

**Table S7.** Physicochemical properties of the MeOH (1) + water (2) co-solvent mixtures at several temperatures

$^a x_1$	$Q$ (kJ·mol <sup>-1</sup> )				$RT \kappa_T$ (cm <sup>3</sup> ·mol <sup>-1</sup> )			
	293.15 K	303.15 K	313.15 K	323.15 K	293.15 K	303.15 K	313.15 K	323.15 K
0	-78.705	-60.068	-60.939	-62.529	1.103	1.141	1.178	1.216
0.05	-57.562	-46.600	-47.153	-48.040	1.200	1.241	1.282	1.323
0.1	-40.352	-35.398	-35.702	-36.053	1.298	1.342	1.386	1.431
0.15	-26.714	-26.267	-26.382	-26.344	1.395	1.443	1.491	1.538
0.2	-16.285	-19.008	-18.989	-18.691	1.493	1.544	1.595	1.646
0.25	-8.704	-13.424	-13.318	-12.873	1.590	1.645	1.699	1.753
0.3	-3.607	-9.317	-9.164	-8.667	1.688	1.745	1.803	1.860
0.35	-0.633	-6.490	-6.322	-5.852	1.785	1.846	1.907	1.968
0.4	0.580	-4.745	-4.589	-4.204	1.883	1.947	2.011	2.075
0.45	0.396	-3.884	-3.760	-3.502	1.980	2.048	2.115	2.183
0.5	-0.825	-3.710	-3.631	-3.524	2.078	2.148	2.219	2.290
0.55	-2.720	-4.026	-3.996	-4.048	2.175	2.249	2.323	2.398
0.6	-4.926	-4.633	-4.651	-4.851	2.273	2.350	2.428	2.505
0.65	-7.081	-5.335	-5.392	-5.711	2.370	2.451	2.532	2.613
0.7	-8.824	-5.934	-6.014	-6.406	2.467	2.552	2.636	2.720
0.75	-9.791	-6.231	-6.313	-6.715	2.565	2.652	2.740	2.827
0.8	-9.621	-6.031	-6.084	-6.414	2.662	2.753	2.844	2.935
0.85	-7.952	-5.134	-5.123	-5.283	2.760	2.854	2.948	3.042
0.9	-4.421	-3.344	-3.225	-3.098	2.857	2.955	3.052	3.150
0.95	1.334	-0.463	-0.186	0.363	2.955	3.056	3.156	3.257
1	9.675	3.706	4.199	5.321	3.052	3.156	3.261	3.365