Supplementary Information

Phillic-phobic chemical dynamics of 1st tier dendrimer dispersed o/w nanoemulsion

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Table S1 Purity level of chemical used for nanoemulsion preparation.

Name of chemical	Purity level (%)
Cellulose acetate propionate	99.5
Cellulose acetate butyrate	99.5
Tween-20	99.0
Sodium dodecyl sulfate	99.9
Cetyltrimethylammonium bromide	99.9
Castor oil	99
Olive oil	99
Linseed oil	99
ethyl acetate	99.5
Glycerol	99.5
Ethanol	99

All the chemicals were used with any further purification.

Table S2 Composition (w/w %) of the different chemicals used in the current study for preparation of nanoemulsion

S.No	Chemicals→ / NEs↓	Water	CAP	CAB	Tw-20	SDS	CTAB	CO	LO	OO	EtOH	Glycerol	EA
F1	OO+CAP+TW20	80.2	0.02		0.12	-	-	-	-	0.2	5.5	7.8	6.2
F2	OO+CAB+TW20	80.2		0.02	0.12	-	-	-	-	0.2	5.5	7.8	6.2
F3	OO+CAP+SDS	80.2	0.02	-	-	0.12	-	-	-	0.2	5.5	7.8	6.2
F4	OO+CAB+SDS	80.2	-	0.02		0.12	-	-	-	0.2	5.5	7.8	6.2
F5	OO+CAP+CTAB	80.2	0.02	-	-	-	0.12	-	-	0.2	5.5	7.8	6.2
F6	OO+CAB+CTAB	80.2		0.02			0.12	-	-	0.2	5.5	7.8	6.2
F7	CO+CAP+TW20	80.2	0.02	-	0.12	-	-	0.20	-	-	5.5	7.8	6.2
F8	CO+CAB+TW20	80.2	-	0.02	0.12	-	-	0.20	-	-	5.5	7.8	6.2
F9	CO+CAP+SDS	80.2	0.02	-	-	0.12	-	0.20	-	-	5.5	7.8	6.2
F10	CO+CAB+SDS	80.2	-	0.02	-	0.12		0.20	-	-	5.5	7.8	6.2
F11	CO+CAP+CTAB	80.3	0.02	-	-	-	0.12	0.20	-	-	5.5	7.8	6.2
F12	CO+CAB+CTAB	80.2	-	0.02	-	-	0.12	0.20	-	-	5.5	7.8	6.2
F13	LO+CAP+TW20	80.2	0.02	-	0.12	-	-	-	0.2	-	5.5	7.8	6.2
F14	LO+CAB+TW20	80.2		0.02	0.12	-	-	-	0.2	-	5.5	7.8	6.2
F15	LO+CAP+SDS	80.2	0.02	-	-	0.12	-	-	0.2	-	5.5	7.8	6.2
F16	LO+CAB+SDS	80.2		0.02	-	0.12	-	-	0.2	-	5.5	7.8	6.2
F17	LO+CAP+CTAB	80.2	0.02	-	-	-	0.12	-	0.2	-	5.5	7.8	6.2
F18	LO+CAB+CTAB	80.2	-	0.02	-	-	0.12	-	0.2	-	5.5	7.8	6.2

*The uncertainty in compositions $u(C) = 5\times 10^{-4}$.

Table S3 Densities (ρ /10^3kg·m^{-3}), viscosities (η /10^{-3} kg·m^{-1}·s^{-1}), surface tension(γ /mN·m^{-1}) and sound velocities (u/ m·s^{-1}) values of 5% (w/w) aq-DMSO, 10% (w/w) aq-DMSO, 15% (w/w) aq-DMSO and 20% (w/w) aq-DMSO at T = 298.15K

Systems	ρ /10^3kg·m^{-3}		η /10^{-3} kg·m^{-1}·s^{-1}		γ /mN·m^{-1}		u / m·s^{-1}		$\Delta\rho$	$\Delta\eta$	$\Delta\gamma$	Δ u
	Exp.	Lit.[24, 25]	Exp.	Lit[24]	Exp.	Lit.[26]	Exp.	Lit.[25]				
5% (w/w) aq-DMSO	1.003071	1.0038	0.9321	0.96	68.32	68.2	1520.52	-	-0.00073	-0.0279	0.12	-
10% (w/w) aq-DMSO	1.009813	1.009900	1.0127	1.06	67.34	66.6	1544.03	1544.66	-0.0001	-0.0473	0.74	-0.635

