

Supporting Information for

Enantioselective Adsorption of Surfactants

monitored by ATR-FTIR

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t-BOC-N-phenylalaninoyl-11-undecene (BNPU) ^1H NMR of BNPU powder (CDCl_3 , 400 MHz) δ 7.31 – 7.20 (m, 5H), 5.85 – 5.78 (m, 1H), 5.65 (br. s, 1H), 5.02 (br. s, 1H), 5.02 – 4.92 (2 d, 2H), 3.15 – 2.99 (m, 4H), 2.07 – 2.01 (m, 2H), 1.63 – 1.18 (m, 15); ^{13}C NMR of BNPU powder (CDCl_3 , 100 MHz) δ 170.9, 155.3, 139.2, 136.9, 129.3, 128.6, 126.9, 114.2, 80, 56.1, 39.5, 38.8, 33.8, 29.4, 29.3, 29.1, 28.9, 28.3, 26.8; m/z (relative intensity) 41 (27.4); 55 (17.1); 65 (7.6); 81 (2.8); 91 (100); 191 (29.4); accurate mass ESI MS m/z 439.3 [M+Na]

N-phenylalaninoyl-11-undecene (NPU) ^1H NMR of NPU powder (CDCl_3 , 400 MHz) δ 7.31 – 7.21 (m, 5H), 6.85 (br. s, 1H), 5.81 – 5.77 (m, 1H), 5.65 (br. s, 1H), 5.00 – 4.91 (2 d, 2H), 4.23 (br. s, 1H), 2.81 – 3.28 (m, 4H), 2.05 – 2.00 (m, 2H), 1.37 – 1.18 (m, 14); ^{13}C NMR of NPU powder (CDCl_3 , 100 MHz) δ 139.2, 134.3, 129.3, 129.0, 127, 114.1, 54.9, 39.8, 38.8, 37.5, 33.8, 29.4, 29.3, 29.2, 29.1, 28.9, 28.8, 26.7; m/z (relative intensity) 41 (40.9); 55 (27.1); 69 (8.5); 77 (10.8); 91 (18.5); 103 (14.6); 120 (100); 225 (16.9); accurate mass ESI MS m/z 339.2 [M+Na]

N-lauroyl-L-phenylalanine(L-NLP) and N-lauroyl-D-phenylalanine (D-NLP)

^1H NMR(CDCl_3 , 400 MHz) δ 7.31 – 7.15 (m, 5H), 4.90 (m, 1H), 4 (br. s, 1H) 3.12 – 3.26 (m, 2H), 2.37 – 2.16 (m, 2H), 1.80 – 1.2 (m, 18 H), 1.01 - 0.86 (m, 3H); ^{13}C NMR (CDCl_3 , 100 MHz) δ 173, 174, 139.2, 138, 127, 129, 130, 52, 37.5, 38, 32.1, 29.8, 29.6, 29.5, 24.2, 22.9, 14.3; m/z 348.3 [M+H]

N-d₂₃-lauroyl-L-phenylalanine (L-d₂₃-NLP) and N-d₂₃-lauroyl-D-phenylalanine (D-d₂₃-NLP)

^1H NMR (CDCl_3 , 400 MHz) δ 7.26 – 7.15 (m, 5H), 4.65 (m, 1H), 4 (br. s, 1H), 5.02 (br. s, 1H), 3.46 – 3.02 (m, 2H), 2.11 – 2.07 (m, 2H), 1.63 – 1.46 (m, 18 H), 1.19 - 0.86 (m, 3H); ^{13}C NMR (CDCl_3 , 100 MHz) δ 173, 174, 139.2, 138, 127, 129, 130, 52, 37.5, 38, 32.1, 29.8, 29.6, 29.5, 24.2, 22.9, 14.3; m/z 371.4 [M+H]

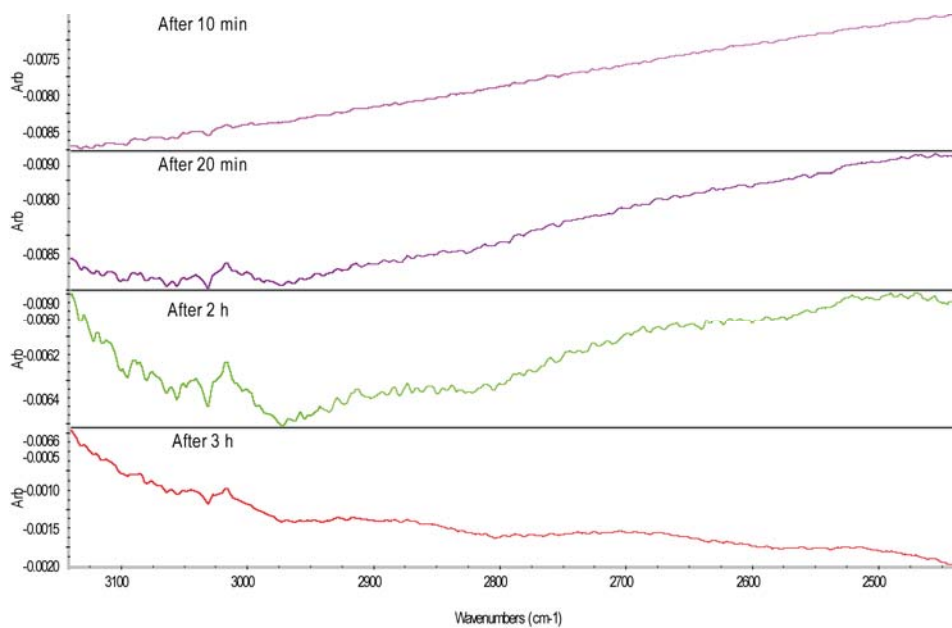


Figure A1 Spectrum of the chiral film taken, 10 min, 20 min, 2 h and 3 h after the background was taken. A spectrum of the same film was used as a background; all spectra were taken in carbon tetrachloride. No significant change in the C-H stretching region ($2800\text{--}3000\text{ cm}^{-1}$) suggested that the film was stable. (colour online)