Unusual pH-responsive fluid based on a simple tertiary amine surfactant: the formation of vesicles and wormlike micelles

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Figure 1 ¹HNMR spectroscopy of DOAPA



Figure 2 The IR results of the DOAPA system at different pH

The NH vibration of N, N-dimethyl oleoaminde-propylamine moved from 3426 cm⁻¹ to 3478 cm⁻¹ when pH changed from 6.20 to 6.82 as shown in Figure 2, and the NH vibration of N, N-dimethyl oleoaminde-propylamine moved from 3425 cm⁻¹ to 3478 cm⁻¹ when pH changed from 7.42 to 6.82, which demonstrated the hydrogen bonds were strengthened with the adjusting pH in this system.