15% (w/w) aq-DMSO	1.016165	1.0174	1.1647	1.18	66.41	65.3	1568.10	-	-0.00124	-0.0153	1.11	-
20% (w/w) aq-DMSO	1.023219	1.023623	1.3397	1.34	65	64.2	1593.24	1592.19	-0.0004	0.0997	0.8	1.05

Unit: $\Delta\rho$ = 10^3kg·m^{-3}, $\Delta\eta$ =10^{-3} kg·m^{-1}·s^{-1}, $\Delta\gamma$ = mN·m^{-1} and Δ u = m.s^{-1} $\Delta\rho$ = Exp.-Lit, $\Delta\eta$ = Exp.-Lit, $\Delta\gamma$ = Exp.-Lit., Δ u = Exp.-Lit. values, (w/w) % in weight/ weight.

Table S4 Densities (ρ /10^3kg·m^{-3}) of blank (BNEs) and TTDMM loaded nanoemulsions (DNEs) with different oils, surfactants and co-surfactants at 293.15, 303.15 and 313.15 K

		CAP			**CAB**		
	Oil	Tw-20	SDS	CTAB	Tw-20	SDS	CTAB
				BNEs			
T/K		**F1**	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	1.012795	1.017216	1.010816	1.007919	1.020415	1.011733
303.15		1.009329	1.013531	1.006928	1.004240	1.016592	1.007956
313.15		1.004930	1.009657	1.002411	0.999578	1.011867	1.003623
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	1.009926	1.014293	1.009416	1.002424	1.037129	1.013303
303.15		1.009329	1.012504	1.005687	0.998920	1.013941	1.009498
313.15		1.001829	1.007999	1.001434	0.994644	1.009348	1.004331
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	1.010426	1.018724	1.012239	1.006387	1.017135	1.014150
303.15		1.007146	1.014840	1.008290	1.002219	1.013210	1.010466
313.15		1.003167	1.010964	1.003286	0.998142	1.008045	1.005838
				DNEs			
		F1	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	1.009613	1.008764	1.005296	1.004083	1.013731	1.005235
303.15		1.00545	1.007502	1.001509	1.000091	1.009756	1.001800
313.15		1.001173	1.002632	0.997048	0.995753	1.005285	0.997170
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	1.005787	1.010446	1.002893	0.998878	1.010691	1.006923
303.15		1.00175	1.006315	0.999109	0.995583	1.003526	1.002979

313.15		0.997124	1.001558	0.994578	0.991417	0.997420	0.998263
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	1.005305	1.012651	1.006633	1.001713	1.011987	1.007704
303.15		1.002003	1.008678	1.002666	0.997455	1.008048	0.997732
313.15		0.997667	1.004024	0.997876	0.992429	1.003583	0.996642

Standard uncertainties are u(T) = ± 0.01 K, u(p) = ± 0.01 MPa, and the expanded uncertainties Uc (0.95 confidence level) is Uc (ρ) = ±0.25 kg·m^{-3}.

Table S5 Surface tension (γ /mN·m^{-1}) of blank (BNEs) and TTDMM loaded nanoemulsions (DNEs) with different oils, surfactants and co-surfactants at 293.15, 303.15 and 313.15 K

		CAP			CAB		
	Oil	Tw-20	SDS	CTAB	Tw-20	SDS	CTAB
				BNEs			
T/K		**F1**	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	30.84	38.03	27.49	31.58	38.59	37.50
303.15		30.17	37.59	36.41	31.32	38.25	36.54
313.15		29.13	38.94	37.49	29.48	38.05	37.64
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	26.53	32.73	32.77	25.19	32.70	32.04
303.15		25.61	31.77	32.38	24.72	32.37	31.67
313.15		24.24	31.83	32.17	23.11	31.42	31.62
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	27.52	32.59	31.92	25.94	31.18	31.53
303.15		26.86	32.30	31.37	25.67	30.40	31.52
313.15		26.54	30.28	28.08	25.26	30.36	31.85
				DNEs			
		F1	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	36.89	41.54	43.76	34.46	44.73	44.06
303.15		36.97	41.80	43.07	33.98	43.57	43.22
313.15		37.86	42.82	44.11	35.20	44.33	44.12
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	29.67	36.34	36.67	29.55	36.71	36.81
303.15		29.19	35.87	36.08	29.16	36.12	36.21
313.15		29.47	35.24	35.56	29.07	35.89	36.04
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	33.42	35.49	35.74	29.40	34.91	34.23
303.15		32.55	35.15	35.51	29.29	34.58	34.12
313.15		32.14	35.21	35.22	28.28	34.54	34.09

Standard uncertainties are u(T) = ±0.01 K, u(p) = ±0.01 MPa, and the expanded uncertainties Uc (0.95 confidence level) is Uc (γ) = ±0.38 mN·m^{-1}.

