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## APPENDIX

### A. Viscosity Measurements

#### The HPC/Water System

**Table A1** Reduced viscosity,  $\eta_{sp}/c$ , as a function of total HPC concentration at 30 °C for the HPC/water system (Figure 3.1)

[HPC] (g/l)	$\eta_{sp}/c$ (l/g)				Average	SD
	1	2	3	4		
0.5	0.1369	0.1370	0.1372	0.1391	0.1376	1.0408e-3
1.0	0.1365	0.1367	0.1311	0.1309	0.1338	3.2352e-3
1.5	0.1321	0.1317	0.1310	0.1300	0.1312	9.2014e-4
2.0	0.1364	0.1364	0.1376	0.1378	0.1371	7.5498e-4
2.5	0.1386	0.1391	0.1410	0.1409	0.1399	1.2302e-3
3.0	0.1406	0.1409	0.1423	0.1419	0.1414	8.0571e-4

**Table A2** Inherent viscosity,  $(\ln \eta_r)/c$ , as a function of total HPC concentration at 30 °C for the HPC/water system (Figure 3.1)

[HPC] (g/l)	$(\ln \eta_r)/c$ (l/g)				Average	SD
	1	2	3	4		
0.5	0.1323	0.1325	0.1327	0.1347	0.1331	1.1121e-3
1.0	0.1280	0.1281	0.1232	0.1230	0.1256	2.8593e-3
1.5	0.1205	0.1202	0.1196	0.1188	0.1198	7.5000e-4
2.0	0.1206	0.1206	0.1216	0.1217	0.1211	6.0759e-4
2.5	0.1190	0.1194	0.1208	0.1207	0.1200	9.1059e-4
3.0	0.1173	0.1175	0.1185	0.1182	0.1178	6.4291e-4

**Table A3** Relative viscosity,  $\eta_r$ , as a function of total HPC concentration at 30 °C for the HPC/water system (Figure 3.2)

[HPC] (g/l)	$\eta_r$		Average	SD
	1	2		
1.0	1.1360	1.1369	1.1365	6.3640e-4
2.0	1.2731	1.2726	1.2729	3.5355e-4
3.0	1.4242	1.4242	1.4242	0.0000
4.0	1.5886	1.5879	1.5883	4.9497e-7
5.0	1.7890	1.7894	1.7892	2.8284e-4
6.0	1.9814	1.9820	1.9817	4.2426e-4
7.0	2.1930	2.1933	2.1932	2.1213e-4
8.0	2.4216	2.4205	2.4211	7.7782e-4
9.0	2.6979	2.6981	2.6980	1.4142e-4
10.0	2.9656	2.9662	2.9662	8.4853e-4

### The OTG/Water System

**Table A4** Viscosity as a function of OTG solution at 30 °C for the OTG/water system (Figure 3.6)

[OTG] (mM)	Viscosity (cP)		Average	SD
	1	2		
0.060	0.8061	0.8058	0.8060	2.1213e-4
0.084	0.8060	0.8054	0.8057	4.2426e-4
0.204	0.8076	0.8082	0.8079	4.2426e-4
0.420	0.8113	0.8117	0.8115	2.8284e-4
1.020	0.7985	0.7991	0.7988	4.2426e-4
2.040	0.7964	0.7964	0.7964	0.0000
5.040	0.7985	0.7985	0.7985	0.0000
8.040	0.7995	0.8003	0.7999	5.6569e-4
10.20	0.8016	0.8012	0.8014	2.8284e-4
12.00	0.8041	0.8034	0.8038	4.9497e-4
16.20	0.8155	0.8144	0.8150	7.7782e-4
20.04	0.8322	0.8310	0.8316	8.4853e-4
30.00	0.8681	0.8687	0.8684	4.2426e-4

### The CTAB/Water System

**Table A5** Viscosity as a function of CTAB concentration at 30 °C for the CTAB/water system (Figure 3.9)

[CTAB] (mM)	Viscosity (cP)		Average	SD
	1	2		
0.80	0.8146	0.8152	0.8149	4.2426e-4
0.85	0.8160	0.8164	0.8162	2.8284e-4
0.90	0.8163	0.8161	0.8162	1.4142e-4
1.00	0.8163	0.8161	0.8162	1.4142e-4
1.50	0.8179	0.8178	0.8179	7.0711e-5
2.00	0.8202	0.8208	0.8205	4.2426e-4
2.50	0.8254	0.8258	0.8256	2.8284e-4
3.00	0.8262	0.8261	0.8262	7.0711e-5
3.50	0.8294	0.8288	0.8291	4.2426e-4
4.00	0.8334	0.8329	0.8332	3.5355e-4
5.00	0.8369	0.8366	0.8367	2.1213e-4
6.00	0.8423	0.8417	0.8420	4.2426e-4
7.00	0.8505	0.8500	0.8502	2.8284e-4
8.00	0.8512	0.8512	0.8512	0.0000
9.00	0.8550	0.8552	0.8551	1.4142e-4
10.00	0.8618	0.8613	0.8616	3.5355e-4

The HPC/OTG/Water System

**Table A6** Specific viscosity,  $\eta_{sp}$ , as a function of total OTG concentration at 30 °C for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l (Figure 3.11)

[OTG] (mM)	$\eta_{sp}$		Average	SD
	1	2		
0.00	0.7817	0.7822	0.7820	3.5355e-4
0.06	0.7721	0.7725	0.7723	2.8284e-4
0.08	0.7707	0.7724	0.7716	1.2021e-3
0.20	0.7654	0.7645	0.7649	6.3640e-4
0.42	0.7624	0.7601	0.7613	1.6263e-3
1.02	0.7602	0.7625	0.7613	1.6263e-3
2.04	0.7652	0.7644	0.7648	5.6569e-4
5.04	0.7709	0.7727	0.7718	1.2728e-3
8.04	0.7769	0.7782	0.7776	9.1924e-4
9.00	0.7671	0.7632	0.7652	2.7577e-3
10.20	0.7811	0.7819	0.7815	5.6569e-4
12.00	0.7914	0.7934	0.7924	1.4142e-3
16.20	0.8376	0.8387	0.8382	7.7782e-4
20.04	0.8666	0.8681	0.8674	1.0607e-3
27.00	0.8993	0.8996	0.8995	2.1213e-4
45.00	1.1110	1.1134	1.1122	1.6971e-3
63.00	1.3915	1.3938	1.3927	1.6263e-3

**Table A7** Viscosity as a function of total OTG concentration at 30 °C for the HPC/OTG/water system at fixed HPC concentration of 5 g/l (Figure 3.12)

[OTG] (mM)	Viscosity (cP)		Average	SD
	1	2		
0.00	1.4508	1.4513	1.4511	3.5355e-4
0.06	1.4430	1.4434	1.4432	2.8284e-4
0.08	1.4419	1.4433	1.4426	9.8995e-4
0.20	1.4383	1.4369	1.4376	9.8995e-4
0.42	1.4351	1.4345	1.4318	4.2426e-4
1.02	1.4334	1.4353	1.4344	1.3435e-3
2.04	1.4374	1.4368	1.4371	4.2426e-4
5.04	1.4421	1.4436	1.4426	1.0607e-3
8.04	1.4469	1.4480	1.4475	7.7782e-4
9.00	1.4610	1.4578	1.4594	2.2627e-3
10.20	1.4504	1.4511	1.4508	4.9497e-4
12.00	1.4588	1.4604	1.4596	1.1311e-3
16.20	1.4964	1.4972	1.4968	5.6569e-4
20.04	1.5200	1.5212	1.5206	8.4853e-4
27.00	1.5706	1.5704	1.5705	1.4142e-4
45.00	1.7454	1.7473	1.7464	1.3435e-3
63.00	1.9773	1.9792	1.9783	1.3435e-3

The HPC/CTAB/Water System

**Table A8** Specific viscosity,  $\eta_{sp}$ , as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 1 g/l (Figure 3.20)

[CTAB] (mM)	[CTAB]/HPC]	$\eta_{sp}$		Average	SD
		1	2		
0.05	0.01822	0.0868	0.0871	0.0870	2.1213e-4
0.10	0.03645	0.0902	0.0899	0.0900	2.1213e-4
0.50	0.18223	0.0946	0.0942	0.0900	2.1213e-4
0.70	0.25512	0.0914	0.0916	0.0915	1.4141e-4
0.85	0.30979	0.0961	0.0962	0.0962	7.0711e-5
0.90	0.32801	0.0924	0.0917	0.0920	4.9497e-4
1.00	0.36446	0.0920	0.0917	0.0918	2.1213e-4
1.50	0.54669	0.0818	0.0813	0.0816	3.5355e-4
2.00	0.72892	0.0882	0.0886	0.0884	2.8284e-4
2.50	0.91115	0.0910	0.0923	0.0916	9.1924e-4
3.00	1.09338	0.1043	0.1046	0.1044	2.1213e-4
3.50	1.27561	0.1049	0.1064	0.1056	1.0607e-3
4.00	1.45784	0.1125	0.1097	0.1111	1.9799e-3
5.00	1.82230	0.1287	0.1261	0.1274	1.8385e-3
6.00	2.18676	0.1269	0.1282	0.1276	9.1924e-4
7.00	2.55080	0.1266	0.1274	0.1270	5.6568e-4
8.00	2.91568	0.1250	0.1227	0.1238	1.6263e-3
9.00	3.28014	0.1294	0.1294	0.1294	0.0000e0
10.00	3.64460	0.1357	0.1367	0.1362	7.0711e-4

**Table A9** Specific viscosity,  $\eta_{sp}$ , as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 2 g/l (Figure 3.20)

