

Supplementary

Table 1S. Interaction parameters, χ_{12}^{∞} .

χ_{12}^{∞}						
[emim][TFA]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
328.15	3.82	4.21	4.63	5.05	5.46	5.89
338.15	3.79	4.15	4.54	4.97	5.37	5.80
348.15	3.72	4.08	4.47	4.91	5.29	5.71
358.15	3.66	4.02	4.38	4.81	5.23	5.64
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene
328.15	3.18	3.56	3.80	4.08	3.11	3.43
338.15	3.12	3.50	3.73	4.00	3.07	3.38
348.15	3.05	3.43	3.65	3.93	3.03	3.33
358.15	3.01	3.35	3.60	3.86	2.99	3.30
<i>T</i> /K	1-heptene	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne
328.15	3.87	4.29	1.53	1.89	2.31	2.73
338.15	3.83	4.23	1.54	1.91	2.32	2.73
348.15	3.79	4.18	1.56	1.92	2.32	2.72
358.15	3.71	4.12	1.57	1.94	2.33	2.72
<i>T</i> /K	benzene	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene
328.15	1.17	1.58	2.05	1.88	2.05	2.00
338.15	1.17	1.58	2.04	1.87	2.04	2.00
348.15	1.17	1.58	2.03	1.87	2.04	2.00
358.15	1.17	1.58	2.02	1.87	2.04	2.00
<i>T</i> /K	methanol	ethanol	1-propanol	1-butanol		
328.15	-0.856	-0.541	-0.390	-0.145		
338.15	-0.841	-0.541	-0.388	-0.150		
348.15	-0.835	-0.541	-0.387	-0.154		
358.15	-0.824	-0.539	-0.385	-0.159		
[emim][SCN]						
<i>T</i> /K	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane	cyclopentane	cyclohexane
308.15	6.20	6.58	6.93	7.26	4.31	4.74
318.15	6.34	6.70	7.05	7.37	4.37	4.76
328.15	6.00	6.40	6.83	7.18	4.16	4.54
338.15	5.97	6.36	6.72	7.08	4.03	4.45
348.15	6.08	6.30	6.66	7.04	4.02	4.40
358.15	5.84	6.22	6.55	6.92	3.90	4.30
<i>T</i> /K	cyclooctane	1-hexene	1-heptene	1-octene	1-pentyne	1-hexyne
308.15	5.15	4.65	5.12	5.59	2.11	2.55
318.15	5.07	4.74	5.17	5.62	2.14	2.57
328.15	4.96	4.59	5.03	5.48	2.15	2.57
338.15	4.84	4.48	4.93	5.39	2.15	2.57
348.15	4.77	4.43	4.91	5.34	2.16	2.58
358.15	4.67	4.36	4.84	5.28	2.17	2.59
<i>T</i> /K	1-heptyne	1-octyne	benzene	toluene	ethylbenzene	<i>o</i> -xylene
308.15	3.09	3.63	1.36	1.85	2.47	2.14
318.15	3.10	3.63	1.36	1.86	2.45	2.14

χ_{12}^{∞}						
328.15	3.10	3.61	1.36	1.86	2.44	2.15
338.15	3.08	3.59	1.36	1.86	2.42	2.15
348.15	3.09	3.58	1.36	1.86	2.42	2.15
358.15	3.08	3.56	1.37	1.86	2.41	2.15
<i>T</i> /K	<i>m</i> -xylene	<i>p</i> -xylene	methanol	ethanol	1-propanol	
308.15	2.44	2.34	-0.137	0.310	0.557	
318.15	2.43	2.34	-0.162	0.264	0.506	
328.15	2.43	2.35	-0.177	0.234	0.469	
338.15	2.42	2.34	-0.193	0.201	0.428	
348.15	2.42	2.35	-0.210	0.173	0.397	
358.15	2.41	2.35	-0.222	0.145	0.367	
[bmim][SCN]						
<i>T</i> /K	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane	cyclopentane
318.15	5.16	5.38	5.64	5.93	6.28	3.73
328.15	5.00	5.23	5.50	5.81	6.16	3.57
338.15	4.88	5.11	5.39	5.70	6.06	3.46
348.15	4.72	5.00	5.29	5.61	5.96	3.35
358.15	4.64	4.90	5.20	5.53	5.87	3.30
<i>T</i> /K	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene	1-heptene
318.15	3.97	3.91	4.10	3.83	3.98	4.26
328.15	3.83	3.81	4.02	3.66	3.86	4.16
338.15	3.71	3.73	3.92	3.58	3.78	4.09
348.15	3.61	3.65	3.85	3.51	3.69	4.03
358.15	3.54	3.58	3.77	3.40	3.64	3.98
<i>T</i> /K	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne	benzene
318.15	4.58	1.69	1.98	2.36	2.76	0.977
328.15	4.49	1.69	1.98	2.37	2.75	0.976
338.15	4.42	1.70	1.99	2.37	2.74	0.982
348.15	4.36	1.70	2.01	2.38	2.74	0.989
358.15	4.31	1.72	2.01	2.38	2.75	0.996
<i>T</i> /K	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene	thiophene
318.15	1.38	1.85	1.62	1.86	1.79	0.508
328.15	1.38	1.84	1.62	1.85	1.79	0.518
338.15	1.39	1.83	1.62	1.85	1.79	0.538
348.15	1.39	1.83	1.63	1.85	1.80	0.557
358.15	1.40	1.82	1.63	1.85	1.81	0.569
<i>T</i> /K	THF	MTBE	methanol	ethanol	1-propanol	1-butanol
318.15	0.956	2.59	-0.202	0.084	0.195	0.414
328.15	0.956	2.55	-0.221	0.052	0.155	0.375
338.15	0.958	2.53	-0.238	0.023	0.122	0.335
348.15	0.961	2.51	-0.248	-0.002	0.095	0.301
358.15	0.965	2.50	-0.263	-0.026	0.072	0.273
<i>T</i> /K	1-pentanol					
318.15	0.595					
328.15	0.545					
338.15	0.516					
348.15	0.498					