Table S6 Viscosities (η /10^{-3} kg·m^{-1}·s^{-1}) of blank (BNEs) and TTDMM loaded nanoemulsions (DNEs) with different oils, surfactants and co-surfactants at 293.15, 303.15 and 313.15 K

		CAP			CAB		
	Oil	**Tw-20**	**SDS**	**CTAB**	**Tw-20**	**SDS**	**CTAB**
BNEs							
T/K		**F1**	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	1.3423	1.2218	1.1438	1.3032	1.2450	1.1176
303.15		1.8652	0.9528	0.9132	0.9931	0.9889	0.8899
313.15		0.8031	0.7648	0.7093	0.7791	0.7658	0.7108
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	2.0328	1.8080	1.7549	2.0513	1.9144	1.8190
303.15		1.4913	1.3673	1.3105	1.4874	1.3786	1.3508
313.15		1.1264	1.0557	0.9992	1.1568	1.0494	1.0366
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	1.6701	1.8533	1.8398	1.9383	1.8804	1.7544
303.15		1.2152	1.3926	1.3423	1.4590	1.4226	1.3487
313.15		0.9503	1.1066	1.1301	1.1167	1.0985	1.0720
DNEs							
		F1	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	1.3291	1.2818	1.2391	1.3704	1.3293	1.2054
303.15		1.0943	1.0303	1.0048	1.0862	1.0499	0.9584
313.15		0.8283	0.8141	0.9165	0.8081	0.8110	0.7415
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	2.1369	1.9406	1.8554	1.8937	1.9150	1.9614
303.15		1.6076	1.4595	1.3769	1.4083	1.4520	1.4203
313.15		1.2344	1.0693	1.0233	1.0263	1.0683	1.0728
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	1.6499	2.0493	2.1948	2.1192	2.1299	2.1371
303.15		1.2529	1.4946	1.4894	1.5536	1.5177	1.5908
313.15		0.9553	1.1193	1.0908	1.1554	1.1260	1.1534

Standard uncertainties are u(T) = ±0.01 K, u(p) = ±0.01 MPa, and combined expanded uncertainties Uc (0.95 confidence level) is Uc(η)= ±5.6 × 10^{-5} kg·m^{-1}·s^{-1}.

Table S7 Friccohesity (σ/s·cm^{-1}) of blank (BNEs) and TTDMM loaded nanoemulsions (DNEs) with different oils, surfactants and co-surfactants at 293.15, 303.15 and 313.15 K

		CAP			CAB		
BNEs							
	Oil	**Tw-20**	**SDS**	**CTAB**	**Tw-20**	**SDS**	**CTAB**
T/K		**F1**	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	0.043523	0.032129	0.041605	0.041261	0.032259	0.029802
303.15		0.033696	0.025347	0.025085	0.031706	0.025854	0.024350
313.15		0.027568	0.019640	0.018920	0.026427	0.020124	0.018885
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	0.076637	0.055231	0.053553	0.081443	0.058538	0.056765
303.15		0.058227	0.043039	0.040466	0.060169	0.042594	0.042648
313.15		0.046463	0.033168	0.031059	0.050055	0.033396	0.032779
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	0.060678	0.056866	0.057641	0.074729	0.060309	0.055648

303.15		0.045251	0.043114	0.042793	0.056842	0.046792	0.042784
313.15		0.035812	0.036541	0.040246	0.044213	0.036183	0.033657
				DNEs			
		F1	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	0.036024	0.030854	0.028313	0.039768	0.029718	0.027361
303.15		0.029597	0.024651	0.023331	0.031970	0.024100	0.022173
313.15		0.021877	0.019012	0.020777	0.022958	0.018294	0.016808
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	0.072009	0.053401	0.050601	0.064086	0.052167	0.053278
303.15		0.055081	0.040693	0.038167	0.048297	0.040203	0.039219
313.15		0.041887	0.030345	0.028779	0.035308	0.029765	0.029767
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	0.049364	0.057741	0.061418	0.072089	0.061008	0.062437
303.15		0.038489	0.042517	0.041948	0.053037	0.043884	0.046620
313.15		0.029719	0.031786	0.030970	0.040860	0.032597	0.033832

Standard uncertainties are u(T) = ±0.01 K, u(p) = ±0.01 MPa, and the expanded uncertainties Uc (0.95 confidence level) is Uc(σ) = ±0.000099 s·cm^{-1}.

