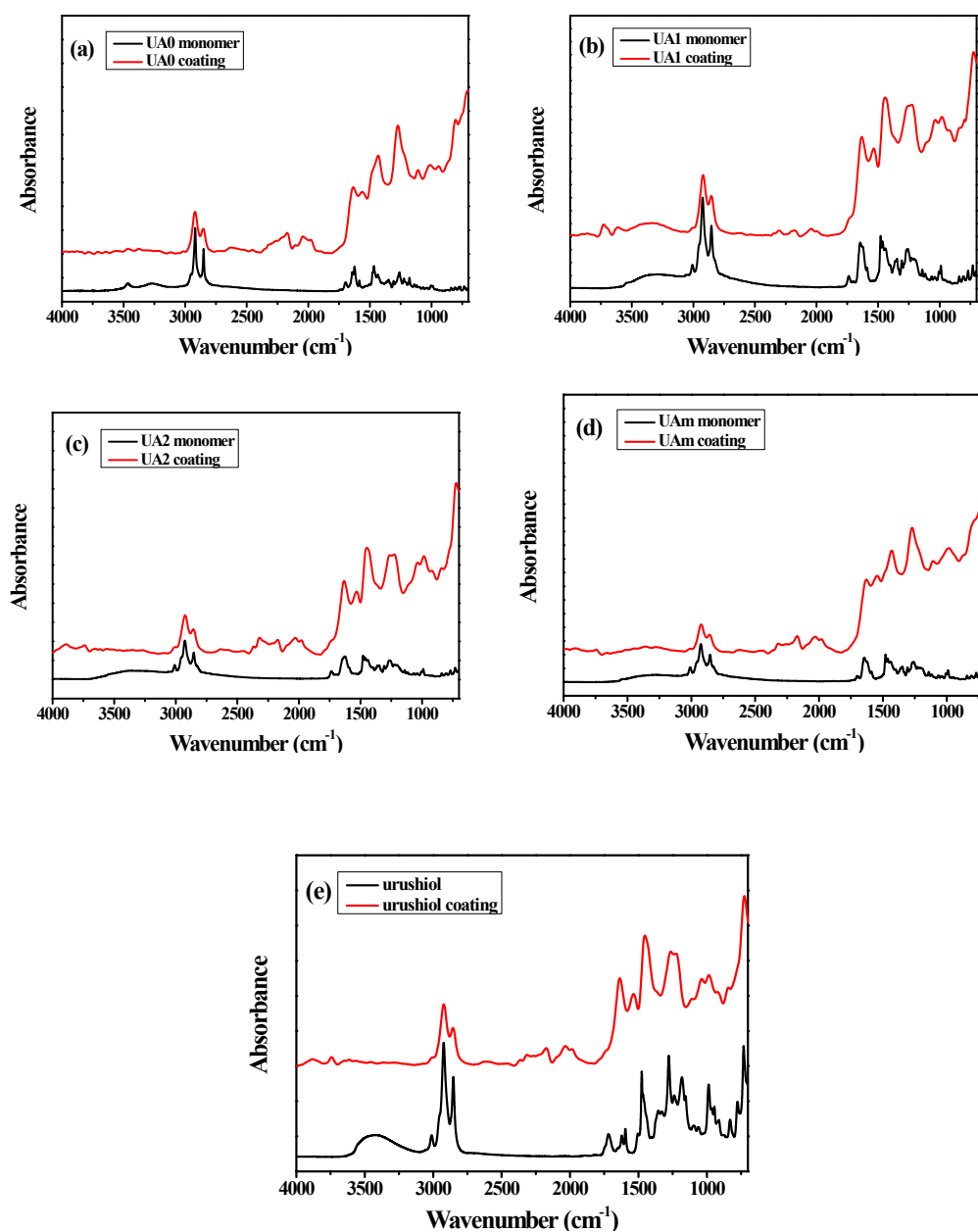


Figure S4. ATR-FTIR spectral comparison of UA0~2 (a-c), UAm (d), and urushiol (e) with their coatings.