χ_{12}^{∞}						
358.15	0.479					
[hmim][SCN]						
T/K	n -heptane	n -octane	n -nonane	n -decane	cyclopentane	cyclohexane
318.15	4.32	4.48	4.69	4.99	3.20	3.33
328.15	4.23	4.41	4.63	4.91	3.09	3.24
338.15	4.20	4.38	4.60	4.88	3.04	3.17
348.15	4.16	4.34	4.56	4.83	3.00	3.14
358.15	4.08	4.29	4.51	4.76	2.91	3.06
368.15	4.05	4.21	4.46	4.74	2.86	3.02
T/K	cycloheptane	cyclooctane	1-pentene	1-hexene	1-heptene	1-octene
318.15	3.25	3.37	3.34	3.35	3.51	3.73
328.15	3.19	3.33	3.22	3.29	3.46	3.69
338.15	3.14	3.28	3.20	3.24	3.46	3.67
348.15	3.11	3.23	3.17	3.23	3.43	3.66
358.15	3.06	3.18	3.09	3.18	3.40	3.63
368.15	3.02	3.15	3.06	3.15	3.37	3.60
T/K	1-pentyne	1-hexyne	1-heptyne	1-octyne	benzene	toluene
318.15	1.64	1.79	2.04	2.31	0.933	1.23
328.15	1.63	1.81	2.06	2.33	0.939	1.24
338.15	1.65	1.84	2.09	2.35	0.957	1.26
348.15	1.67	1.86	2.11	2.37	0.968	1.28
358.15	1.68	1.88	2.14	2.38	0.976	1.29
368.15	1.69	1.89	2.15	2.40	0.989	1.30
T/K	ethylbenzene	o -xylene	m -xylene	p -xylene	thiophene	THF
318.15	1.59	1.41	1.60	1.56	0.582	0.799
328.15	1.60	1.42	1.61	1.58	0.598	0.806
338.15	1.61	1.45	1.63	1.60	0.621	0.818
348.15	1.62	1.46	1.65	1.61	0.636	0.824
358.15	1.63	1.47	1.65	1.62	0.652	0.833
368.15	1.64	1.49	1.66	1.64	0.670	0.846
di- n -propyl						
T/K	MTBE	diethyl ether	ether	di- n -butyl ether	acetone	methanol
318.15	2.28	2.28	2.96	3.49	0.591	0.120
328.15	2.26	2.26	2.94	3.46	0.586	0.094
338.15	2.25	2.24	2.92	3.44	0.592	0.075
348.15	2.26	2.22	2.91	3.41	0.595	0.051
358.15	2.25	2.20	2.88	3.39	0.588	0.030
368.15	2.24	2.20	2.87	3.36	0.588	0.010
T/K	ethanol					
318.15	0.288					
328.15	0.251					
338.15	0.225					
348.15	0.192					
358.15	0.170					
368.15	0.136					
[1,4bmPY][SCN]						
T/K	n -hexane	n -heptane	n -octane	n -nonane	n -decane	cyclopentane