Table S8 Hydrodynamic radii *(R_{hyd}/*nm*)* of blank (BNEs) and TTDMM loaded nanoemulsions (DNEs) with different oils, surfactants and co-surfactants at 293.15, 303.15 and 313.15 K

		CAP			CAB		
BNEs							
	Oil	**Tw-20**	**SDS**	**CTAB**	**Tw-20**	**SDS**	**CTAB**
T/K		**F1**	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	1.3376	1.1397	0.9504	1.1962	1.0750	0.6640
303.15		1.0247	0.7990	0.5271	1.0917	1.0734	0.6756
313.15		1.0705	0.9275	0.5205	1.0772	1.0217	0.7472
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	1.3174	1.0388	0.9457	1.3071	1.1533	1.0152
303.15		1.2286	1.0047	0.8570	1.2131	1.0168	0.9523
313.15		1.1359	0.9493	0.7169	1.2353	0.9811	0.9405
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	-0.8053	0.6876	0.6406	1.0870	0.9999	2.0005
303.15		-0.8053	0.8460	0.6586	1.1240	1.0565	1.9324
313.15		-0.6334	1.0199	1.0797	1.1175	1.0739	1.0032
DNEs							
		F1	**F3**	**F5**	**F2**	**F4**	**F6**
293.15	**OO**	-0.4339	0.7398	0.8825	0.7472	0.8236	0.8655
303.15		0.8571	0.8756	0.9386	0.9120	0.7984	0.8596
313.15		0.6369	0.8101	1.3407	0.6701	0.7870	0.7093
		F7	**F9**	**F11**	**F8**	**F10**	**F12**
293.15	**CO**	0.7501	0.8458	0.7788	-0.8588	0.1336	0.8643
303.15		0.8631	0.8224	0.7478	-0.7598	0.7601	0.7516
313.15		0.9248	0.4742	0.5841	-0.9762	0.5295	0.6604
		F13	**F15**	**F17**	**F14**	**F16**	**F18**
293.15	**LO**	-0.4635	0.9555	1.1676	0.9165	1.0305	1.2162
303.15		0.6344	0.8453	0.9668	0.8117	0.8198	1.1398
313.15		0.3511	0.4561	-0.6594	0.6586	0.5910	0.8556

Standard uncertainties are u(T) = ±0.01 K, u(p) = ±0.01 MPa.

Table S9 Surface excess concentration (Γ_{max}/ mol·m^{-2}) and surface area per molecule (A_{min}/m^2·mol^{-1}) of cellulose acetate propionate (CAP) blank (BNEs) and TTDMM loaded nanoemulsions (DNEs) at 293.15, 303.15 and 313.15 K

		Γ_{max}/ mol·m^{-2}			A_{min}/m^2·mol^{-1}		
BNEs							
	Oil	**Tw-20**	**SDS**	**CTAB**	**Tw-20**	**SDS**	**CTAB**
T/K		**F1**	**F3**	**F5**	**F1**	**F3**	**F5**
293.15	**OO**	0.00152	0.00221	0.00160	657.65	452.46	625.90
303.15		0.00144	0.00211	0.00205	693.14	473.37	488.76
313.15		0.00130	0.00212	0.00204	770.69	471.99	490.30
		F7	**F9**	**F11**	**F7**	**F9**	**F11**
293.15	**CO**	0.00194	0.00240	0.00240	515.08	417.39	416.95
303.15		0.00181	0.00225	0.00229	551.66	444.76	436.29
313.15		0.00166	0.00218	0.00220	602.02	458.55	453.67
		F13	**F15**	**F17**	**F13**	**F15**	**F17**
293.15	**LO**	0.00193	0.00229	0.00224	517.19	436.79	445.98
303.15		0.00182	0.00219	0.00213	548.14	455.73	469.30
313.15		0.00175	0.00199	0.00185	573.06	502.14	541.54
DNEs							
		F1	**F3**	**F5**	**F1**	**F3**	**F5**
293.15	**OO**	0.00182	0.00241	0.00254	549.77	414.17	393.17
303.15		0.00177	0.00235	0.00242	565.65	425.71	413.16
313.15		0.00169	0.00233	0.00240	593.02	429.25	416.68
		F7	**F9**	**F11**	**F7**	**F9**	**F11**
293.15	**CO**	0.00217	0.00266	0.00268	460.42	375.97	372.62
303.15		0.00207	0.00254	0.00255	484.11	393.95	391.65
313.15		0.00202	0.00241	0.00244	495.25	414.17	410.45
		F13	**F15**	**F17**	**F13**	**F15**	**F17**
293.15	**LO**	0.00235	0.00249	0.00251	425.89	401.09	398.35
303.15		0.00221	0.00239	0.00241	452.23	418.76	414.61
313.15		0.00211	0.00232	0.00232	473.08	431.82	431.73

Standard uncertainties are u(T) = ±0.01 K, u(p) = ±0.01 MPa.