[CTAB] (mM)	[CTAB]/HPC]	$\eta_{sp}$		Average	SD
		1	2		
0.05	9.1115e-3	0.2420	0.2405	0.2412	1.0607e-3
0.10	0.01822	0.2423	0.2420	0.2422	2.1213e-4
0.50	0.09112	0.2456	0.2462	0.2459	4.2626e-4
0.70	0.12756	0.2728	0.2735	0.2732	4.9497e-4
0.80	0.14578	0.2844	0.2835	0.2840	6.3640e-4
0.85	0.15490	0.2927	0.2918	0.2922	6.3640e-4
0.90	0.16401	0.2975	0.2957	0.2966	1.2728e-4
1.00	0.18223	0.3071	0.3060	0.3066	7.7782e-4
1.50	0.27334	0.3124	0.3112	0.3118	8.4853e-4
2.00	0.36446	0.2875	0.2863	0.2869	8.4853e-4
2.50	0.45558	0.2618	0.2608	0.2613	7.0711e-4
3.00	0.54669	0.2502	0.2487	0.2494	1.0607e-3
3.50	0.63780	0.2401	0.2411	0.2406	7.0711e-4
4.00	0.72892	0.2388	0.2372	0.2380	1.1314e-3
5.00	0.91115	0.2468	0.2463	0.2466	3.5355e-4
6.00	1.09338	0.2463	0.2450	0.2456	9.1924e-4
7.00	1.27540	0.2566	0.2552	0.2559	9.8995e-4
8.00	1.45784	0.2718	0.2719	0.2718	7.0711e-5
9.00	1.64007	0.2902	0.2885	0.2894	1.2021e-3
10.00	1.82230	0.2793	0.2796	0.2794	2.1213e-4



**Table A10** Specific viscosity,  $\eta_{sp}$ , as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l (Figure 3.20)

[CTAB] (mM)	[CTAB]/HPC	$\eta_{sp}$		Average	SD
		1	2		
0.05	6.07433e-3	0.4255	0.4280	0.4268	1.7678e-3
0.10	0.01215	0.4185	0.4196	0.4190	7.7782e-4
0.50	0.06074	0.4404	0.4406	0.4405	1.4142e-4
0.70	0.08504	0.4860	0.4860	0.4860	0.0000e0
0.80	0.09719	0.5162	0.5153	0.5158	6.3640e-4
0.85	0.10326	0.5438	0.5435	0.5436	2.1213e-4
0.90	0.10934	0.5556	0.5548	0.5552	5.6568e-4
1.00	0.12149	0.5693	0.5695	0.5694	1.4442e-4
1.50	0.18223	0.5704	0.5692	0.5698	8.4853e-4
2.00	0.24297	0.5520	0.5507	0.5514	9.1924e-4
2.50	0.30372	0.5924	0.5924	0.5924	0.0000e0
3.00	0.36446	0.5530	0.5528	0.5529	1.4142e-4
3.50	0.42520	0.5290	0.5268	0.5279	1.5556e-3
4.00	0.48595	0.4909	0.4894	0.4902	1.0607e-3
5.00	0.60753	0.4457	0.4453	0.4455	2.8284e-4
6.00	0.72892	0.4262	0.4260	0.4261	1.4142e-4
7.00	0.85027	0.4063	0.4080	0.4072	1.2021e-3
8.00	0.97189	0.4147	0.4154	0.4151	4.9497e-4

**Table A11** Specific viscosity,  $\eta_{sp}$ , as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 4 g/l (Figure 3.20)

[CTAB] (mM)	[CTAB]/HPC	$\eta_{sp}$		Average	SD
		1	2		
0.05	4.55558e-3	0.5715	0.5732	0.5724	1.2021e-3
0.10	9.11150e-3	0.5763	0.5756	0.5759	4.2426e-4
0.70	0.06378	0.6514	0.6524	0.6519	7.0711e-4
0.80	0.07289	0.6981	0.6971	0.6976	7.0711e-4
0.85	0.07745	0.7099	0.7103	0.7101	2.8284e-4
0.90	0.08200	0.7443	0.7432	0.7438	7.7782e-4
1.00	0.09112	0.7801	0.7798	0.7800	2.1213e-4
1.50	0.13667	0.9407	0.9418	0.9412	7.7782e-4
2.00	0.18223	1.0205	1.0203	1.0204	1.4142e-4
2.50	0.22779	1.0230	1.0235	1.0232	3.5355e-4
3.00	0.27334	0.9645	0.9643	0.9644	1.4142e-4
3.50	0.31890	0.9274	0.9582	0.9278	5.6568e-4
4.00	0.36446	0.8730	0.8707	0.8718	1.6263e-3
5.00	0.45558	0.8087	0.8093	0.8090	4.2426e-4
6.00	0.54669	0.6876	0.6867	0.6872	6.3640e-4
7.00	0.63770	0.6399	0.6396	0.6398	2.1213e-4
8.00	0.72892	0.6013	0.6002	0.6008	7.7782e-4
9.00	0.82004	0.5610	0.5603	0.5606	4.9497e-4
10.00	0.91115	0.5341	0.5350	0.5346	6.3640e-4

**Table A12** Specific viscosity,  $\eta_{sp}$ , as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l (Figure 3.20)

[CTAB] (mM)	[CTAB]/HPC]	$\eta_{sp}$		Average	SD
		1	2		
0.05	3.6446e-3	0.7405	0.7430	0.7418	1.7678e-3
0.10	7.2892e-3	0.7511	0.7509	0.7510	1.4142e-4
0.50	0.03645	0.7845	0.7812	0.7828	2.3334e-3
0.70	0.05102	0.8692	0.8695	0.8694	2.1213e-4
0.80	0.05831	0.9324	0.9334	0.9329	7.0711e-4
0.85	0.03195	0.9440	0.9433	0.9436	4.9497e-4
0.90	0.06560	1.0376	1.0392	1.0384	1.1314e-3
1.00	0.07289	1.0266	1.0236	1.0251	2.1213e-3
1.50	0.10934	1.2919	1.2909	1.2914	7.0711e-4
2.00	0.14578	1.4381	1.4377	1.4379	2.8284e-4
2.50	0.18223	1.5108	1.5093	15100	1.0607e-3
3.00	0.21868	1.4962	1.4984	1.4973	1.5556e-3
3.50	0.25512	1.4674	1.4706	1.4690	2.2627e-3
4.00	0.29157	1.3976	1.3973	1.3974	1.9092e-3
5.00	0.36446	1.2893	1.2920	1.2906	1.9092e-3
6.00	0.43735	1.1367	1.1368	1.1367	7.0711e-3
7.00	0.51016	1.0821	1.0812	1.0816	6.3640e-4
8.00	0.58314	0.9516	0.9521	0.9518	3.5355e-4
9.00	0.65603	0.8559	0.8540	0.8550	1.3435e-3

**Table A13** Viscosity as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 1 g/l

[CTAB] (mM)	[CTAB]/HPC]	Viscosity (cP)		Average	SD
		1	2		
0.05	0.01822	0.9145	0.9148	0.9146	2.1213e-4
0.10	0.03645	0.9173	0.9171	0.9172	1.4142e-4
0.50	0.18223	0.9210	0.9207	0.9208	2.1213e-4
0.70	0.25512	0.9184	0.9185	0.9184	7.0711e-5
0.85	0.30979	0.9223	0.9224	0.9224	7.0711e-5
0.90	0.32801	0.9194	0.9193	0.9194	7.0711e-5
1.00	0.36446	0.9188	0.9187	0.9188	7.0711e-5
1.50	0.54669	0.9102	0.9098	0.9100	2.8284e-4
2.00	0.72892	0.9157	0.9161	0.9159	2.8284e-4
2.50	0.91115	0.9210	0.9191	0.9200	1.3435e-3
3.00	1.09338	0.9293	0.9295	0.9294	7.0711e-5
3.50	1.27561	0.9296	0.9310	0.9303	9.8995e-4
4.00	1.45784	0.9361	0.9338	0.9349	1.6263e-3
5.00	1.82230	0.9498	0.9476	0.9487	1.5556e-3
6.00	2.18676	0.9483	0.9493	0.9488	9.8826e-4
7.00	2.55080	0.9480	0.9487	0.9484	4.9497e-4
8.00	2.91568	0.9467	0.9447	0.9457	1.4142e-4
9.00	3.28014	0.9504	0.9503	0.9504	7.0711e-5
10.00	3.64460	0.9557	0.9565	0.9561	5.6568e-4

**Table A14** Viscosity as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 2 g/l

[CTAB] (mM)	[CTAB]/HPC]	Viscosity (cP)		Average	SD
		1	2		
0.05	9.1115e-3	1.0318	1.0306	1.0312	8.4853e-4
0.10	0.01822	1.0321	1.0318	1.0320	2.1213e-4
0.50	0.09112	1.0348	1.0353	1.0350	3.5355e-4
0.70	0.12756	1.0574	1.0580	1.0577	4.2426e-4
0.80	0.14578	1.0670	1.0662	1.0666	5.6568e-4
0.85	0.15490	1.0740	1.0732	1.0736	5.6568e-4
0.90	0.16401	1.0779	1.0764	1.0772	1.0607e-3
1.00	0.18223	1.0859	1.0849	1.0854	7.0711e-4
1.50	0.27334	1.0903	1.0893	1.0898	7.0711e-4
2.00	0.36446	1.0696	1.0686	1.0691	7.0711e-4
2.50	0.45558	1.0482	1.0474	1.0478	5.6568e-4
3.00	0.54669	1.0386	1.0374	1.0380	8.4583e-4
3.50	0.63780	1.0302	1.0311	1.0306	6.3640e-4
4.00	0.72892	1.0292	1.0278	1.0280	9.8995e-4
5.00	0.91115	1.0358	1.0354	1.0356	2.8284e-4
6.00	1.09338	1.0354	1.0343	1.0348	7.7782e-4
7.00	1.27540	1.0439	1.0428	1.0434	7.7782e-4
8.00	1.45784	1.0565	1.0567	1.0566	1.4142e-4
9.00	1.64007	1.0718	1.0742	1.0730	1.6970e-3
10.00	1.82230	1.0628	1.0630	1.0629	1.4142e-4

