



SUPPLEMENTARY MATERIAL TO  
**Ultrasonic and spectroscopic investigations of molecular interactions  
in binary mixture of PEG-400 and DMSO at different temperatures**

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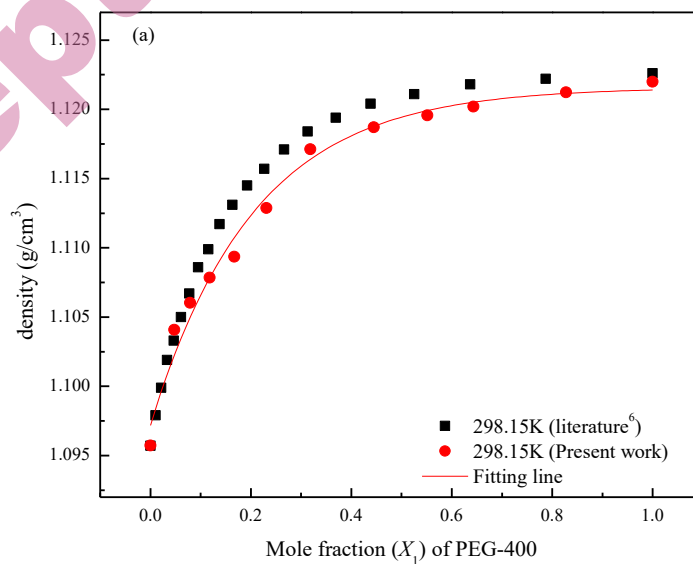
Table S1: Calculated density ( $d^*$ ) (using Equation 1), Literature ( $d^6$ ) density along with AAPD  
for PEG-400 + DMSO at 298.15 K and 308.15 K.

$X_1^6$	$d^6$	$d^*$	% deviation
298.15 K			
0.0102	1.0979	1.0984	0.0427
0.0213	1.0999	1.0996	0.0284
0.0333	1.1019	1.1008	0.0969
0.0466	1.1033	1.1021	0.1060
0.0611	1.105	1.1035	0.1400
0.0773	1.1067	1.1048	0.1694
0.0952	1.1086	1.1062	0.2146
0.1152	1.1099	1.1076	0.2034
0.1378	1.1117	1.1091	0.2346
0.1633	1.1131	1.1105	0.2293
0.1927	1.1145	1.1120	0.2228
0.2266	1.1157	1.1135	0.1999
0.2662	1.1171	1.1149	0.1979
0.313	1.1184	1.1163	0.1921
0.3691	1.1194	1.1175	0.1676
0.4382	1.1204	1.1187	0.1532
0.5253	1.1211	1.1197	0.1262
0.637	1.1218	1.1205	0.1174
0.787	1.1222	1.1211	0.1020
AAPD			0.1550

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Table S1: *Continued*

$X_1^6$	$d^6$	$d^*$	% deviation
308.15 K			
0.0102	1.0867	1.0892	0.2311
0.0213	1.0889	1.0903	0.1293
0.0333	1.0911	1.0914	0.0310
0.0466	1.0927	1.0926	0.0066
0.0611	1.0949	1.0939	0.0957
0.0773	1.0966	1.0951	0.1333
0.0952	1.0985	1.0965	0.1854
0.1152	1.1001	1.0978	0.2061
0.1378	1.1015	1.0993	0.2041
0.1633	1.1035	1.1007	0.2534
0.1927	1.1047	1.1022	0.2264
0.2266	1.1063	1.1037	0.2336
0.2662	1.1076	1.1052	0.2131
0.313	1.1088	1.1067	0.1849
0.3691	1.11	1.1082	0.1606
0.4382	1.111	1.1096	0.1244
0.5253	1.112	1.1109	0.0985
0.637	1.1128	1.1120	0.0713
0.787	1.1133	1.1129	0.0378
AAPD			0.1488

Figure S1: Density values from Literature<sup>6</sup> and present work with fitting equation at 298.15 K.