Table S10 Surface excess concentration (Γ_{max}/ mol·m^{-2}) and surface area per molecule (A_{min}/m^2·mol^{-1}) of cellulose acetate butyrate (CAB) blank (BNEs) and TTDMM loaded nanoemulsions (DNEs) at 293.15, 303.15 and 313.15 K

		Γ_{max}/ mol·m^{-2}			A_{min}/m^2·mol^{-1}		
BNEs							
	Oil	**Tw-20**	**SDS**	**CTAB**	**Tw-20**	**SDS**	**CTAB**
T/K		**F2**	**F4**	**F6**	**F2**	**F4**	**F6**
293.15	**OO**	0.00184	0.00224	0.00218	544.80	445.84	458.84
303.15		0.00176	0.00215	0.00205	568.09	465.18	486.90
313.15		0.00160	0.00207	0.00205	623.44	483.03	488.35
		F8	**F10**	**F12**	**F8**	**F10**	**F12**
293.15	**CO**	0.00184	0.00239	0.00235	542.47	417.78	426.37
303.15		0.00175	0.00229	0.00224	571.53	436.54	446.08
313.15		0.00158	0.00215	0.00217	631.53	464.46	461.54
		F14	**F16**	**F18**	**F14**	**F16**	**F18**
293.15	**LO**	0.00182	0.00219	0.00221	548.82	456.55	451.51
303.15		0.00174	0.00207	0.00214	573.51	484.17	466.97
313.15		0.00166	0.00200	0.00209	602.07	500.88	477.42
DNEs							
		F2	**F4**	**F6**	**F2**	**F4**	**F6**
293.15	**OO**	0.00200	0.00260	0.00256	499.33	384.67	390.56
303.15		0.00191	0.00245	0.00243	523.71	408.43	411.67
313.15		0.00191	0.00241	0.00240	522.21	414.62	416.63
		F8	**F10**	**F12**	**F8**	**F10**	**F12**
293.15	**CO**	0.00216	0.00269	0.00269	462.36	372.20	371.13
303.15		0.00206	0.00256	0.00256	484.53	391.21	390.14
313.15		0.00199	0.00246	0.00247	502.09	406.64	404.98
		F14	**F16**	**F18**	**F14**	**F16**	**F18**
293.15	**LO**	0.00207	0.00219	0.00240	484.24	456.55	415.89
303.15		0.00199	0.00207	0.00232	502.54	484.17	431.39
313.15		0.00186	0.00200	0.00224	537.79	500.88	446.03

Standard uncertainties are u(T) = ±0.01 K, u(p) = ±0.01 MPa.

Table S11 Kinetic parameters of blank nanoemulsions

BNEs	Size (nm) ±SD	PDI ±SD	Zeta ±SD
NE1	182.8 ±2.3	0.503 ±0.012	0.52 ±0.12
NE2	171.3 ±2.1	0.187 ±0.001	0.56 ±0.08
NE3	264.3 ±1.5	0.881 ±0.031	-14.5 ±1.23
NE4	322.2 ±6.2	0.173 ±0.056	-18.6 ±2.15
NE5	201.6 ±2.6	0.736 ±0.025	25.5 ±2.51
NE6	283.7 ±5.1	0.146 ± 0.015	18.14 ± 2.59
NE7	259.6 ±3.2	0.133 ±0.002	0.56 ±0.25
NE8	283.3 ±4.1	0.165 ±0.003	0.59 ± 0.26
NE9	263.6 ±2.0	0.365 ±0.002	-18.66 ±2.56
NE10	207.5 ±1.9	0.149 ±0.029	-15.05 ±3.25
NE11	182.7 ±2.9	0.636 ±0.065	19.51 ±2.51
NE12	282.2 ±3.2	0.637 ±0.005	17.19 ±2.65
NE13	329.1 ±2.7	0.552 ±0.004	1.49 ±1.11
NE14	266.2 ±4.2	0.303 ±0.002	1.65 ±1.21
NE15	190.2 ±5.1	0.821 ±0.024	-16.24 ±2.78
NE16	293.3 ±1.8	0.741 ±0.021	-18.77 ±1.89
NE17	257.3 ±5.4	0.632 ±0.025	31.61 ±4.61
NE18	275.1 ±1.8	0.258 ±0.015	24.54 ±5.23