**Table A15** Viscosity as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l

[CTAB] (mM)	[CTAB]/HPC]	Viscosity (cP)		Average	SD
		1	2		
0.05	6.07433e-3	1.1576	1.1596	1.1586	1.4142e-3
0.10	0.01215	1.1519	1.1528	1.1523	6.3640e-4
0.50	0.06074	1.1697	1.1698	1.1698	7.0711e-5
0.70	0.08504	1.2067	1.2067	1.2067	0.0000e0
0.80	0.09719	1.2312	1.2305	1.2309	4.9497e-4
0.85	0.10326	1.2536	1.2534	1.2535	1.4142e-4
0.90	0.10934	1.2632	1.2626	1.2629	4.2426e-4
1.00	0.12149	1.2744	1.2745	1.2744	7.0711e-5
1.50	0.18223	1.2752	1.2742	1.2747	7.0711e-4
2.00	0.24297	1.2602	1.2592	1.2597	7.0711e-4
2.50	0.30372	1.2931	1.2931	1.2931	0.0000e0
3.00	0.36446	1.2610	1.2612	1.2611	1.4142e-4
3.50	0.42520	1.2416	1.2399	1.2408	1.2021e-3
4.00	0.48595	1.2107	1.2014	1.2111	4.9497e-4
5.00	0.60753	1.1739	1.1736	1.1737	2.1213e-4
6.00	0.72892	1.1581	1.1580	1.1580	7.0711e-5
7.00	0.85027	1.1420	1.1434	1.1427	9.8995e-4
8.00	0.97189	1.1488	1.1494	1.1491	4.2426e-4

**Table A16** Viscosity as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 4 g/l

[CTAB] (mM)	[CTAB]/HPC	Viscosity (cP)		Average	SD
		1	2		
0.05	4.55558e-3	1.2915	1.2929	1.2922	9.8995e-4
0.10	9.11150e-3	1.2954	1.2949	1.2952	3.5355e-4
0.70	0.06378	1.3572	1.3580	1.3576	5.6568e-4
0.80	0.07289	1.3955	1.3947	1.3951	5.6568e-4
0.85	0.07745	1.4052	1.4056	1.4054	2.8284e-4
0.90	0.08200	1.4335	1.4326	1.4330	6.3640e-4
1.00	0.09112	1.4629	1.4627	1.4628	1.4142e-4
1.50	0.13667	1.5949	1.5958	1.5954	6.3640e-4
2.00	0.18223	1.6605	1.6604	1.6604	7.0711e-5
2.50	0.22779	1.6625	1.6630	1.6628	3.5355e-4
3.00	0.27334	1.6145	1.6143	1.6144	1.4142e-4
3.50	0.31890	1.5840	1.5846	1.5843	4.2426e-4
4.00	0.36446	1.5393	1.5374	1.5384	1.3435e-3
5.00	0.45558	1.4864	1.4870	1.4867	4.2426e-4
6.00	0.54669	1.3869	1.3862	1.3866	4.9497e-4
7.00	0.63770	1.3477	1.3475	1.3476	1.4142e-4
8.00	0.72892	1.3160	1.3151	1.3156	6.3640e-4
9.00	0.82004	1.2828	1.2823	1.2826	3.5355e-4
10.00	0.91115	1.2607	1.2615	1.2611	5.6568e-4

**Table A17** Viscosity as a function of total CTAB concentration at 30 °C for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l

[CTAB] (mM)	[CTAB]/HPC	Viscosity (cP)		Average	SD
		1	2		
0.05	3.6446e-3	1.4430	1.4450	1.4440	1.4142e-3
0.10	7.2892e-3	1.4518	1.4516	1.4517	1.4142e-4
0.50	0.03645	1.4768	1.4794	1.4781	1.8385e-3
0.70	0.05102	1.5497	1.5499	1.5198	1.4142e-4
0.80	0.05831	1.6021	1.6029	1.6025	5.6568e-4
0.85	0.03195	1.6117	1.6111	1.6114	4.2426e-4
0.90	0.06560	1.6893	1.6906	1.6900	9.1924e-4
1.00	0.07289	1.6801	1.6777	1.6789	1.6970e-3
1.50	0.10934	1.9001	1.8993	1.8997	5.6568e-4
2.00	0.14578	2.0214	2.0210	2.0212	2.8284e-4
2.50	0.18223	2.0815	2.0803	2.0809	8.4853e-4
3.00	0.21868	2.0695	2.0713	2.0704	1.2728e-3
3.50	0.25512	2.0456	2.0483	2.0470	1.9092e-3
4.00	0.29157	1.9877	1.9875	1.9876	1.4142e-4
5.00	0.36446	1.8979	1.9002	1.8990	1.6263e-3
6.00	0.43735	1.7714	1.7715	1.7714	7.0711e-5
7.00	0.51016	1.7262	1.7255	1.7258	4.9497e-4
8.00	0.58314	1.6180	1.6184	1.6182	2.8284e-4
9.00	0.65603	1.5386	1.5371	1.5378	1.0607e-3

**Table A18** Interaction viscosity,  $\eta_I$ , and the ratio of  $\eta_I/\eta_{I, \max.}$  as a function of total CTAB concentration for the HPC/CTAB/water system at the fixed HPC concentration of 2 g/l (Figure 3.22)

[CTAB] (mM)	$\eta_I$		Average	SD	$\eta_I/\eta_{I, \max.}$		Average	SD
	1	2			1	2		
0.05	-0.0007	-0.0019	0.0013	8.4853e-4	-0.0131	-0.0363	-0.0247	0.0164
0.10	-0.0004	-0.0007	-0.0005	2.1213e-4	-0.0075	-0.0134	-0.0104	4.1494e-3
0.50	0.0023	0.0028	0.0026	3.5355e-4	0.0431	0.0534	0.0483	7.3284e-3
0.70	0.0249	0.0255	0.0252	4.2426e-4	0.4663	0.4866	0.4765	0.0144
0.80	0.0345	0.0337	0.0341	5.6569e-4	0.6461	0.6431	0.6446	2.0772e-3
0.85	0.0415	0.0407	0.0411	5.6569e-4	0.7772	0.7767	0.7769	3.0830e-4
0.90	0.0454	0.0439	0.0447	1.0607e-3	0.8502	0.8378	0.8440	8.7688e-3
1.00	0.0534	0.0524	0.0529	7.0711e-4	1.0000	1.0000	1.0000	0.0000
1.50	0.0578	0.0568	0.0573	7.0711e-4	1.0824	1.0840	1.0832	1.1119e-3
2.00	0.0371	0.0361	0.0366	7.0711e-4	0.6948	0.6889	0.6918	4.1191e-3
2.50	0.0157	0.0149	0.0153	5.6569e-4	0.2941	0.2844	0.2892	6.8281e-3
3.00	0.0061	0.0049	0.0055	8.4853e-4	0.1142	0.0935	0.1039	0.0147
3.50	-0.0023	-0.0014	-0.0018	6.3640e-4	-0.0431	-0.0267	-0.0349	0.0116
4.00	-0.0033	-0.0047	-0.0040	9.8995e-4	-0.0618	-0.0897	-0.0757	0.0197
5.00	0.0033	0.0029	0.0031	2.8284e-4	0.0618	0.0553	0.0586	4.5638e-3
6.00	0.0029	0.0018	0.0024	7.7782e-4	0.0543	0.0344	0.0443	0.0141
7.00	0.0114	0.0103	0.0109	7.7782e-4	0.2135	0.1966	0.2050	0.0120
8.00	0.0240	0.0242	0.0241	1.4142e-4	0.4494	0.4618	0.4556	8.7638e-3
9.00	0.0393	0.0417	0.0405	1.6971e-3	0.7360	0.7958	0.7659	0.0423
10.00	0.0303	0.0305	0.0304	1.4142e-4	0.5674	0.5802	0.5747	0.0104

**Table A19** Interaction viscosity,  $\eta_I$ , and the ratio of  $\eta_I/\eta_{I, \max.}$  as a function of total CTAB concentration for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l (Figure 3.22)

[CTAB] (mM)	$\eta_I$		Average	SD	$\eta_I/\eta_{I, \max.}$		Average	SD
	1	2			1	2		
0.05	0.0062	0.0082	0.0072	1.4142e-3	0.0501	0.0668	0.0584	0.0118
0.10	0.0005	0.0014	0.0010	6.3640e-4	0.0040	0.0114	0.0077	5.2056e-3
0.50	0.0183	0.0184	0.0184	7.0711e-5	0.1478	0.1498	0.1488	1.4270e-3
0.70	0.0553	0.0553	0.0553	0.0000	0.4467	0.4503	0.4485	2.5721e-3
0.80	0.0798	0.0791	0.0795	4.9497e-4	0.6446	0.6441	0.6444	3.1907e-4
0.85	0.1022	0.1020	0.1021	1.4142e-4	0.8255	0.8306	0.8281	3.6019e-3
0.90	0.1118	0.1112	0.1115	4.2426e-4	0.9031	0.9055	0.9043	1.7451e-3
1.00	0.1230	0.1231	0.1230	7.0711e-5	0.9935	1.0024	0.9980	6.2968e-3
1.50	0.1238	0.1228	0.1233	7.0711e-4	1.0000	1.0000	1.0000	0.0000
2.00	0.1088	0.1078	0.1083	7.0711e-4	0.8788	0.8778	0.8783	6.9768e-4
2.50	0.1417	0.1417	0.1417	0.0000	1.1446	1.1539	1.1492	6.5908e-3
3.00	0.1098	0.1096	0.1097	1.4142e-4	0.8869	0.8925	0.8897	3.9554e-3
3.50	0.0902	0.0885	0.0894	1.2021e-3	0.7286	0.7207	0.7246	1.7451e-3
4.00	0.0593	0.0600	0.0597	4.9497e-4	0.4790	0.4886	0.4838	6.7889e-3
5.00	0.0225	0.0222	0.0224	2.1213e-4	0.1817	0.1808	0.1813	6.8094e-4
6.00	0.0067	0.0066	0.0066	7.0711e-5	0.0541	0.0537	0.0539	2.6419e-4
7.00	-0.0094	-0.0083	-0.0088	7.7782e-4	-0.0759	-0.0676	-0.0718	5.8968e-3
8.00	-0.0026	-0.0020	0.0023	4.2426e-4	-0.0210	-0.0163	-0.0186	3.3340e-3

**Table A20** Interaction viscosity,  $\eta_I$ , and the ratio of  $\eta_I/\eta_{I, \max.}$  as a function of total CTAB concentration for the HPC/CTAB/water system at the fixed HPC concentration of 4 g/l (Figure 3.22)