5. TG analysis of the coatings of urushiol and urushiol analogues.

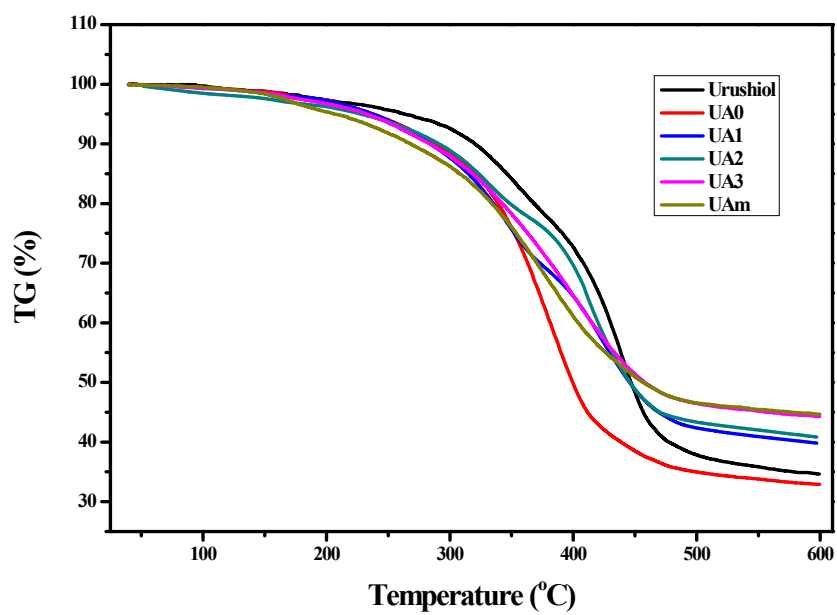