Table S12 Kinetic parameters of TTDMM loaded nanoemulsions

DNEs	Size (nm) ±SD	PDI ±SD	Zeta ±SD
DNEs1	109.2 ±4.5	0.158 ±0.002	0.56 ±0.2
DNEs2	117.5 ±2.3	0.084 ±0.012	1.76 ±0.9
DNEs3	126.3 ±4.1	0.052 ±0.001	-15.55±2.3
DNEs4	167.8 ±5.6	0.201 ±0.011	-19.5 ±2.3
DNEs5	123.3 ±3.2	0.356 ±0.009	27.68 ±5.3
DNEs6	112.4 ±5.3	0.308 ±0.008	31.36 ±4.2
DNEs7	124.4 ±4.2	0.144 ±0.005	2.87 ±1.9
DNEs8	176.8 ±3.5	0.177 ±0.008	1.52 ±1.4
DNEs9	124.6 ±6.1	0.311 ±0.009	-19.71±2.3
DNEs10	99.2 ±5.2	0.344 ±0.004	-22.71±4.1
DNEs11	131.2 ±6.3	0.212 ±0.014	11.86 ±1.3
DNEs12	129.3 ±5.3	0.143 ±0.011	15.27 ±2.6
DNEs13	78.8 ±4.4	0.301 ±0.014	0.59 ±0.5
DNEs14	86.02 ±2.6	0.250 ±0.025	1.56 ±0.8
DNEs15	94.6 ±5.1	0.320 ±0.014	-22.86 ±2.1
DNEs16	97.3 ±3.5	0.290 ±0.034	-19.09 ±2.0
DNEs17	83.67 ±5.2	0.060 ±0.017	22.77 ±3.2
DNEs18	109.9 ±4.6	0.278 ±0.091	19.51 ±1.6