[CTAB] (mM)	$\eta_I$		Average	SD	$\eta_I/\eta_{I, \max.}$		Average	SD
	1	2			1	2		
0.05	0.0019	0.0033	0.0026	9.8995e-4	0.0051	0.0089	0.0070	2.6707e-3
0.10	0.0058	0.0053	0.0056	3.5355e-4	0.01563	0.0143	0.0150	9.5051e-4
0.70	0.0676	0.0684	0.0680	5.6569e-4	0.1822	0.1845	0.1834	1.5603e-3
0.80	0.1059	0.1051	0.1055	5.6569e-4	0.2855	0.2834	0.2845	1.4711e-3
0.85	0.1156	0.1160	0.1158	2.8284e-4	0.3117	0.3128	0.3123	8.2223e-4
0.90	0.1439	0.1430	0.1435	6.3640e-4	0.3880	0.3856	0.3868	1.6423e-3
1.00	0.1733	0.1731	0.1732	1.4142e-4	0.4672	0.4668	0.4670	2.9229e-4
1.50	0.3053	0.3062	0.3058	6.3640e-4	0.8231	0.8258	0.8245	1.8732e-3
2.00	0.3709	0.3708	0.3709	7.0711e-5	1.0000	1.0000	1.0000	0.0000
2.50	0.3729	0.3734	0.3732	3.5355e-4	1.0054	1.0070	1.0062	1.1452e-3
3.00	0.3249	0.3247	0.3248	1.4142e-4	0.8760	0.8757	0.8758	2.1435e-4
3.50	0.2944	0.2950	0.2947	4.2426e-4	0.7937	0.7956	0.7947	1.2956e-3
4.00	0.2497	0.2478	0.2488	1.3435e-3	0.6732	0.6683	0.6708	3.4949e-3
5.00	0.1968	0.1974	0.1971	4.2426e-4	0.5306	0.5324	0.5315	1.2454e-3
6.00	0.0973	0.0966	0.0970	4.9497e-4	0.2623	0.2605	0.2614	1.2849e-3
7.00	0.0581	0.0579	0.0580	1.4142e-4	0.1566	0.1561	0.1564	3.5152e-4
8.00	0.0264	0.0255	0.260	6.3640e-4	0.0712	0.0688	0.0700	1.7027e-3
9.00	-0.0068	-0.0073	-0.0070	3.5355e-4	-0.0183	-0.0197	-0.0190	9.5698e-4
10.00	-0.0289	-0.0281	-0.0285	5.6569e-4	-0.0779	-0.0758	-0.0769	1.5107e-3

**Table A21** Interaction viscosity,  $\eta_I$ , and the ratio of  $\eta_I/\eta_{I, \max.}$  as a function of total CTAB concentration for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l (Figure 3.22)

[CTAB] (mM)	$\eta_I$		Average	SD	$\eta_I/\eta_{I, \max.}$		Average	SD
	1	2			1	2		
0.05	-0.0085	-0.0065	-0.0075	1.4142e-3	-0.0138	-0.0105	-0.0121	2.3100e-3
0.10	0.0003	0.0001	0.0002	1.4142e-4	0.0005	0.0002	0.0003	2.2917e-4
0.50	0.0279	0.0253	0.0268	1.8385e-3	0.0451	0.0408	0.0430	3.0590e-3
0.70	0.0982	0.0984	0.0983	1.4142e-4	0.1589	0.1588	0.1588	9.8136e-5
0.80	0.1506	0.1514	0.1510	5.6569e-4	0.2437	0.2443	0.2440	4.1226e-4
0.85	0.1602	0.1596	0.1599	4.2426e-4	0.2592	0.2575	0.2584	1.2168e-3
0.90	0.2378	0.2391	0.2385	9.1924e-4	0.3848	0.3858	0.3853	6.9294e-4
1.00	0.2286	0.2262	0.2274	1.6971e-3	0.3699	0.3650	0.3674	3.4977e-3
1.50	0.4486	0.4478	0.4482	5.6569e-4	0.7259	0.7225	0.7242	2.4033e-3
2.00	0.5699	0.5695	0.5697	2.8284e-4	0.9222	0.9188	0.9205	2.3501e-3
2.50	0.6300	0.6288	0.6294	8.4853e-4	1.0194	1.0140	1.0170	3.4625e-3
3.00	0.6180	0.6198	0.6189	1.2728e-3	1.0000	1.0000	1.0000	0.0000
3.50	0.5941	0.5968	0.5955	1.9092e-3	0.9613	0.9629	0.9621	1.1062e-3
4.00	0.5362	0.5360	0.5961	1.4142e-4	0.8676	0.8648	0.8662	2.0099e-3
5.00	0.4464	0.4487	0.4476	1.6263e-3	0.7223	0.7239	0.7231	1.1406e-3
6.00	0.3199	0.3200	0.3200	7.0711e-5	0.5176	0.5163	0.5170	9.4891e-4
7.00	0.2747	0.2740	0.2744	4.9497e-4	0.4445	0.4421	0.4433	1.7114e-3
8.00	0.1665	0.1669	0.1667	2.8284e-4	0.2694	0.2693	0.2693	9.6918e-5
9.00	0.0871	0.0856	0.0864	1.0607e-3	0.1409	0.1381	0.1395	2.0007e-3

**Table A22** Specific viscosity,  $\eta_{sp}$ , as a function of total CTAB concentration at 30 °C at the fixed HPC concentration of 4 g/l and at the fixed NaCl concentration of 5 mM (Figure 3.19)

[CTAB] (mM)	[CTAB]/HPC]	$\eta_{sp}$		Average	SD
		1	2		
0.05	4.55558e-3	0.5535	0.5529	0.5532	4.2426e-4
0.10	9.11150e-3	0.5560	0.5571	0.5566	7.7782e-4
0.50	0.04556	0.6242	0.6232	0.6237	7.0711e-4
0.70	0.06378	0.6387	0.6392	0.6390	3.5355e-4
0.80	0.07289	0.6667	0.6677	0.6672	7.0711e-4
0.85	0.07745	0.6625	0.6619	0.6622	4.2426e-4
0.90	0.08200	0.6942	0.6952	0.6947	7.0711e-4
1.00	0.09112	0.6886	0.6883	0.6885	2.1213e-4
1.50	0.13667	0.7446	0.7442	0.7444	2.8284e-4
2.00	0.18223	0.7785	0.7795	0.7790	7.0711e-4
2.50	0.22779	0.7731	0.7740	0.7736	6.3640e-4
3.00	0.27334	0.7592	0.7589	0.7591	2.1213e-4
3.50	0.31890	0.7468	0.7469	0.7469	7.0711e-5
4.00	0.36446	0.6821	0.6808	0.6814	9.1924e-4
5.00	0.45558	0.6115	0.6126	0.6120	7.7782e-4
6.00	0.54669	0.5486	0.5481	0.5481	3.5355e-4
7.00	0.63770	0.5062	0.5072	0.5072	7.0711e-4
8.00	0.72892	0.4757	0.4765	0.4765	5.6569e-4
9.00	0.82004	0.4224	0.4200	0.4200	1.6971e-3
10.00	0.91115	0.3923	0.3907	0.3907	1.1314e-3

**Table A23** Specific viscosity,  $\eta_{sp}$ , as a function of total CTAB concentration at 30 °C at the fixed HPC concentration of 4 g/l and at the fixed NaCl concentration of 20 mM (Figure 3.19)

[CTAB] (mM)	[CTAB]/HPC]	$\eta_{sp}$		Average	SD
		1	2		
0.05	4.55558e-3	0.5987	0.5976	0.5982	7.7782e-4
0.10	9.11150e-3	0.5987	0.5976	0.5982	7.7782e-4
0.50	0.04556	0.6090	0.6095	0.6093	3.5355e-4
0.70	0.06378	0.5856	0.5864	0.5860	5.6569e-4
0.80	0.07289	0.5882	0.5878	0.5880	2.8284e-4
0.85	0.07745	0.6060	0.6046	0.6053	9.8995e-4
0.90	0.08200	0.6174	0.6185	0.6180	7.7782e-4
1.00	0.09112	0.6188	0.6175	0.6182	9.1924e-4
1.50	0.13667	0.5621	0.5630	0.5626	6.3640e-4
2.00	0.18223	0.6007	0.6015	0.6011	5.6569e-4
2.50	0.22779	0.5970	0.5961	0.5965	6.3640e-4
3.00	0.27334	0.5951	0.5970	0.5961	1.3435e-3
3.50	0.31890	0.6198	0.6191	0.6194	4.9497e-4
4.00	0.36446	0.6411	0.6426	0.6418	1.0607e-3
5.00	0.45558	0.6038	0.6025	0.6032	9.1924e-4
6.00	0.54669	0.5435	0.5424	0.5430	7.7782e-4
7.00	0.63770	0.5344	0.5358	0.5351	9.8995e-4
8.00	0.72892	0.4456	0.4436	0.4446	1.4142e-3
9.00	0.82004	0.4050	0.4071	0.4061	1.4849e-3
10.00	0.91115	0.3871	0.3867	0.3869	2.8284e-4