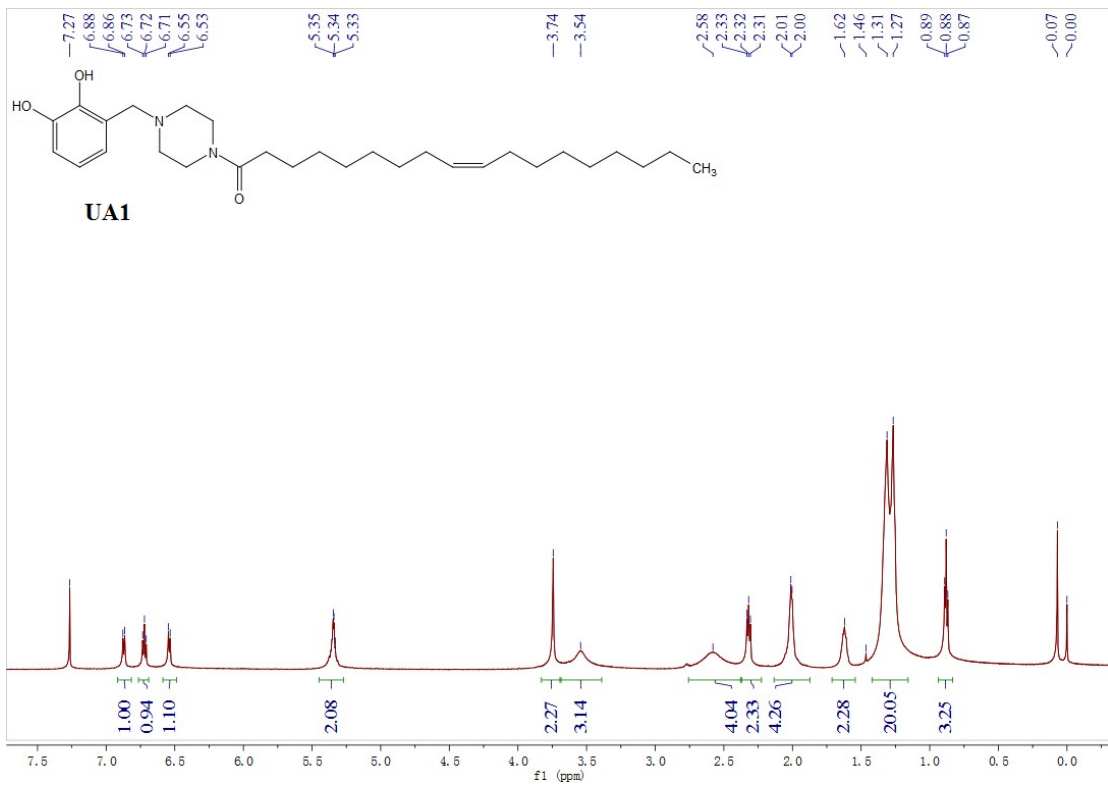
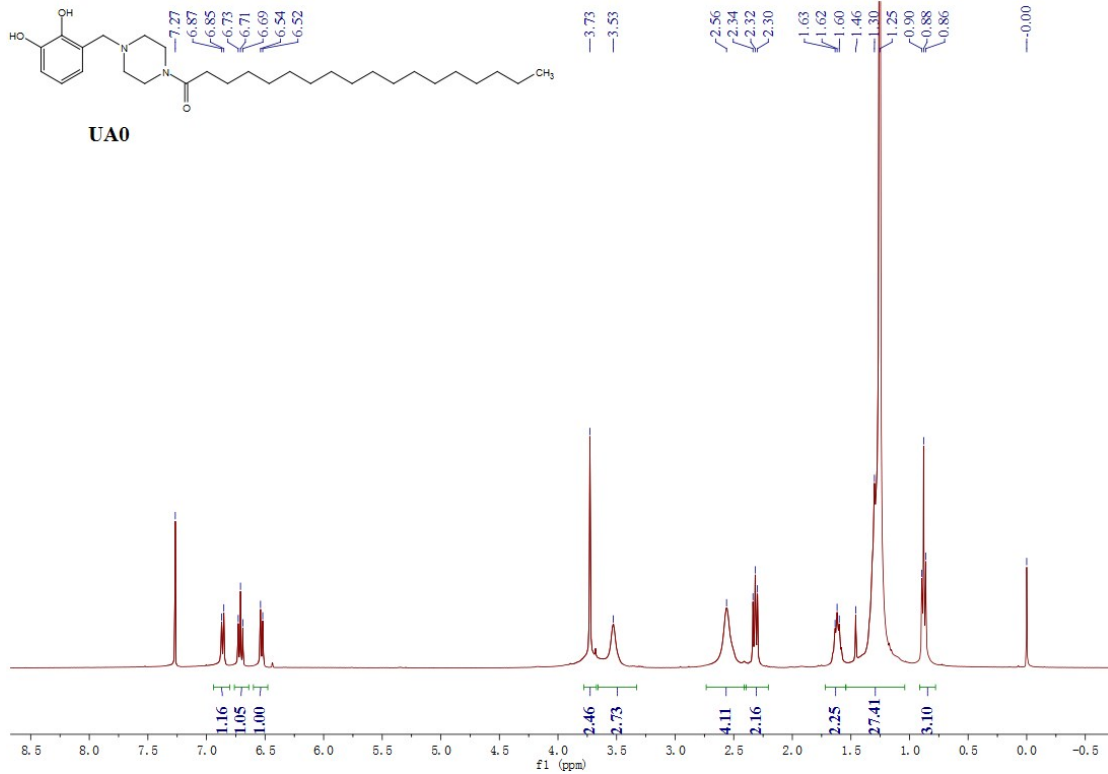