χ_{12}^{∞}						
298.15	4.83	5.04	5.39	5.90	6.28	3.42
308.15	4.64	4.91	5.26	5.81	6.14	3.31
318.15	4.55	4.81	5.18	5.69	6.02	3.24
328.15	4.41	4.71	5.09	5.57	5.91	3.15
338.15	4.29	4.62	4.99	5.45	5.80	3.07
348.15	4.20	4.54	4.91	5.34	5.68	3.01
358.15	4.13	4.46	4.82	5.25	5.59	2.94
<i>T</i> /K	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene	1-heptene
298.15	3.75	3.83	4.08	3.40	3.68	4.04
308.15	3.65	3.73	3.97	3.31	3.60	3.97
318.15	3.56	3.64	3.89	3.24	3.53	3.90
328.15	3.46	3.56	3.80	3.16	3.45	3.83
338.15	3.38	3.48	3.71	3.10	3.39	3.77
348.15	3.31	3.41	3.62	3.07	3.34	3.72
358.15	3.24	3.35	3.56	3.00	3.30	3.67
<i>T</i> /K	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne	benzene
298.15	4.53	1.45	1.78	2.15	2.53	0.749
308.15	4.44	1.46	1.79	2.16	2.53	0.752
318.15	4.36	1.47	1.80	2.16	2.53	0.761
328.15	4.28	1.48	1.82	2.18	2.53	0.765
338.15	4.21	1.49	1.83	2.18	2.54	0.770
348.15	4.15	1.51	1.83	2.19	2.53	0.777
358.15	4.09	1.52	1.85	2.19	2.54	0.782
<i>T</i> /K	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene	thiophene
298.15	1.09	1.58	1.28	1.50	1.44	0.279
308.15	1.10	1.58	1.29	1.51	1.45	0.296
318.15	1.11	1.57	1.29	1.51	1.46	0.308
328.15	1.12	1.58	1.31	1.53	1.47	0.313
338.15	1.13	1.58	1.32	1.53	1.48	0.326
348.15	1.13	1.57	1.32	1.54	1.49	0.339
358.15	1.14	1.57	1.34	1.55	1.50	0.355
di- <i>n</i> -propyl						
<i>T</i> /K	THF	MTBE	diethyl ether	ether	di- <i>n</i> -butyl ether	acetone
298.15	0.991	2.50	2.51	3.49	4.30	0.627
308.15	0.973	2.47	2.46	3.42	4.21	0.627
318.15	0.966	2.45	2.43	3.37	4.14	0.623
328.15	0.967	2.42	2.38	3.31	4.07	0.621
338.15	0.951	2.40	2.35	3.26	4.00	0.620
348.15	0.951	2.39	2.33	3.22	3.95	0.616
358.15	0.943	2.36	2.30	3.18	3.90	0.613
<i>T</i> /K	pentan-2-one	pentan-3-one	methanol	ethanol		
298.15	1.18	1.17	-0.185	0.150		
308.15	1.16	1.16	-0.209	0.097		
318.15	1.15	1.16	-0.238	0.065		
328.15	1.15	1.17	-0.266	0.023		
338.15	1.14	1.17	-0.287	-0.020		
348.15	1.13	1.17	-0.302	-0.050		

χ_{12}^{∞}						
358.15	1.13	1.16	-0.319	-0.084		
[bmPYR][SCN]						
<i>T</i> /K	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane	cyclopentane
298.15	4.91	5.24	5.62	6.01	6.42	3.53
308.15	4.79	5.13	5.50	5.90	6.30	3.44
318.15	4.67	5.03	5.41	5.79	6.19	3.35
328.15	4.53	4.89	5.29	5.67	6.08	3.26
338.15	4.44	4.81	5.20	5.58	5.98	3.19
348.15	4.37	4.71	5.10	5.48	5.87	3.12
358.15	4.31	4.64	5.02	5.39	5.78	3.05
<i>T</i> /K	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene	1-heptene
298.15	3.91	4.03	4.31	3.46	3.78	4.17
308.15	3.81	3.93	4.20	3.39	3.71	4.10
318.15	3.72	3.84	4.11	3.32	3.65	4.05
328.15	3.62	3.76	4.01	3.24	3.58	3.98
338.15	3.55	3.69	3.94	3.19	3.53	3.93
348.15	3.47	3.62	3.86	3.16	3.47	3.87
358.15	3.40	3.55	3.79	3.08	3.42	3.82
<i>T</i> /K	1-octene	1-hexyne	1-heptyne	1-octyne	benzene	toluene
298.15	4.59	1.73	2.16	2.59	0.791	1.20
308.15	4.51	1.75	2.17	2.60	0.817	1.23
318.15	4.45	1.78	2.19	2.61	0.840	1.25
328.15	4.38	1.80	2.21	2.62	0.860	1.28
338.15	4.32	1.83	2.23	2.62	0.885	1.30
348.15	4.26	1.85	2.24	2.63	0.900	1.32
358.15	4.21	1.87	2.26	2.63	0.917	1.35
<i>T</i> /K	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene	thiophene	THF
298.15	1.71	1.48	1.74	1.68	0.280	1.02
308.15	1.72	1.50	1.74	1.69	0.318	1.03
318.15	1.73	1.52	1.75	1.70	0.351	1.03
328.15	1.73	1.53	1.76	1.71	0.382	1.03
338.15	1.74	1.55	1.77	1.72	0.414	1.03
348.15	1.74	1.56	1.78	1.73	0.441	1.03
358.15	1.75	1.57	1.78	1.74	0.469	1.03
di- <i>n</i> -propyl						
<i>T</i> /K	MTBE	diethyl ether	ether	di- <i>n</i> -butyl ether	acetone	pentan-2-one
298.15	2.51	2.55	3.60	4.45	0.649	1.22
308.15	2.51	2.52	3.54	4.37	0.650	1.22
318.15	2.50	2.50	3.50	4.31	0.653	1.22
328.15	2.49	2.46	3.45	4.25	0.655	1.23
338.15	2.48	2.44	3.41	4.19	0.656	1.23
348.15	2.48	2.41	3.37	4.13	0.656	1.23
358.15	2.47	2.39	3.33	4.08	0.657	1.23
<i>T</i> /K	pentan-3-one	methanol	ethanol			
298.15	1.18	-0.360	-0.029			
308.15	1.18	-0.362	-0.049			
318.15	1.20	-0.364	-0.065			

χ_{12}^{∞}			
328.15	1.22	-0.366	-0.083
338.15	1.23	-0.371	-0.099
348.15	1.24	-0.374	-0.117
358.15	1.25	-0.381	-0.133