## B. Dynamic Light Scattering Measurements

### The HPC/Water System

**Table B1** Data for the HPC concentration of 1 g/l at various angles

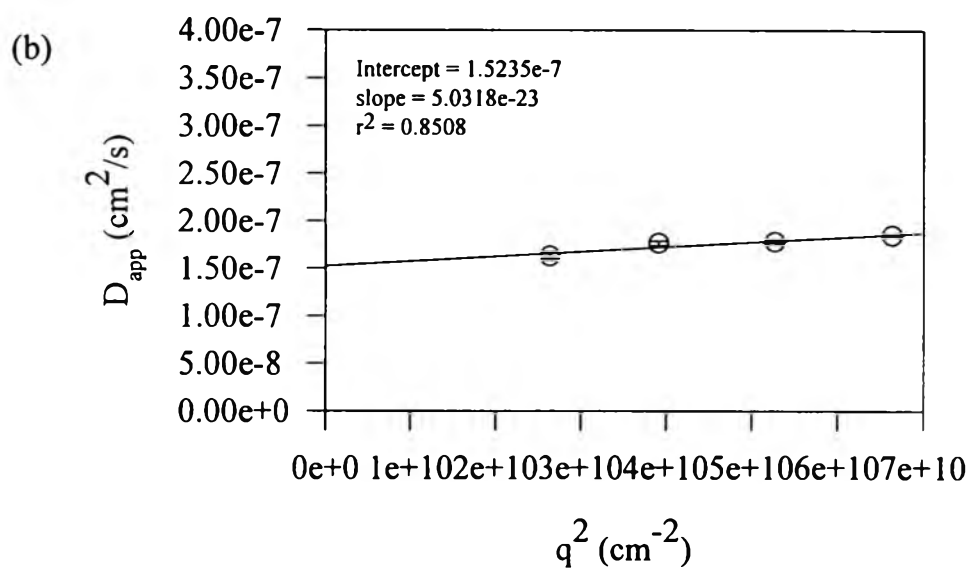
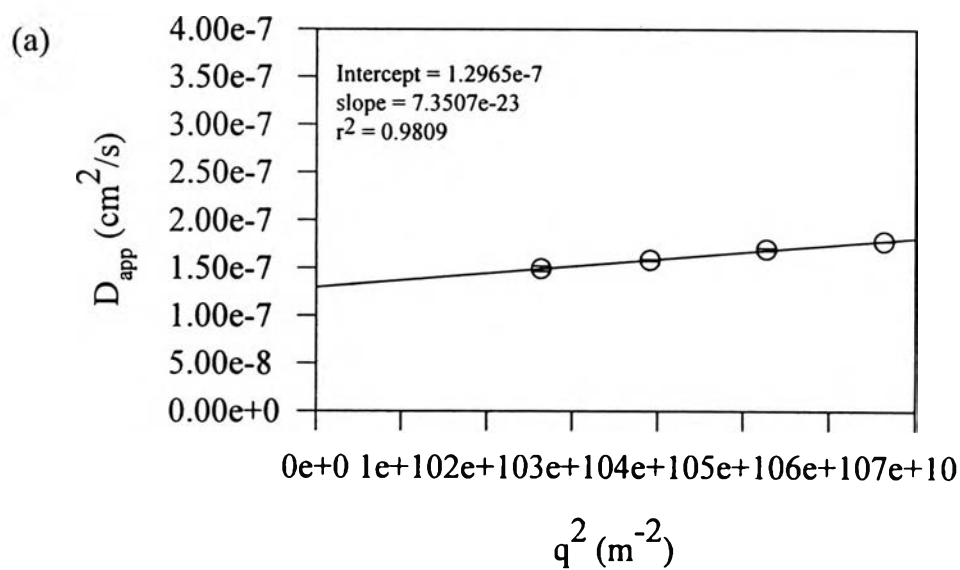
Measurement 1:

Angle (degree)	Sample ( $\mu\text{s}$ )	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.20	36.7	55.6	28.3	0.537	98.6	44.0	15.2e-8
	3.20	38.1	58.0	29.3	0.545	96.7	43.7	14.6e-8
	3.20	37.4	56.9	28.7	0.546	94.9	43.3	14.9e-8
Average	3.20	37.4	56.8	28.8	0.543	96.7	43.7	14.9e-8
SD	0.0000	0.7000	1.2014	0.5033	4.9329e-3	1.8502	0.3512	3.0000e-9
75	2.00	35.2	52.2	27.5	0.509	95.3	44.3	15.8e-8
	2.00	35.5	53.2	27.5	0.523	94.9	45.1	15.7e-8
	2.00	35.1	52.4	27.4	0.512	94.8	44.7	15.9e-8
Average	2.00	35.3	52.6	27.5	0.515	95.0	44.7	15.8e-8
SD	0.0000	0.2082	0.5292	0.0577	7.3711e-3	0.2646	0.4000	1.000e-9
90	1.30	33.1	48.2	26.2	0.483	95.0	45.7	16.8e-8
	1.30	32.6	46.8	25.9	0.467	96.6	45.5	17.1e-8
	1.30	33.0	47.8	26.2	0.478	96.5	45.7	16.9e-8
Average	1.30	32.9	47.6	26.1	0.476	96.0	45.6	16.9e-8
SD	0.0000	0.2646	0.7211	0.1732	8.1854e-3	0.8963	0.1155	1.5275e-9
105	1.00	31.3	43.2	25.5	0.424	96.7	43.6	17.8e-8
	1.00	31.3	44.5	25.1	0.458	96.7	43.1	17.8e-8
	1.00	31.3	43.9	25.3	0.440	96.5	43.1	17.8e-8
Average	1.00	31.3	43.9	25.3	0.441	96.6	43.3	17.8e-8
SD	0.0000	0.0000	0.6506	0.2000	0.0470	0.1155	0.2887	0.0000

Measurement 2:

Angle (degree)	Sample ( $\mu\text{s}$ )	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.80	34.2	50.3	26.3	0.496	95.7	37.8	16.3e-8
	2.80	33.5	48.5	26.6	0.477	93.3	39.1	16.6e-8
	2.80	34.9	51.9	27.2	0.513	94.2	40.8	16.0e-8
Average	2.80	34.2	50.2	26.7	0.495	94.4	39.2	16.3e-7
SD	0.0000	0.7000	1.7010	0.4583	0.0180	1.2124	1.5044	3.0000e-7
75	1.80	31.9	45.1	25.7	0.448	95.8	43.1	17.4e-8
	1.80	31.6	45.1	25.3	0.459	95.8	43.8	17.6e-8
	1.80	31.0	42.7	25.3	0.419	94.8	43.1	17.9e-8
Average	1.80	31.5	44.3	25.4	0.442	95.5	43.3	17.6e-8
SD	0.0000	0.4583	1.3856	0.2309	0.2070	0.5774	0.4041	2.5166e-9
90	1.40	31.0	43.6	22.3	0.443	95.1	42.2	18.0e-8
	1.40	31.5	45.4	25.0	0.471	92.8	42.4	17.7e-8
	1.40	31.4	44.6	25.2	0.452	95.2	42.4	17.7e-8
Average	1.40	31.3	44.5	24.2	0.455	94.4	42.3	17.8e-7
SD	0.0000	0.2646	0.9018	1.6197	0.0143	1.3577	0.1155	1.7321e-9
105	1.00	30.1	42.1	24.3	0.439	92.7	41.4	18.5e-8
	1.00	30.3	42.1	24.6	0.429	94.5	40.8	18.4e-8
	1.00	29.9	41.2	24.4	0.421	92.0	40.6	18.6e-8
Average	1.00	30.1	41.8	24.4	0.430	93.1	40.9	18.5e-7
SD	0.0000	0.2000	0.5196	0.1528	9.0185e-3	1.2877	0.4163	1.0000e-9





**Figure B1** Plot of the apparent diffusion coefficient as a function of the scattering vector at 30 °C for the HPC/water system at the fixed HPC concentration of 1 g/l (a) measurement 1; (b) measurement 2.

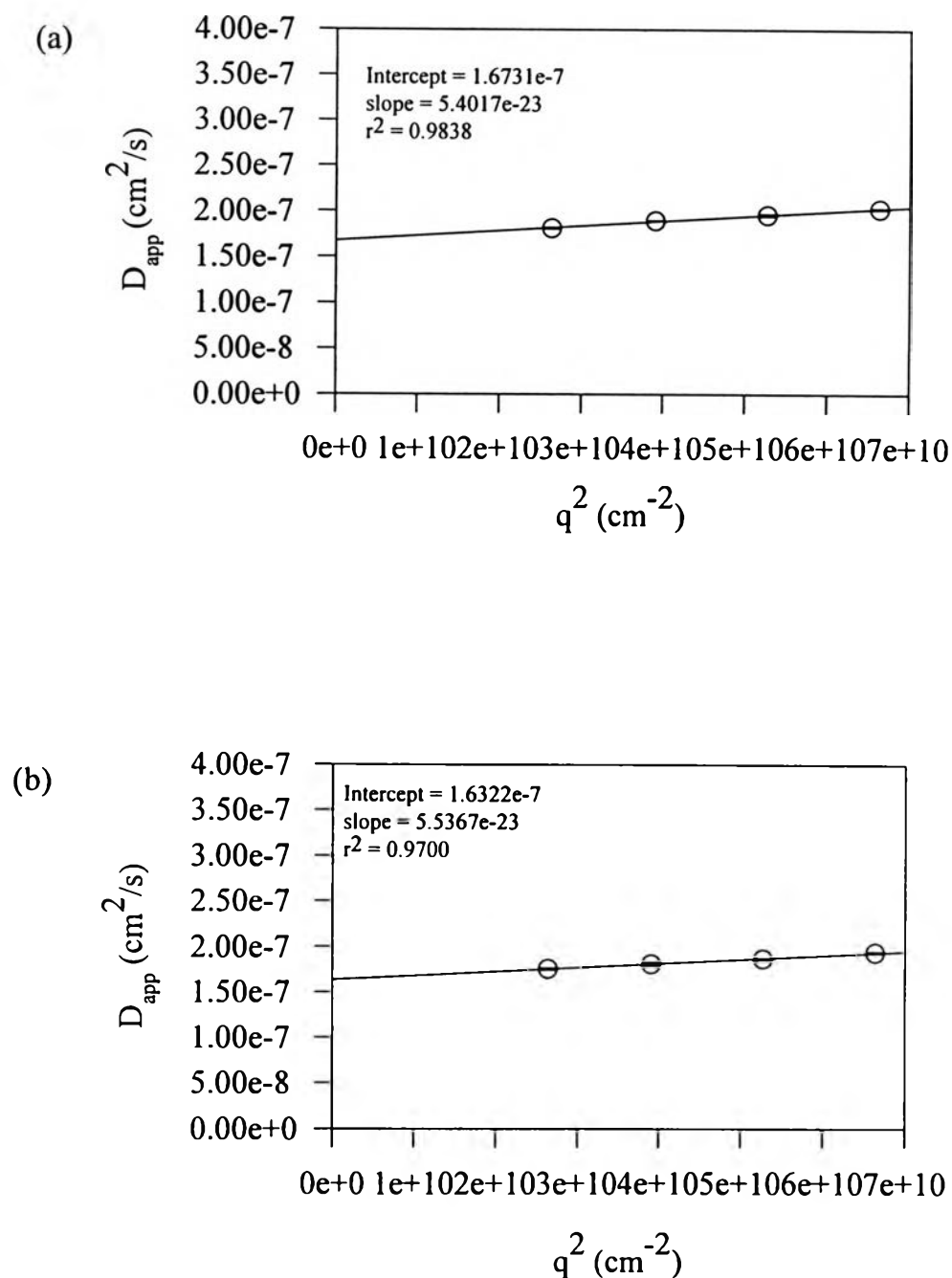
**Table B2** Data for the HPC concentration of 2 g/l at various angles