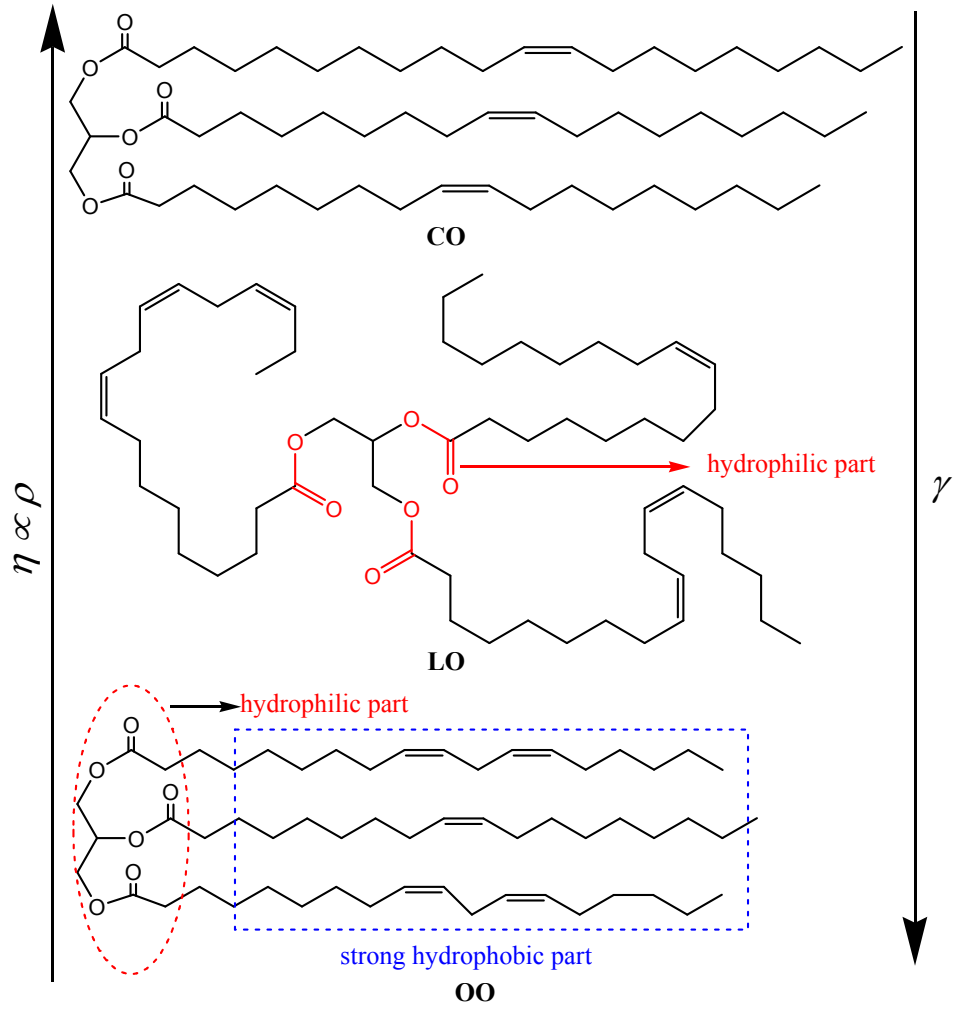

Fig.S1 Chemical structures of different oils used in the study.

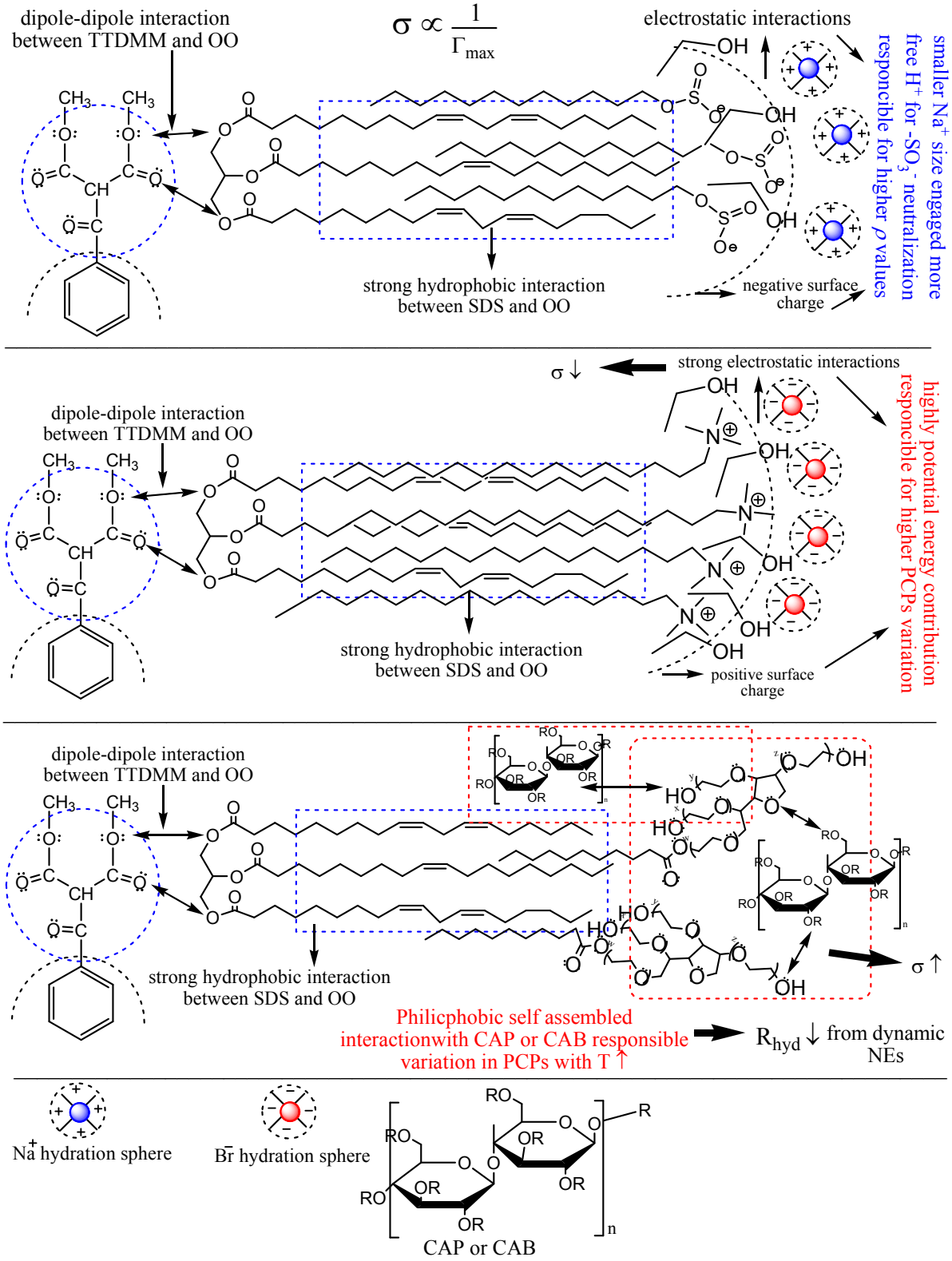

Fig. S2 Possible molecular arrangements of OO-TTDMM with different surfactants.