[bmim][CF ₃ SO ₃]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
308.15	3.57	3.74	4.00	4.31	4.65	5.02
318.15	3.47	3.64	3.92	4.23	4.56	4.93
328.15	3.32	3.53	3.82	4.14	4.47	4.82
338.15	3.27	3.49	3.78	4.08	4.40	4.75
348.15	3.19	3.42	3.70	4.01	4.32	4.66
358.15	3.13	3.36	3.65	3.94	4.26	4.59
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene
308.15	2.88	3.13	3.28	3.50	2.73	2.95
318.15	2.79	3.04	3.20	3.43	2.65	2.89
328.15	2.69	2.95	3.12	3.34	2.56	2.82
338.15	2.66	2.91	3.07	3.29	2.55	2.79
348.15	2.59	2.83	3.00	3.21	2.49	2.74
358.15	2.54	2.78	2.95	3.15	2.46	2.71
<i>T</i> /K	1-heptene	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne
308.15	3.24	3.57	1.24	1.49	1.81	2.14
318.15	3.19	3.51	1.25	1.51	1.82	2.15
328.15	3.13	3.45	1.25	1.52	1.83	2.14
338.15	3.11	3.41	1.27	1.54	1.84	2.15
348.15	3.06	3.36	1.27	1.54	1.85	2.15
358.15	3.02	3.32	1.28	1.56	1.86	2.15
<i>T</i> /K	benzene	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene
308.15	0.758	1.06	1.46	1.26	1.43	1.39
318.15	0.760	1.07	1.46	1.28	1.44	1.40
328.15	0.763	1.07	1.45	1.28	1.44	1.41
338.15	0.770	1.08	1.45	1.29	1.45	1.41
348.15	0.774	1.08	1.45	1.29	1.45	1.41
358.15	0.780	1.09	1.45	1.30	1.45	1.42
<i>T</i> /K	thiophene	THF	MTBE	methanol	ethanol	1-propanol
308.15	0.542	0.585	1.62	0.529	0.611	0.666
318.15	0.546	0.592	1.62	0.480	0.554	0.615
328.15	0.553	0.605	1.62	0.424	0.494	0.551
338.15	0.557	0.610	1.62	0.377	0.439	0.494
348.15	0.564	0.617	1.62	0.335	0.391	0.444
358.15	0.574	0.628	1.63	0.292	0.347	0.402
<i>T</i> /K	1-butanol					
308.15	0.824					
318.15	0.749					
328.15	0.695					
338.15	0.633					
348.15	0.576					
358.15	0.534					

χ_{12}^{∞}						
[1,3bmPY][CF ₃ SO ₃]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
318.15	3.05	3.28	3.58	3.89	4.22	4.56
328.15	2.96	3.21	3.51	3.82	4.13	4.48
338.15	2.91	3.16	3.44	3.75	4.06	4.39
348.15	2.87	3.12	3.40	3.70	4.00	4.32
358.15	2.80	3.06	3.33	3.63	3.93	4.24
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene
318.15	2.49	2.74	2.90	3.11	2.34	2.59
328.15	2.43	2.68	2.84	3.04	2.30	2.55
338.15	2.38	2.62	2.78	2.98	2.27	2.52
348.15	2.34	2.58	2.73	2.92	2.26	2.50
358.15	2.30	2.52	2.68	2.86	2.22	2.46
<i>T</i> /K	1-heptene	1-octene	1-hexyne	1-heptyne	1-octyne	benzene
318.15	2.90	3.20	1.26	1.56	1.85	0.533
328.15	2.86	3.16	1.29	1.57	1.86	0.547
338.15	2.82	3.12	1.31	1.59	1.87	0.557
348.15	2.79	3.09	1.33	1.61	1.89	0.566
358.15	2.76	3.05	1.35	1.62	1.89	0.581
<i>T</i> /K	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene	thiophene
318.15	0.787	1.17	0.934	1.10	1.06	0.299
328.15	0.807	1.18	0.956	1.12	1.08	0.316
338.15	0.821	1.18	0.973	1.13	1.10	0.331
348.15	0.832	1.18	0.986	1.14	1.11	0.343
358.15	0.848	1.19	1.004	1.16	1.13	0.361
di- <i>n</i> -propyl						
<i>T</i> /K	THF	MTBE	diethyl ether	ether	di- <i>n</i> -butyl ether	acetone
318.15	0.57	1.62	1.69	2.42	3.04	0.163
328.15	0.57	1.61	1.67	2.40	2.99	0.170
338.15	0.57	1.60	1.65	2.36	2.96	0.173
348.15	0.58	1.60	1.63	2.34	2.91	0.173
358.15	0.59	1.61	1.62	2.31	2.88	0.179
<i>T</i> /K	pentan-2-one	pentan-3-one	methanol	ethanol	1-propanol	1-butanol
318.15	0.523	0.559	0.462	0.521	0.550	0.661
328.15	0.532	0.575	0.416	0.468	0.490	0.599
338.15	0.538	0.586	0.368	0.416	0.436	0.538
348.15	0.540	0.591	0.322	0.363	0.384	0.483
358.15	0.549	0.601	0.285	0.323	0.342	0.441
[bmPYR][CF ₃ SO ₃]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
318.15	3.88	3.96	4.17	4.43	4.73	5.06
328.15	3.75	3.85	4.08	4.35	4.64	4.98
338.15	3.62	3.75	3.98	4.25	4.55	4.87
348.15	3.50	3.68	3.91	4.19	4.48	4.79
358.15	3.41	3.59	3.83	4.10	4.38	4.71
368.15	3.28	3.56	3.75	4.03	4.31	4.63
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene

χ_{12}^{∞}						
318.15	3.06	3.27	3.37	3.57	2.92	3.09
328.15	2.96	3.19	3.30	3.50	2.85	3.03
338.15	2.87	3.09	3.22	3.40	2.77	2.96
348.15	2.79	3.01	3.15	3.34	2.71	2.91
358.15	2.69	2.95	3.08	3.28	2.66	2.87
368.15	2.70	2.89	3.02	3.21	2.58	2.83
<i>T/K</i>	1-heptene	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne
318.15	3.36	3.65	1.26	1.51	1.81	2.13
328.15	3.31	3.60	1.28	1.53	1.83	2.14
338.15	3.25	3.53	1.29	1.54	1.84	2.15
348.15	3.19	3.48	1.30	1.55	1.85	2.15
358.15	3.15	3.45	1.31	1.57	1.86	2.15
368.15	3.11	3.39	1.34	1.58	1.87	2.15
<i>T/K</i>	benzene	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene
318.15	0.702	1.03	1.42	1.25	1.40	1.37
328.15	0.727	1.04	1.41	1.25	1.41	1.38
338.15	0.728	1.05	1.41	1.26	1.41	1.38
348.15	0.741	1.06	1.41	1.26	1.41	1.38
358.15	0.751	1.07	1.41	1.27	1.41	1.39
368.15	0.760	1.07	1.41	1.27	1.41	1.39
<i>T/K</i>	thiophene	THF	MTBE	methanol	ethanol	1-propanol
318.15	1.39	-0.203	1.88	0.485	0.566	0.636
328.15	1.37	-0.157	1.88	0.439	0.511	0.570
338.15	1.35	-0.121	1.86	0.389	0.458	0.514
348.15	1.32	-0.087	1.85	0.343	0.407	0.461
358.15	1.31	-0.045	1.85	0.311	0.370	0.426
368.15	1.28	-0.015	1.87	0.271	0.327	0.384
<i>T/K</i>	1-butanol					
318.15	0.768					
328.15	0.716					
338.15	0.661					
348.15	0.601					
358.15	0.563					
368.15	0.520					
[bmim][MDEGSO ₄]						
<i>T/K</i>	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	cyclopentane	cyclohexane
298.15	4.42	4.62	4.89	5.17	3.56	3.88
303.15	4.34	4.53	4.79	5.07	3.48	3.79
308.15	4.30	4.49	4.73	5.00	3.45	3.75
<i>T/K</i>	cycloheptane	1-hexene	1-octene	1-hexyne	1-heptyne	1-octyne
298.15	4.00	3.82	4.46	1.88	2.23	2.61
303.15	3.91	3.75	4.39	1.86	2.21	2.59
308.15	3.87	3.70	4.35	1.89	2.24	2.61
<i>T/K</i>	benzene	toluene	methanol			
298.15	1.22	1.67	0.030			
303.15	1.21	1.66	0.017			
308.15	1.21	1.65	-0.003			

χ_{12}^{∞}						
[bmim][OcSO ₄]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	cyclopentane	cyclohexane
298.15	2.28	2.28	2.36	2.45	1.94	2.02
313.15	2.34	2.33	2.39	2.49	1.97	2.04
328.15	2.40	2.42	2.45	2.54	2.12	2.08
<i>T</i> /K	cycloheptane	1-hexene	1-octene	1-hexyne	1-heptyne	1-octyne
298.15	2.04	2.04	2.21	1.20	1.29	1.40
313.15	2.05	2.09	2.23	1.26	1.35	1.46
328.15	2.10	2.16	2.30	1.33	1.43	1.54
<i>T</i> /K	benzene	toluene	methanol			
298.15	0.968	1.14	0.261			
313.15	0.966	1.15	0.202			
328.15	0.990	1.20	0.166			
[P _{1,4,4,4}][TOS]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
318.15	3.80	3.52	3.34	3.27	3.27	3.42
328.15	3.35	3.16	3.07	3.09	3.18	3.31
338.15	3.12	3.00	2.95	2.99	3.09	3.25
348.15	2.97	2.87	2.86	2.91	3.03	3.19
358.15	2.76	2.72	2.75	2.83	2.95	3.11
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene
318.15	2.87	2.85	2.46	2.37	3.15	2.92
328.15	2.51	2.53	2.30	2.25	2.76	2.62
338.15	2.35	2.37	2.20	2.19	2.56	2.48
348.15	2.22	2.26	2.13	2.13	2.45	2.39
358.15	2.13	2.14	2.06	2.08	2.41	2.28
<i>T</i> /K	1-heptene	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne
318.15	2.80	2.77	1.36	1.30	1.30	1.42
328.15	2.58	2.64	1.22	1.22	1.30	1.41
338.15	2.50	2.56	1.18	1.21	1.29	1.42
348.15	2.43	2.51	1.17	1.21	1.30	1.43
358.15	2.35	2.45	1.13	1.20	1.31	1.43
<i>T</i> /K	benzene	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene
318.15	0.936	1.09	1.26	1.21	1.31	1.29
328.15	0.884	1.03	1.22	1.17	1.26	1.23
338.15	0.848	1.01	1.20	1.14	1.27	1.22
348.15	0.814	1.00	1.18	1.13	1.23	1.20
358.15	0.798	0.99	1.17	1.12	1.22	1.20
<i>T</i> /K	thiophene	THF	MTBE	methanol	ethanol	1-propanol
318.15	0.57	0.93	2.58	-0.502	-0.377	-0.492
328.15	0.54	0.84	2.20	-0.504	-0.372	-0.504
338.15	0.53	0.81	2.08	-0.490	-0.375	-0.495
348.15	0.52	0.77	1.99	-0.471	-0.368	-0.488
358.15	0.52	0.77	1.90	-0.466	-0.368	-0.456
<i>T</i> /K	1-butanol					
318.15	-0.514					
328.15	-0.528					