Measurement 1:

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.80	30.7	43.6	24.6	0.455	97.9	49.5	18.1e-8
	2.80	30.9	44.0	24.8	0.455	97.6	48.8	18.0e-8
	2.80	30.8	43.5	24.7	0.449	97.5	48.1	18.1e-8
Average	2.80	30.8	43.7	24.7	0.453	97.7	48.8	18.1e-8
SD	0.0000	0.1000	0.2646	0.1000	3.4641e-3	0.2082	0.7000	5.7735e-10
75	1.70	29.5	41.4	23.8	0.439	98.3	46.0	18.9e-8
	1.70	29.3	41.0	23.8	0.434	97.7	45.3	19.0e-8
	1.70	29.4	40.5	24.0	0.419	96.7	45.0	18.9e-8
Average	1.70	29.4	41.0	23.9	0.431	97.6	45.4	18.6e-8
SD	0.0000	0.1000	0.4509	0.1155	0.0104	0.8083	0.5139	5.5076e-8
90	1.20	28.2	38.9	23.3	0.412	98.1	44.4	19.6e-8
	1.20	28.2	39.1	22.9	0.426	98.6	44.5	19.7e-8
	1.20	28.8	39.5	23.5	0.416	98.8	46.9	19.4e-8
Average	1.20	28.5	39.2	23.2	0.418	98.5	45.3	19.6e-8
SD	0.0000	0.4243	0.3055	0.3055	7.2111e-3	0.3606	1.4154	1.5275e-9
105	0.90	27.5	36.4	22.8	0.383	97.6	44.6	20.3e-8
	0.90	27.5	25.9	23.2	0.395	97.9	44.5	20.2e-8
	0.90	27.3	36.1	22.7	0.377	98.1	44.6	20.4e-8
Average	0.90	27.4	32.8	22.9	0.3850	97.9	44.5	20.3e-7
SD	0.0000	0.1155	5.9775	0.2646	9.1652e-3	0.2517	0.0577	1.0000e-7

Measurement 2:

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.70	31.9	44.9	25.7	0.443	97.0	52.1	17.4e-8
	2.70	31.6	45.4	22.2	0.470	98.3	52.0	17.6e-8
	2.70	31.7	45.3	22.0	0.461	97.2	52.6	17.6e-8
Average	2.70	31.7	45.2	23.3	0.458	97.5	52.2	17.5e-7
SD	0.0000	0.1528	0.2646	2.0809	0.0137	0.7000	0.3215	1.1547e-7
75	1.70	30.3	41.6	24.8	0.415	98.3	50.9	18.3e-8
	1.70	30.8	43.9	24.7	0.457	96.0	50.4	18.1e-8
	1.70	31.1	43.8	25.1	0.444	97.0	50.8	17.9e-8
Average	1.70	30.7	43.1	24.9	0.439	97.1	50.7	18.1e-8
SD	0.0000	0.4041	1.3000	0.2082	0.0215	1.1533	0.2646	2.0000e-9
90	1.40	29.6	40.5	24.2	0.412	99.5	48.9	18.8e-8
	1.40	29.9	41.3	24.4	0.422	99.4	48.6	18.6e-8
	1.40	29.9	41.7	24.2	0.433	99.3	49.0	18.6e-8
Average	1.40	29.8	41.2	24.3	0.422	99.4	48.8	18.7e-7
SD	0.0000	0.1732	0.6110	0.1155	0.0105	0.1000	0.2082	1.1547e-9
105	0.90	28.9	39.6	23.7	0.413	97.6	49.2	19.3e-8
	0.90	28.6	38.5	23.6	0.397	98.1	49.1	19.5e-8
	0.90	28.9	38.9	23.8	0.395	96.9	49.4	19.3e-8
Average	0.90	28.8	39.0	23.7	0.402	97.5	49.2	19.4e-8
SD	0.0000	0.1732	0.5568	0.1000	9.8658e-7	0.6028	0.1528	1.1547e-9



**Figure B2** Plot of the apparent diffusion coefficient as a function of the scattering vector at 30 °C for the HPC/water system at the fixed HPC concentration of 2 g/l (a) measurement 1; (b) measurement 2.

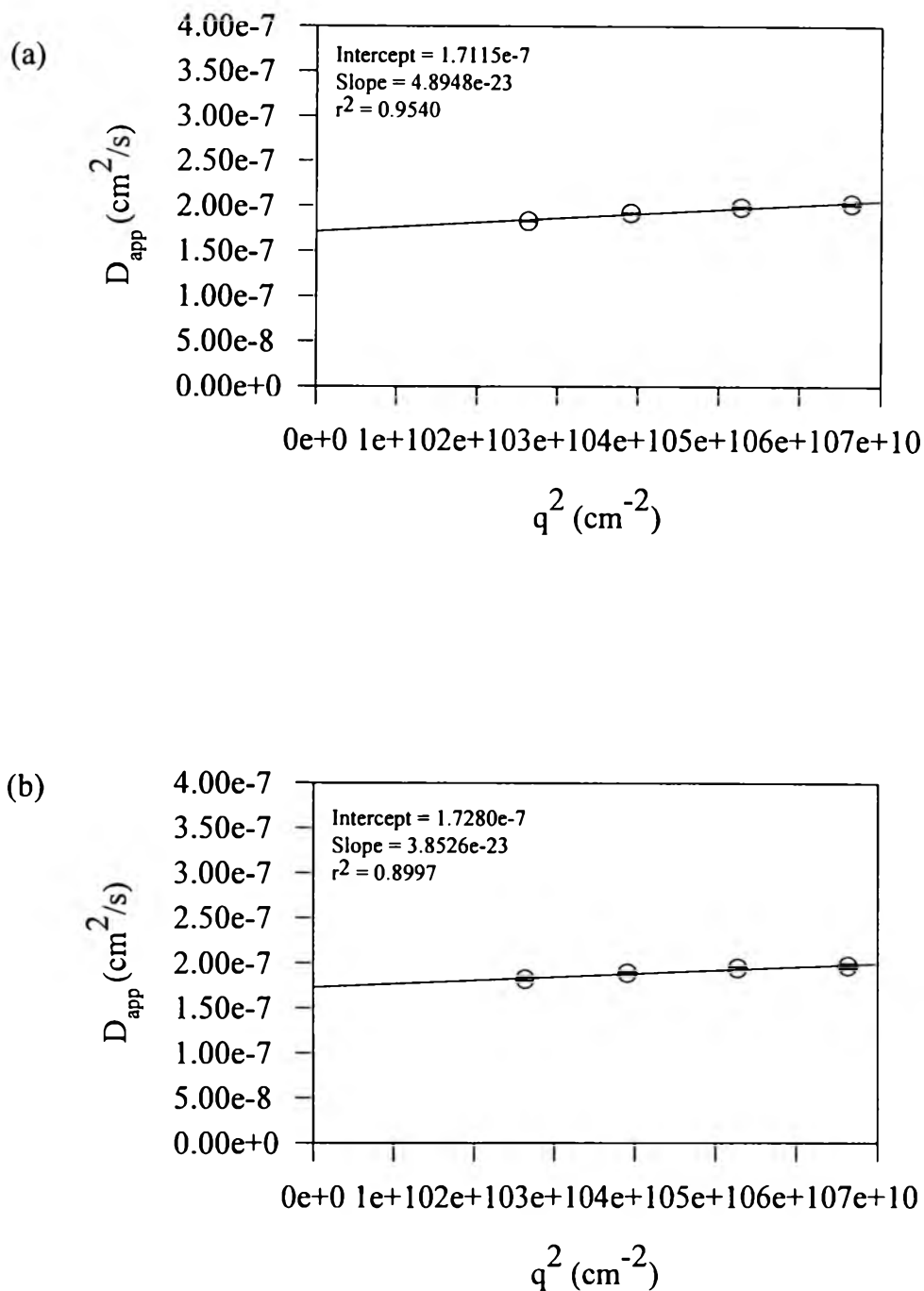
**Table B3** Data for the HPC concentration of 3 g/l at various angles

## Measurement 1:

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.70	30.6	43.9	24.4	0.467	99.2	44.7	16.2e-8
	2.70	30.3	43.0	24.3	0.453	98.8	44.8	18.4e-8
	2.70	30.6	43.9	24.5	0.464	99.4	44.8	18.2e-8
Average	2.70	30.5	43.6	24.4	0.461	99.1	44.8	17.6e-7
SD	0.0000	0.1732	0.5196	0.1000	7.3711e-3	0.3055	0.0577	1.2166e-8
75	1.70	29.2	41.5	23.4	0.453	99.8	45.1	19.1e-8
	1.70	29.0	40.6	23.5	0.437	99.4	45.2	19.2e-8
	1.70	29.1	40.6	23.5	0.436	99.0	44.9	19.2e-8
Average	1.70	29.1	40.9	23.5	0.442	99.4	45.1	19.2e-7
SD	0.0000	0.1000	0.5196	0.0577	9.5394e-3	0.4000	0.1528	5.7735e-10
90	1.20	28.0	38.0	23.0	0.403	98.6	44.9	19.9e-8
	1.20	28.1	38.2	23.0	0.407	98.7	45.2	19.8e-8
	1.20	28.2	38.4	23.1	0.409	98.4	45.5	19.8e-8
Average	1.20	28.1	38.2	23.0	0.406	98.6	45.2	19.8e-7
SD	0.0000	0.1000	0.2000	0.0577	3.0551e-3	0.1523	0.3000	5.7755e-10
105	0.90	27.3	37.0	22.5	0.402	98.7	45.4	20.4e-8
	0.90	27.6	37.6	22.7	0.408	98.8	45.5	20.1e-8
	0.90	27.6	37.8	22.6	0.413	98.8	46.0	20.2e-8
Average	0.90	27.5	37.5	22.6	0.408	98.8	45.6	20.2e-7
SD	0.0000	0.1732	0.4163	0.1000	5.5076e-3	0.5077	0.3215	1.5275e-7

