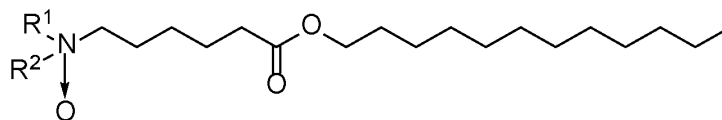


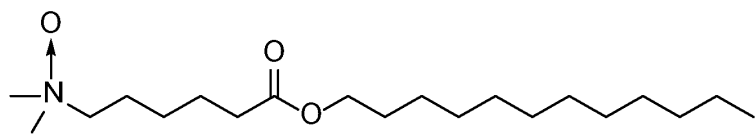
CLAIMS

1. A compound of the following formula:



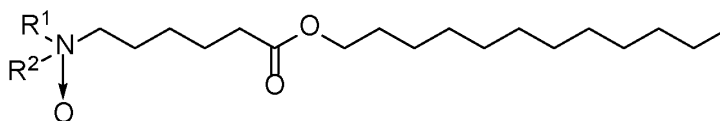
wherein R¹ and R² may be the same or different, and comprise at least one group selected from the group consisting of C₁-C₆ alkyl.

2. The compound of Claim 1, wherein the compound is dodecyl 6-(dimethylamino)hexanoate *N*-oxide, having the following formula:



3. The compound of Claim 1, having a critical micelle concentration (CMC) in water of about 0.08 mmol.
4. The compound of Claim 1, having a plateau value of a minimum surface tension in water of about 28 mN/m.
5. The compound of Claim 1, having a surface tension in water equal to or less than 30 mN/m at concentrations of 0.08 mM or greater.
6. The compound of Claim 1, having a surface tension water equal to or less than 40 mN/m at a surface age of 4900 ms or greater.
7. A method of synthesizing an amino acid surfactant, comprising the steps of: (1) opening a lactam to yield an amino acid having an N-terminus;
 (2) reacting the N-terminus of the amino acid with an alkylating agent to yield a tertiary amine;
 (3) reacting the tertiary amine with an alcohol under acidic conditions to yield an amino acid ester having an N-terminus; and

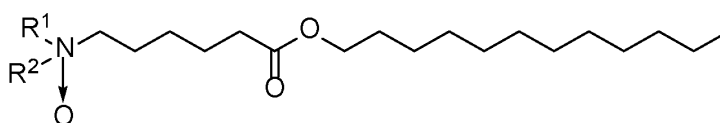
(4) reacting the N-terminus of the amino acid ester with an oxidizing agent to yield an amino acid surfactant of the following formula:



wherein R¹ and R² may be the same or different, and comprise at least one group selected from the group consisting of C₁-C₆ alkyl.

8. The method of Claim 7, wherein in step 1, the lactam is caprolactam.
9. The method of Claim 7, wherein in step 2, the alkylating agent is formaldehyde or paraformaldehyde.
10. The method of Claim 7, wherein in step 3, the alcohol is dodecanol.
11. The method of Claim 7, wherein in step 3, the acid is *p*-toluene sulfonic acid.
12. The method of Claim 7, wherein in step 4, the oxidizing agent is hydrogen peroxide.
13. A liquid composition comprising:
a medium; and

a surfactant of the following formula:



wherein R¹ and R² may be the same or different, and comprise at least one group selected from the group consisting of C₁-C₆ alkyl.

14. The composition of Claim 13, wherein the medium is water.