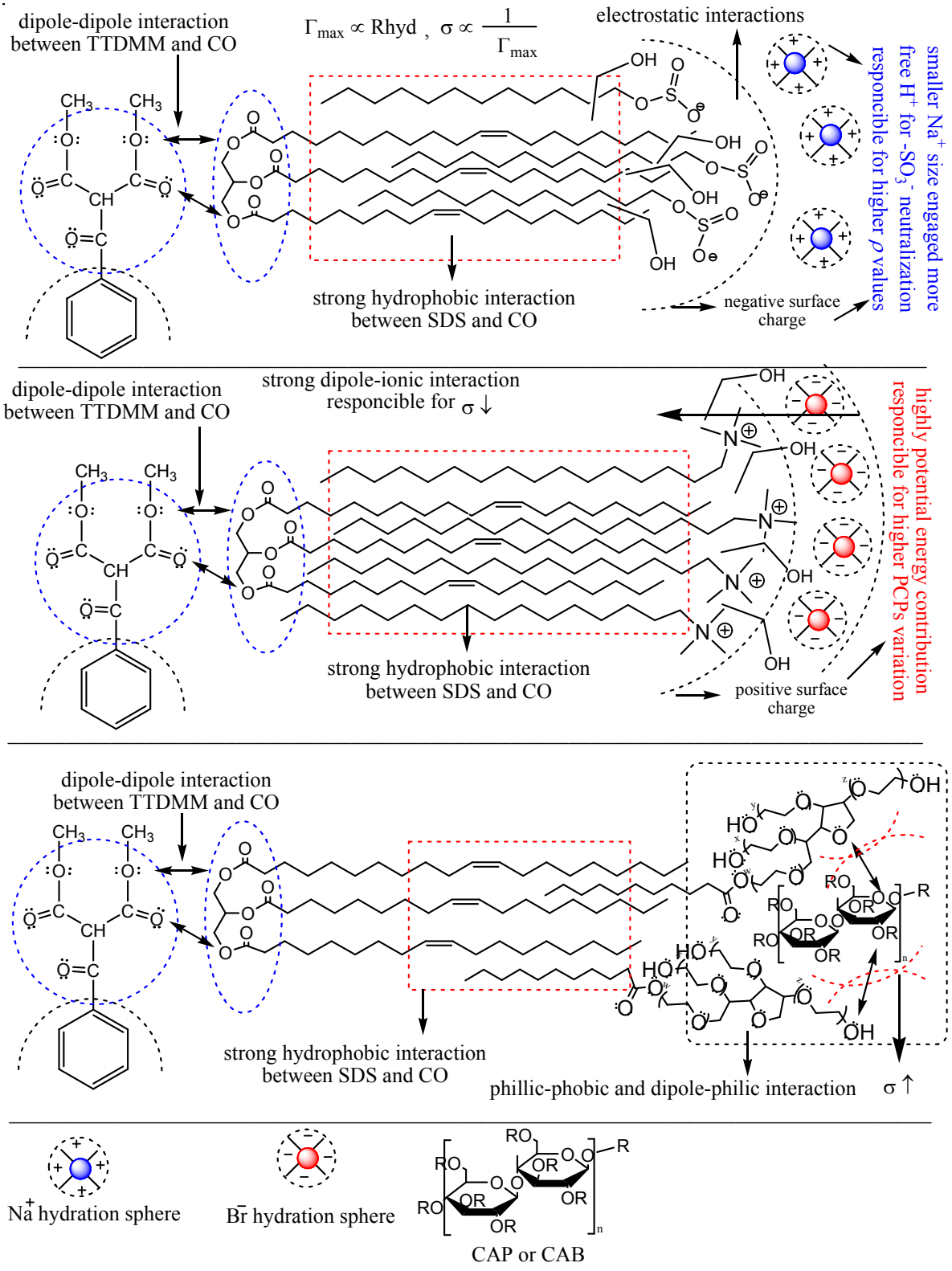

Fig. S3 Possible molecular arrangements of CO-TTDMM with different surfactants.