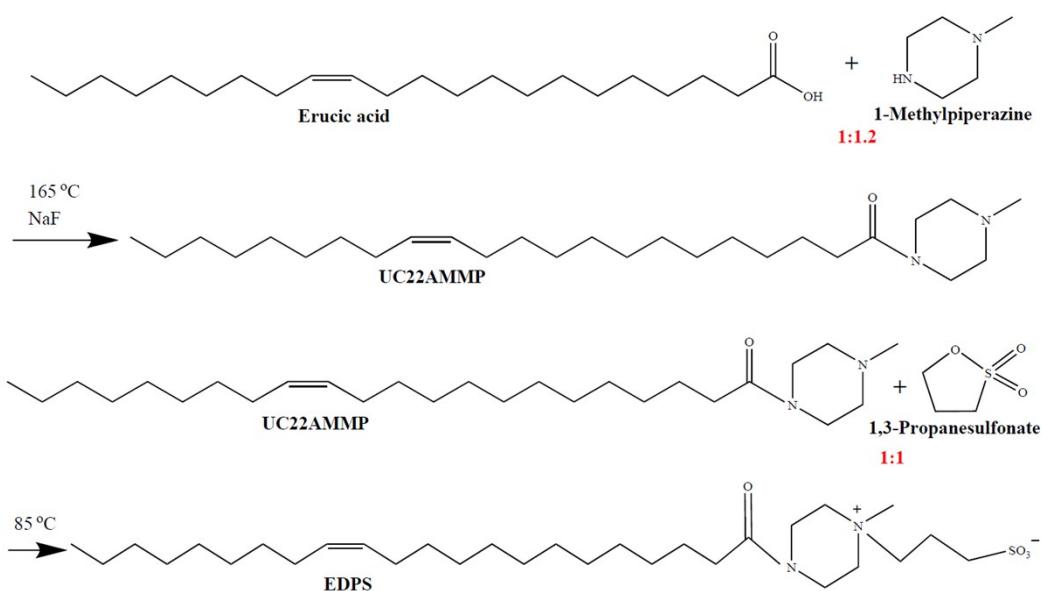


## Electronic Supplementary Information



Scheme S1. The synthetic process of EDPS.

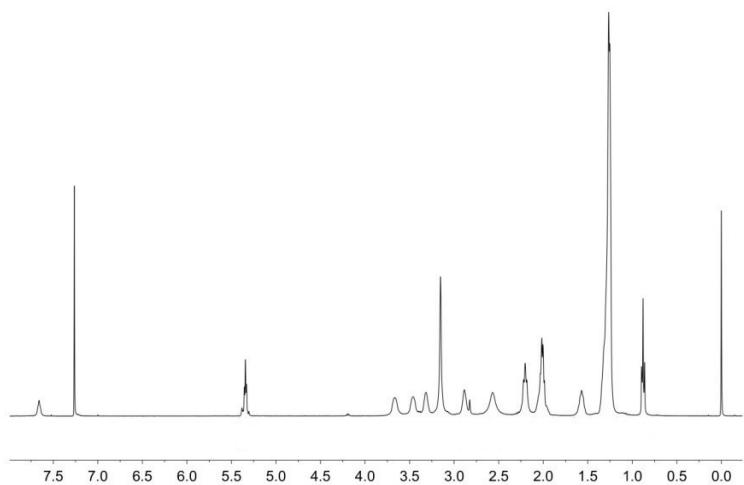
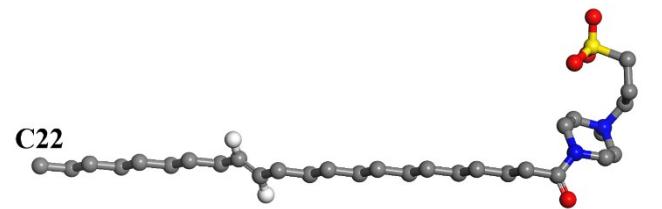
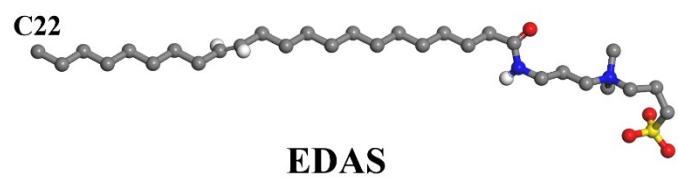


Figure S1. <sup>1</sup>H NMR spectrum of EDPS in  $\text{CDCl}_3$ .



**EDPS**



**EDAS**

Figure S2. The structures of EDPS and EDAS molecules

Table S1. The viscosity comparison of different C<sub>22</sub>-tailed surfactant systems

Surfactant	Concentration (mM)	Viscosity (mPa·s)	Temperature (°C)
EDPS	25	$\sim 1 \times 10^6$	25
EHAC/NaSal <sup>33</sup>	60/36	$\sim 3 \times 10^3$	25
EDAA <sup>35</sup>	30	$\sim 2 \times 10^4$	25
UC22AMPM <sup>35</sup>	30	$\sim 7 \times 10^2$	25
EDAS <sup>40</sup>	25	$\sim 1 \times 10^4$	25

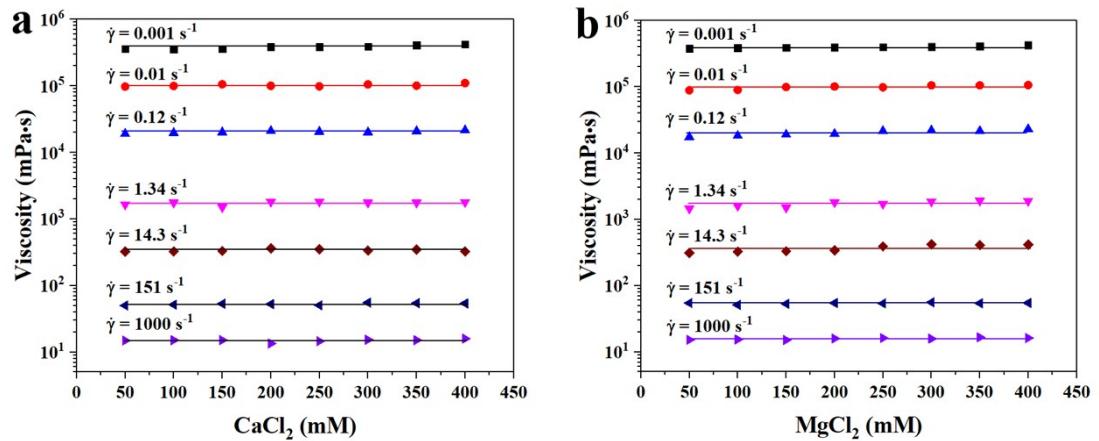


Figure S3. Effects of  $CaCl_2$  (a) and  $MgCl_2$  (b) concentrations on the steady shear viscosity of 25 mM EDPS solution at 25 °C.