χ_{12}^{∞}						
338.15	-0.531					
348.15	-0.506					
358.15	-0.506					
[1,4bmPY][TOS]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	cyclopentane	cyclohexane
328.15	3.61	3.83	4.14	4.39	2.93	3.25
333.15	3.58	3.82	4.09	4.37	2.92	3.21
338.15	3.58	3.78	4.07	4.33	2.88	3.17
343.15	3.57	3.81	4.05	4.34	2.86	3.14
<i>T</i> /K	cycloheptane	cyclooctane	1-pentene	1-hexene	1-heptene	1-octene
328.15	3.32	3.47	3.11	3.28	3.54	3.82
333.15	3.29	3.42	3.07	3.24	3.52	3.80
338.15	3.25	3.37	3.02	3.21	3.48	3.78
343.15	3.24	3.34	2.95	3.22	3.49	3.76
<i>T</i> /K	1-pentyne	1-hexyne	1-heptyne	1-octyne	benzene	1-pentyne
328.15	1.48	1.72	1.97	2.24	1.83	1.48
333.15	1.49	1.76	1.98	2.25	1.81	1.49
338.15	1.53	1.80	1.99	2.26	1.81	1.53
343.15	1.56	1.82	2.01	2.28	1.81	1.56
<i>T</i> /K	methanol	ethanol				
328.15	0.444	0.640				
333.15	0.432	0.625				
338.15	0.419	0.607				
343.15	0.402	0.595				
[1,4bmPY][NTf ₂]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
318.15	2.74	2.87	3.07	3.32	3.59	3.89
328.15	2.68	2.80	3.01	3.25	3.51	3.80
338.15	2.61	2.74	2.95	3.18	3.43	3.72
348.15	2.56	2.68	2.89	3.11	3.36	3.62
358.15	2.48	2.63	2.82	3.05	3.28	3.54
368.15	2.43	2.58	2.78	2.99	3.20	3.47
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene
318.15	2.24	2.43	2.56	2.74	2.05	2.21
328.15	2.17	2.37	2.50	2.67	2.01	2.17
338.15	2.13	2.31	2.44	2.60	1.98	2.13
348.15	2.08	2.24	2.37	2.53	1.94	2.10
358.15	2.02	2.19	2.31	2.47	1.90	2.06
368.15	1.98	2.14	2.26	2.41	1.86	2.02
<i>T</i> /K	1-heptene	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne
318.15	2.44	2.69	1.04	1.22	1.44	1.68
328.15	2.40	2.64	1.04	1.23	1.44	1.68
338.15	2.36	2.60	1.04	1.23	1.44	1.67
348.15	2.32	2.55	1.05	1.24	1.44	1.66
358.15	2.29	2.50	1.04	1.24	1.44	1.65
368.15	2.26	2.47	1.05	1.24	1.44	1.65
<i>T</i> /K	benzene	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene

χ_{12}^{∞}						
318.15	0.176	0.363	0.670	0.501	0.599	0.588
328.15	0.195	0.387	0.692	0.527	0.625	0.618
338.15	0.214	0.408	0.704	0.549	0.649	0.642
348.15	0.230	0.426	0.711	0.568	0.665	0.659
358.15	0.242	0.443	0.720	0.583	0.681	0.677
368.15	0.258	0.463	0.732	0.600	0.704	0.696
di- <i>n</i> -propyl						
<i>T</i> /K	thiophene	THF	MTBE	diethyl ether	ether	di- <i>n</i> -butyl ether
318.15	0.139	0.132	1.01	1.12	1.79	2.33
328.15	0.158	0.142	1.03	1.12	1.77	2.29
338.15	0.173	0.179	1.04	1.11	1.74	2.25
348.15	0.185	0.212	1.04	1.10	1.72	2.21
358.15	0.199	0.220	1.05	1.10	1.70	2.17
368.15	0.215	0.194	1.05	1.10	1.68	2.13
<i>T</i> /K	acetone	methanol	ethanol	1-propanol	1-butanol	
318.15	-0.234	1.37	1.27	1.25	1.32	
328.15	-0.218	1.29	1.19	1.15	1.21	
338.15	-0.209	1.19	1.09	1.06	1.11	
348.15	-0.206	1.11	1.00	0.966	1.01	
358.15	-0.201	1.04	0.921	0.884	0.928	
368.15	-0.193	0.971	0.850	0.812	0.855	
[C ₆ OCmim][NTf ₂]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
318.15	2.29	2.38	2.53	2.72	2.92	3.15
328.15	2.22	2.33	2.48	2.66	2.87	3.08
338.15	2.18	2.28	2.43	2.61	2.80	3.01
348.15	2.13	2.24	2.39	2.56	2.75	2.96
358.15	2.08	2.20	2.34	2.52	2.69	2.90
368.15	2.04	2.16	2.30	2.46	2.64	2.82
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene
318.15	1.90	2.06	2.15	2.29	1.78	1.90
328.15	1.86	2.00	2.10	2.24	1.75	1.86
338.15	1.81	1.95	2.04	2.17	1.72	1.82
348.15	1.78	1.91	2.01	2.14	1.70	1.80
358.15	1.73	1.86	1.96	2.09	1.67	1.76
368.15	1.70	1.81	1.91	2.03	1.63	1.73
<i>T</i> /K	1-heptene	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne
318.15	2.06	2.24	0.975	1.10	1.25	1.43
328.15	2.02	2.20	0.973	1.10	1.25	1.42
338.15	1.99	2.17	0.963	1.09	1.24	1.41
348.15	1.96	2.13	0.959	1.10	1.24	1.41
358.15	1.93	2.10	0.952	1.10	1.24	1.40
368.15	1.91	2.08	0.946	1.09	1.23	1.39
<i>T</i> /K	benzene	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene
318.15	0.401	0.555	0.792	0.691	0.767	0.770
328.15	0.403	0.561	0.793	0.694	0.770	0.774
338.15	0.404	0.563	0.788	0.694	0.770	0.774

χ_{12}^{∞}						
348.15	0.408	0.571	0.792	0.702	0.772	0.785
358.15	0.408	0.573	0.789	0.701	0.776	0.782
368.15	0.412	0.578	0.788	0.703	0.781	0.787
di- <i>n</i> -propyl						
<i>T</i> /K	thiophene	THF	MTBE	diethyl ether	ether	acetone
318.15	0.405	-0.116	0.683	0.814	1.37	-0.401
328.15	0.400	-0.094	0.700	0.824	1.36	-0.386
338.15	0.395	-0.072	0.716	0.823	1.34	-0.377
348.15	0.399	-0.045	0.733	0.823	1.34	-0.359
358.15	0.393	-0.030	0.743	0.820	1.33	-0.351
368.15	0.397	-0.010	0.761	0.826	1.33	-0.339
<i>T</i> /K	methanol	ethanol	1-propanol	1-butanol		
318.15	1.38	1.21	1.14	1.15		
328.15	1.29	1.12	1.05	1.05		
338.15	1.20	1.03	0.951	0.953		
348.15	1.13	0.957	0.876	0.875		
358.15	1.05	0.875	0.793	0.793		
368.15	0.963	0.791	0.714	0.718		
[(C ₆ OC) ₂ im][NTf ₂]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
318.15	1.58	1.65	1.76	1.88	2.03	2.18
328.15	1.54	1.61	1.72	1.85	1.98	2.13
338.15	1.51	1.58	1.68	1.81	1.93	2.08
348.15	1.49	1.55	1.65	1.78	1.90	2.05
358.15	1.44	1.52	1.62	1.74	1.86	2.00
368.15	1.42	1.50	1.59	1.71	1.82	1.96
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene
318.15	1.33	1.44	1.51	1.60	1.26	1.33
328.15	1.30	1.40	1.47	1.56	1.23	1.30
338.15	1.26	1.36	1.42	1.51	1.20	1.27
348.15	1.24	1.33	1.39	1.48	1.18	1.25
358.15	1.21	1.29	1.36	1.44	1.15	1.23
368.15	1.19	1.26	1.33	1.41	1.13	1.20
<i>T</i> /K	1-heptene	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne
318.15	1.43	1.55	0.735	0.788	0.860	0.960
328.15	1.41	1.52	0.726	0.787	0.863	0.960
338.15	1.38	1.50	0.715	0.777	0.854	0.954
348.15	1.36	1.47	0.712	0.779	0.855	0.952
358.15	1.34	1.45	0.703	0.777	0.855	0.949
368.15	1.32	1.43	0.692	0.772	0.850	0.940
<i>T</i> /K	benzene	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene
318.15	0.327	0.397	0.553	0.475	0.524	0.523
328.15	0.319	0.398	0.547	0.480	0.525	0.528
338.15	0.312	0.396	0.539	0.475	0.522	0.526
348.15	0.309	0.396	0.536	0.475	0.523	0.526
358.15	0.310	0.400	0.537	0.477	0.526	0.531
368.15	0.306	0.398	0.532	0.474	0.522	0.525