## Measurement 2:

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.70	30.7	44.1	24.5	0.465	97.0	48.8	18.1e-8
	2.70	30.3	43.2	24.2	0.460	97.6	48.5	18.4e-8
	2.70	30.7	44.2	24.5	0.468	99.5	48.5	18.1e-8
Average	2.70	30.6	43.8	24.4	0.464	98.0	48.6	18.2e-7
SD	0.0000	0.2309	0.5508	0.1732	4.0415e-3	1.3051	0.1732	1.7321e-9
75	1.70	29.5	41.5	23.8	0.443	99.1	47.3	18.9e-8
	1.70	29.7	41.9	24.0	0.445	97.9	47.3	18.7e-8
	1.70	29.4	41.2	23.7	0.440	98.3	47.7	19.0e-8
Average	1.70	29.5	41.5	23.8	0.443	98.6	47.4	1.8867e-7
SD	0.0000	0.1528	0.3512	0.1528	2.5166e-3	0.6429	0.2309	1.5275e-9
90	1.20	28.5	39.6	24.1	0.430	98.5	46.3	19.6e-8
	1.20	28.9	40.1	23.5	0.427	97.3	46.3	19.3e-8
	1.20	28.7	40.3	23.2	0.440	98.9	46.0	19.4e-8
Average	1.20	28.7	40.0	23.6	0.432	98.2	46.2	19.4e-7
SD	0.0000	0.2000	0.3606	0.4583	6.8069e-3	0.8327	0.1732	1.5275e-9
105	0.90	28.0	38.2	23.0	0.409	99.2	49.8	19.9e-8
	0.90	28.0	37.9	24.2	0.401	98.8	50.0	19.9e-8
	0.90	28.7	40.3	23.1	0.443	99.3	50.2	19.4e-8
Average	0.90	28.2	38.8	23.4	0.418	99.1	50.0	19.7e-7
SD	0.0000	0.4041	1.3077	0.6658	0.0223	0.2646	0.2000	2.8868e-8



**Figure B3** Plot of the apparent diffusion coefficient as a function of the scattering vector at 30 °C for the HPC/water system at the fixed HPC concentration of 3 g/l (a) measurement 1; (b) measurement 2.

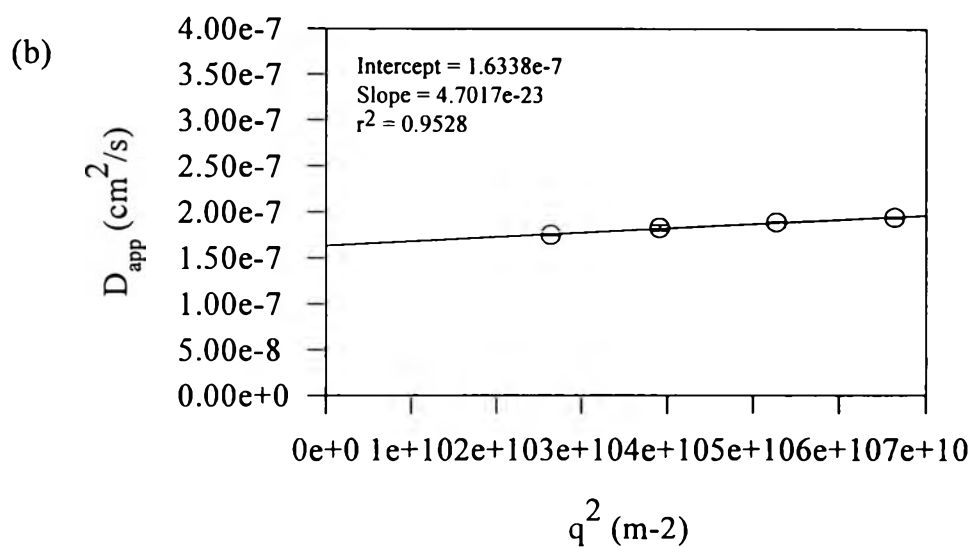
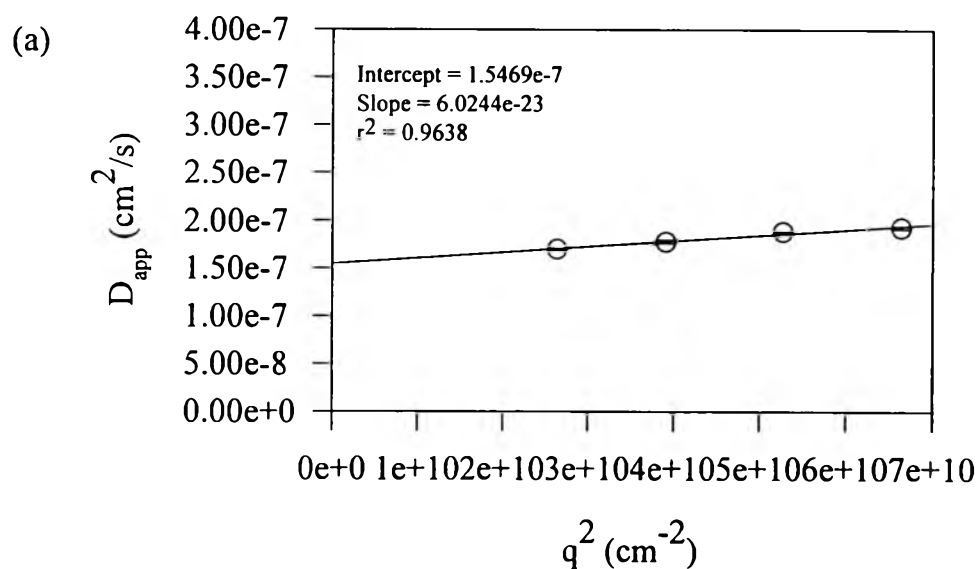
**Table B4** Data for the HPC concentration of 4 g/l at various angles

## Measurement 1:

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.60	32.8	48.5	25.7	0.504	94.5	53.3	17.0e-8
	2.60	33.0	48.4	25.9	0.494	95.2	53.5	16.9e-8
	2.60	32.6	47.8	25.6	0.495	98.6	53.9	17.1e-8
Average	2.60	32.8	48.2	25.7	0.498	96.1	53.6	17.0e-8
SD	0.0000	0.2000	0.3786	0.1528	5.5076e-3	2.1932	0.3055	1.0000e-9
75	1.70	31.3	45.1	24.9	0.472	96.7	53.9	17.8e-8
	1.70	31.0	44.8	24.6	0.474	96.8	53.5	18.0e-8
	1.70	31.7	46.1	25.1	0.482	97.1	53.5	17.6e-8
Average	1.70	31.3	45.6	24.9	0.476	96.9	53.6	7.8e-8
SD	0.0000	0.3512	0.6807	0.2517	5.2915e-3	0.2080	0.2309	2.0000e-9
90	1.50	29.6	42.2	23.7	0.460	98.4	52.3	18.8e-8
	1.50	29.5	41.2	23.9	0.434	99.2	52.1	18.9e-8
	1.50	29.5	44.4	23.9	0.439	97.7	52.2	18.9e-8
Average	1.50	29.5	42.6	23.8	0.4443	98.4	52.2	18.9e-7
SD	0.0000	0.0577	1.6371	0.1155	0.0138	0.7506	0.1000	5.7735e-10
105	1.00	28.9	40.6	23.3	0.442	99.1	52.7	19.3e-8
	1.00	28.9	40.2	23.5	0.429	98.1	52.0	19.2e-8
	1.00	28.6	39.7	23.2	0.428	99.8	51.8	19.5e-8
Average	1.00	28.8	40.2	23.3	0.433	99.0	52.2	19.3e-8
SD	0.0000	0.1732	0.4509	0.1528	7.8102e-3	0.8544	0.4726	1.5275e-9

## Measurement 2:

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.80	31.8	46.6	25.0	0.493	99.1	45.8	17.5e-8
	2.80	31.6	45.7	25.1	0.476	97.7	45.1	17.6e-8
	2.80	31.9	46.5	25.2	0.484	98.8	44.6	17.4e-8
Average	2.80	31.8	46.3	25.1	0.484	98.5	45.2	17.5e-8
SD	0.0000	0.1528	0.4933	0.1000	8.5049e-3	0.7371	0.6028	1.0000e-9
75	1.70	30.6	44.2	24.4	0.473	99.4	45.9	18.2e-8
	1.70	30.9	44.7	24.5	0.477	97.9	45.8	18.0e-8
	1.70	30.0	42.3	24.2	0.446	98.6	45.4	18.6e-8
Average	1.70	30.5	43.7	24.4	0.466	98.6	45.7	18.3e-7
SD	0.0000	0.4583	1.2662	0.1528	0.0169	0.7506	0.2646	3.0551e-9
90	1.20	29.4	41.2	23.8	0.438	97.9	45.2	18.9e-8
	1.20	29.7	42.1	23.3	0.451	98.4	45.5	18.8e-8
	1.20	29.5	41.7	23.7	0.448	99.2	45.1	18.9e-8
Average	1.20	29.5	41.7	23.6	0.446	98.5	45.3	18.9e-7
SD	0.0000	0.1528	0.4509	0.2646	6.8069e-3	0.6557	0.2082	5.7735e-10
105	1.00	28.7	40.1	23.2	0.434	98.7	45.3	19.4e-8
	1.00	28.6	39.5	23.3	0.423	99.0	45.2	19.5e-8
	1.00	28.8	40.2	23.4	0.432	98.4	45.9	19.3e-8
Average	1.00	28.8	39.9	23.3	0.430	98.7	45.5	19.4e-8
SD	0.0000	0.0707	0.3786	0.1000	5.8595e-3	0.3000	0.3786	1.0000e-9



**Figure B4** Plot of the apparent diffusion coefficient as a function of the scattering vector at 30 °C for the HPC/water system at the fixed HPC concentration of 4 g/l (a) measurement; (b) measurement 2.

