

Electronic Supplementary Materials

Table S1 Induction time and maximum methane storage capacity of FS at a temperature of 2 °C, and a pressure of 6 MPa in Fig. 3

Surfactant/mM	Induction time/min	maximum methane storage capacity (V/V)
PBS (1 mM)	65	156
PBS (4 mM)	2	138
PBS (7 mM)	20	150
PBS (10 mM)	12	142
PBS (20 mM)	19	146
PBS (30 mM)	15	151
PHS (0.7 mM)	100	152
PHS (1 mM)	108	145
PHS (4 mM)	21	152
PHS (7 mM)	1	141
PHS (10 mM)	6	156
POS (0.7 mM)	58	153
POS (1 mM)	58	146
POS (4 mM)	7	141
AOS (0.7 mM)	44	136
AOS (1 mM)	102	152
AOS (4 mM)	No	40
AOS (7 mM)	No	46
TOS (0.7 mM)	35	41
TOS (1 mM)	23	36
TOS (4 mM)	58	49
TOS (7 mM)	30	19

Note: there is not an obvious induction time.

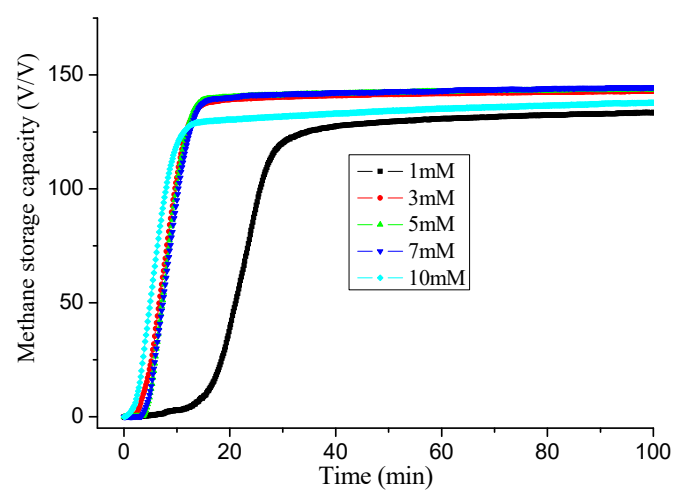


Fig. S1 Methane consumption versus time for SDS at 300 r/min, a temperature of 2°C, and a pressure of 6 MPa.