χ_{12}^{∞}						
<i>T</i> /K	thiophene	THF	MTBE	diethyl ether	di- <i>n</i> -propyl ether	acetone
318.15	0.361	-0.262	0.376	0.520	0.903	-0.324
328.15	0.350	-0.235	0.391	0.527	0.898	-0.314
338.15	0.337	-0.213	0.406	0.528	0.891	-0.308
348.15	0.332	-0.193	0.424	0.542	0.890	-0.298
358.15	0.326	-0.171	0.440	0.534	0.884	-0.293
368.15	0.319	-0.153	0.451	0.540	0.878	-0.290
<i>T</i> /K	methanol	ethanol	1-propanol	1-butanol		
318.15	1.48	1.22	1.06	0.986		
328.15	1.40	1.13	0.968	0.894		
338.15	1.31	1.05	0.882	0.805		
348.15	1.24	0.968	0.804	0.727		
358.15	1.16	0.895	0.734	0.656		
368.15	1.09	0.824	0.665	0.590		
[Et ₃ S][NTf ₂]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	<i>n</i> -nonane	<i>n</i> -decane
308.15	3.28	3.48	3.77	4.09	4.42	4.79
318.15	3.19	3.40	3.68	3.99	4.32	4.67
328.15	3.02	3.28	3.56	3.87	4.20	4.54
338.15	3.01	3.23	3.50	3.80	4.11	4.44
348.15	2.88	3.12	3.39	3.69	3.99	4.32
358.15	2.84	3.07	3.32	3.62	3.90	4.23
368.15	2.71	2.97	3.23	3.52	3.80	4.12
<i>T</i> /K	cyclopentane	cyclohexane	cycloheptane	cyclooctane	1-pentene	1-hexene
308.15	2.72	3.01	3.23	3.49	2.46	2.71
318.15	2.65	2.93	3.15	3.40	2.41	2.66
328.15	2.54	2.81	3.05	3.30	2.32	2.58
338.15	2.50	2.76	2.98	3.21	2.29	2.55
348.15	2.40	2.67	2.89	3.12	2.22	2.47
358.15	2.36	2.61	2.82	3.05	2.20	2.44
368.15	2.27	2.52	2.74	2.95	2.11	2.37
<i>T</i> /K	1-heptene	1-octene	1-pentyne	1-hexyne	1-heptyne	1-octyne
308.15	3.01	3.33	1.29	1.56	1.86	2.18
318.15	2.96	3.27	1.29	1.56	1.86	2.17
328.15	2.88	3.19	1.27	1.54	1.84	2.14
338.15	2.84	3.14	1.28	1.55	1.83	2.13
348.15	2.77	3.07	1.26	1.53	1.81	2.10
358.15	2.73	3.02	1.26	1.53	1.80	2.08
368.15	2.67	2.96	1.23	1.51	1.77	2.05
<i>T</i> /K	benzene	toluene	ethylbenzene	<i>o</i> -xylene	<i>m</i> -xylene	<i>p</i> -xylene
308.15	0.525	0.771	1.13	0.971	1.07	1.06
318.15	0.537	0.787	1.14	0.987	1.09	1.08
328.15	0.536	0.790	1.13	0.986	1.08	1.08
338.15	0.548	0.803	1.14	0.997	1.10	1.09
348.15	0.551	0.807	1.13	0.999	1.10	1.10
358.15	0.561	0.817	1.13	1.003	1.10	1.11

χ_{12}^{∞}						
368.15	0.563	0.818	1.13	1.005	1.10	1.10
<i>T</i> /K	thiophene	THF	MTBE	methanol	ethanol	1-propanol
308.15	0.452	0.279	1.34	1.44	1.42	1.48
318.15	0.460	0.299	1.35	1.35	1.32	1.37
328.15	0.458	0.304	1.33	1.26	1.21	1.26
338.15	0.469	0.325	1.35	1.17	1.13	1.17
348.15	0.469	0.329	1.33	1.09	1.04	1.07
358.15	0.481	0.344	1.34	1.01	0.96	1.00
368.15	0.482	0.349	1.33	0.947	0.882	0.915
<i>T</i> /K	1-butanol					
308.15	1.64					
318.15	1.51					
328.15	1.39					
338.15	1.29					
348.15	1.19					
358.15	1.11					
368.15	1.03					
[hmim][NTf ₂]						
<i>T</i> /K	<i>n</i> -pentane	<i>n</i> -hexane	<i>n</i> -heptane	<i>n</i> -octane	cyclopentane	cyclohexane
298.15	2.28	2.43	2.65	2.89	1.94	2.14
313.15	2.21	2.35	2.55	2.77	1.86	2.04
333.15	2.11	2.27	2.46	2.67	1.80	1.95
<i>T</i> /K	cycloheptane	1-hexene	1-octene	1-hexyne	1-heptyne	1-octyne
298.15	2.27	1.90	2.33	1.02	1.19	1.40
313.15	2.17	1.86	2.26	1.02	1.19	1.39
333.15	2.08	1.80	2.20	1.03	1.21	1.40
<i>T</i> /K	benzene	methanol	ethanol	1-propanol	1-butanol	1-pentanol
298.15	0.213	1.56	1.48	1.43	1.47	1.42
313.15	0.225	1.35	1.33	1.27	1.30	1.26
333.15	0.251	1.19	1.13	1.07	1.09	1.08
<i>T</i> /K	1-hexanol					
298.15	1.60					
313.15	1.44					
333.15	1.24					