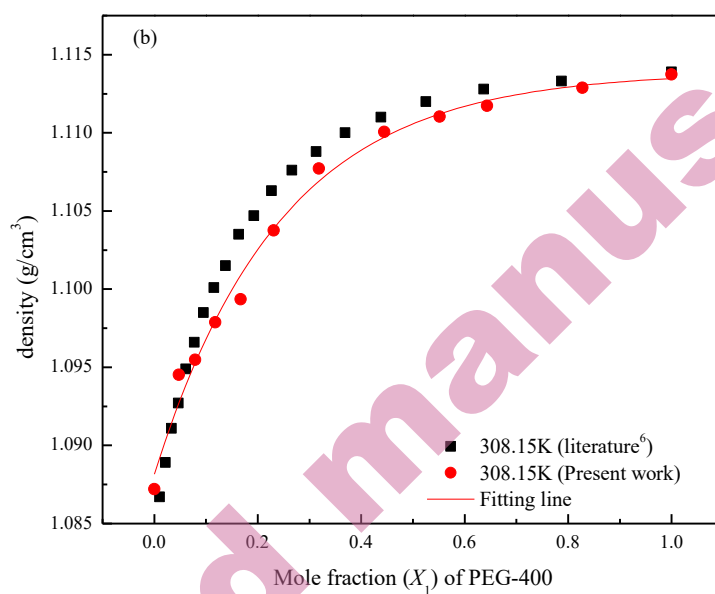


Figure S2: Density values from Literature<sup>6</sup> and present work with fitting equation at 308.15 K.

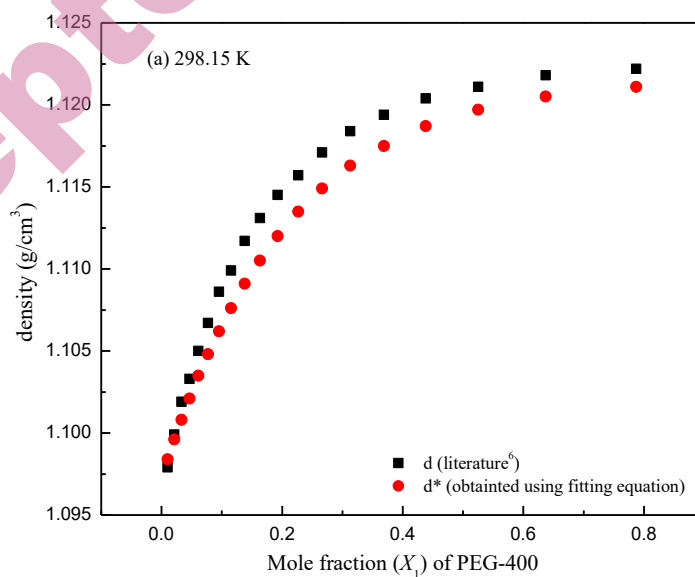


Figure S3: Literature<sup>6</sup> and computed density ( $d^*$ ) values 298.15 K.

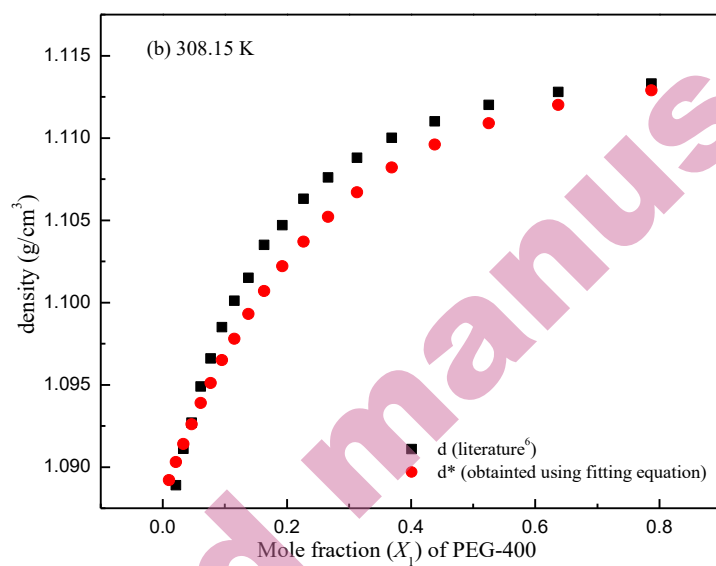


Figure S4: Literature<sup>6</sup> and computed density ( $d^*$ ) values 308.15 K.