Figure S5. TG analysis of the coatings of urushiol and urushiol analogues.

6. ^1H NMR spectra of UA0~3.



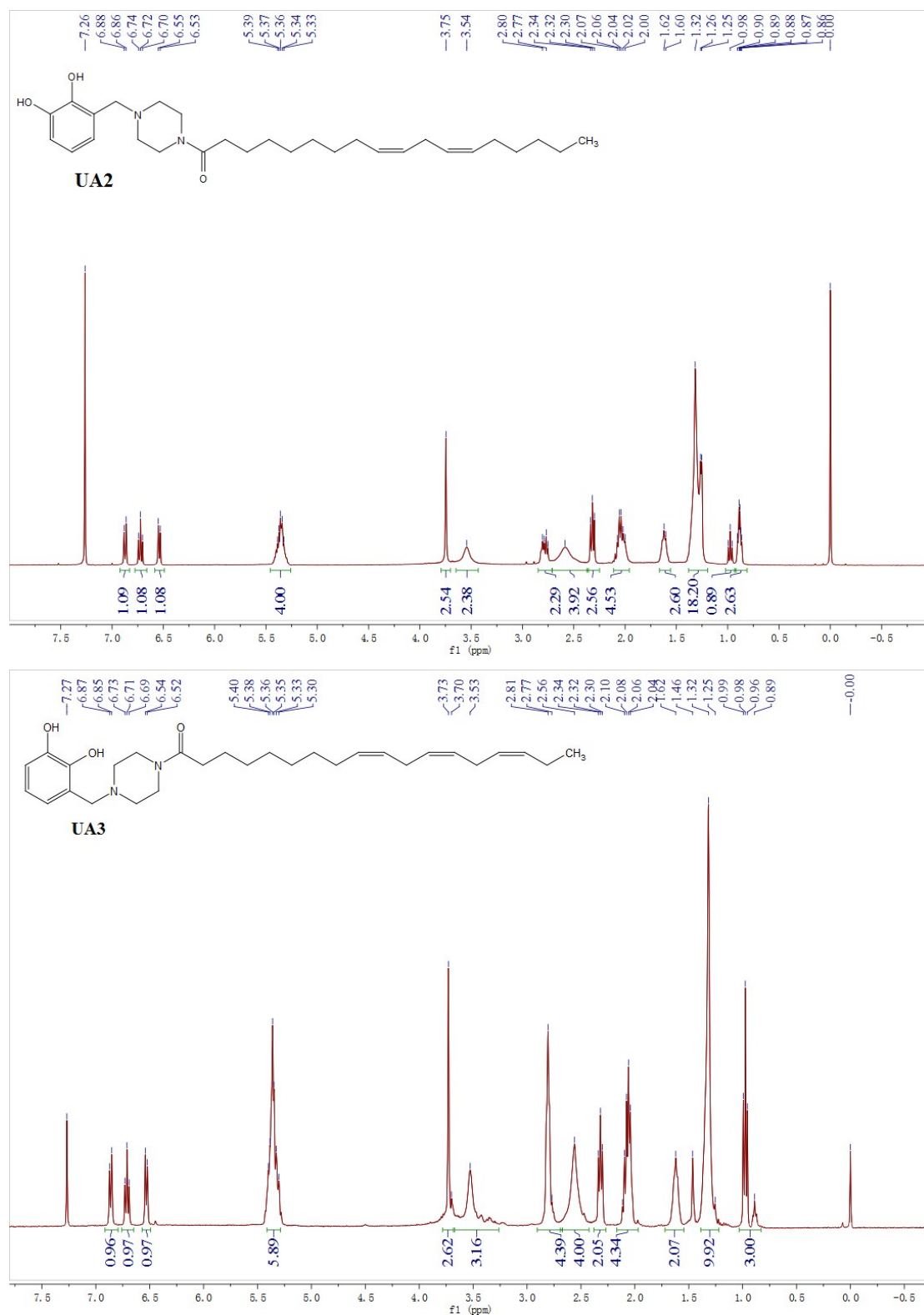


Fig. S6. ^1H NMR spectra of UA0~3.