**Table B5** Data for the HPC concentration of 5 g/l at various angles

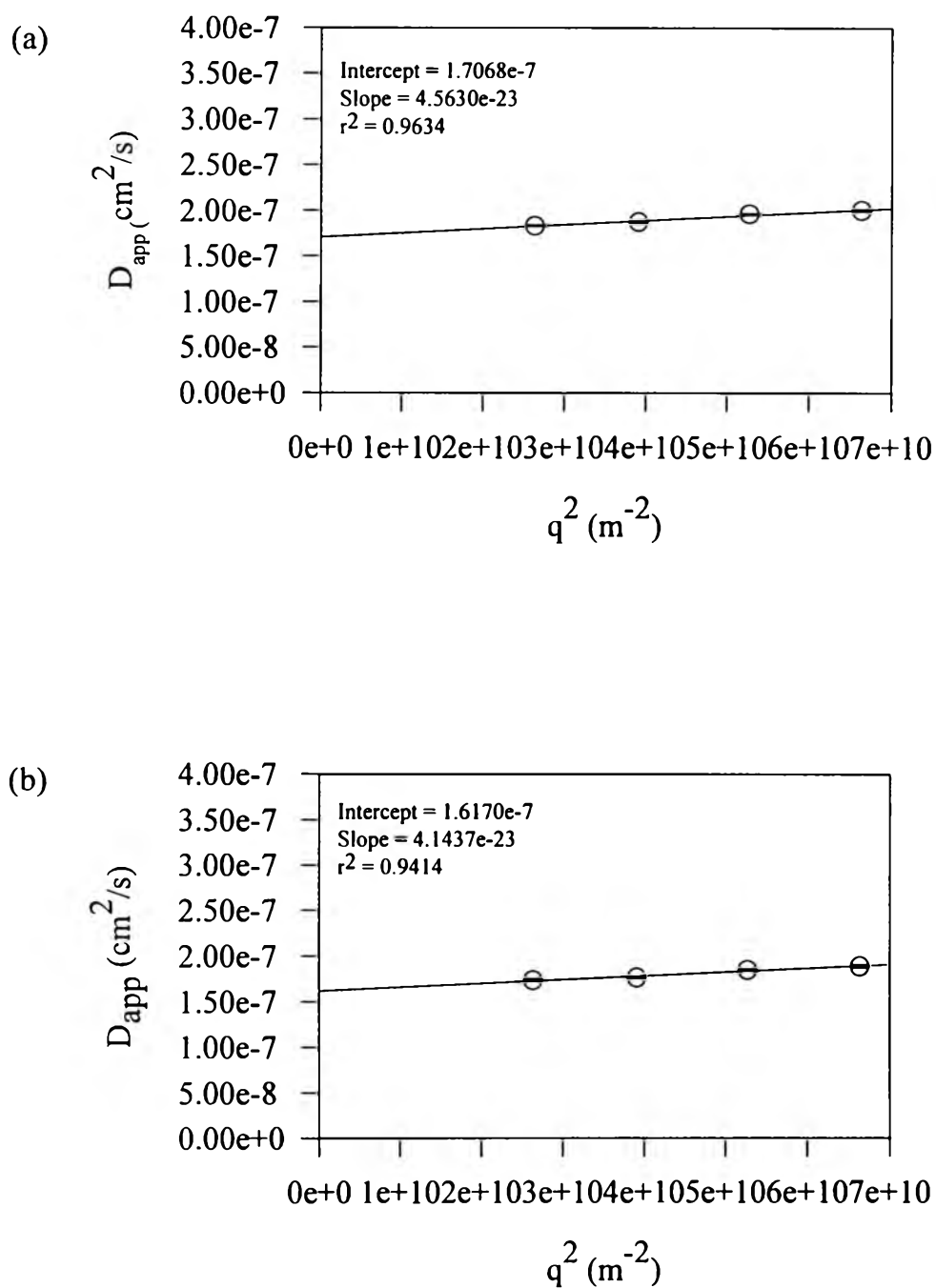
## Measurement 1:

Angle (degree)	Sample ( $\mu\text{s}$ )	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.60	30.6	44.5	24.3	0.480	97.2	52.2	18.2e-8
	2.60	30.4	44.2	23.1	0.480	98.3	52.1	18.3e-8
	2.60	30.3	44.0	24.0	0.481	98.6	51.7	18.4e-8
	Average	2.60	30.4	44.2	23.8	0.480	98.0	52.0
SD	0.0000	0.1528	0.2517	0.6245	5.7735e-3	0.7371	0.2646	1.0000e-9
75	1.60	29.6	52.4	23.6	0.464	97.9	52.0	18.8e-8
	1.60	29.6	42.6	23.5	0.471	98.8	52.3	18.8e-8
	1.60	30.0	43.4	23.8	0.476	96.4	51.1	18.6e-8
	Average	1.60	29.7	46.1	23.6	0.468	97.7	51.8
SD	0.0000	0.2309	5.4418	0.1528	4.9497e-3	1.2124	0.6245	1.1547e-9
90	1.20	28.4	39.6	23.0	0.433	99.3	52.0	19.6e-8
	1.20	28.3	39.9	22.8	0.445	98.4	52.3	19.7e-8
	1.20	28.4	39.4	23.1	0.428	99.1	51.9	19.6e-8
	Average	1.20	28.4	39.6	23.0	0.435	98.9	52.1
SD	0.0000	0.0577	0.2517	0.1528	8.7369e-3	0.4726	0.2082	5.7735e-10
105	0.90	28.0	38.7	22.8	0.423	99.4	52.6	19.9e-8
	0.90	27.6	38.4	22.4	0.430	98.7	52.4	20.1e-8
	0.90	27.6	38.1	22.5	0.421	98.9	52.5	20.1e-8
	Average	0.90	27.7	38.4	22.6	0.425	99.0	52.5
SD	0.0000	0.2309	0.3000	0.2082	4.7258e-3	0.3606	0.1000	1.1155e-9

## Measurement 2:

Angle (degree)	Sample ( $\mu\text{s}$ )	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.40	31.9	46.9	25.0	0.498	96.0	51.5	17.5e-8
	3.40	33.3	47.9	22.1	0.508	98.2	51.5	17.2e-8
	3.40	32.2	47.7	25.1	0.507	97.5	51.5	17.3e-8
	Average	3.40	32.5	47.5	24.1	0.504	97.2	51.5
SD	0.0000	0.7371	0.5292	1.7039	5.5076e-3	1.1240	0.0000	1.5275e-7
75	1.70	31.7	46.9	24.8	0.506	96.5	53.0	17.7e-8
	1.70	31.4	46.6	22.7	0.510	98.4	53.0	17.7e-8
	1.70	31.7	47.2	24.7	0.514	96.1	53.2	17.6e-8
	Average	1.70	31.6	24.1	24.1	0.510	97.0	53.1
SD	0.0000	0.1732	1.1846	1.1846	4.0000e-3	1.2288	0.1155	5.7735e-9
90	1.20	30.0	43.5	23.6	0.485	96.9	51.8	18.6e-8
	1.20	30.3	44.8	23.8	0.501	98.3	51.9	18.4e-8
	1.20	30.3	44.8	23.8	0.501	98.3	51.9	18.4e-8
	Average	1.20	30.2	44.4	23.7	0.496	97.8	51.9
SD	0.0000	0.1732	0.7506	0.1155	9.2376e-3	0.8083	0.0577	1.1547e-9
105	1.00	29.7	43.1	23.5	0.402	97.8	52.9	18.7e-8
	1.00	29.4	42.1	23.5	0.465	97.8	53.1	18.9e-8
	1.00	29.2	42.3	23.1	0.478	97.4	53.0	19.1e-8
	Average	1.00	29.4	42.5	23.4	0.448	97.7	53.0
SD	0.0000	0.2517	0.5292	0.2309	0.0406	0.2369	0.1000	2.0000e-9

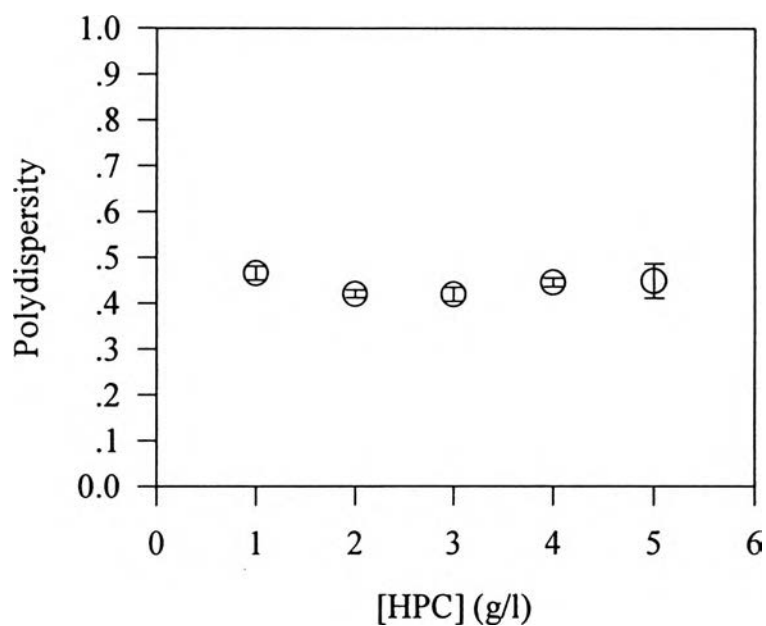




**Figure B5** Plot of the apparent diffusion coefficient as a function of the scattering vector at 30 °C for the HPC/water system at the fixed HPC concentration of 5 g/l (a) measurement 1; (b) measurement 2.

**Table B6** The center of mass diffusion coefficient ( $D_c$ ) as a function of HPC concentration at 30 °C for the HPC/water system.

[HPC] (g/l)	$D_c$ (cm <sup>2</sup> /s)		Average	SD
	1	2		
1.0	1.2965e-7	1.5235e-7	1.4100e-7	1.6055e-8
2.0	1.6731e-7	1.6322e-7	1.6527e-7	2.8921e-9
3.0	1.7115e-7	1.7280e-7	1.7197e-7	1.1628e-9
4.0	1.5469e-7	1.6338e-7	1.5903e-7	6.1448e-9
5.0	1.7068e-7	1.6170e-7	1.6619e-7	6.3503e-9

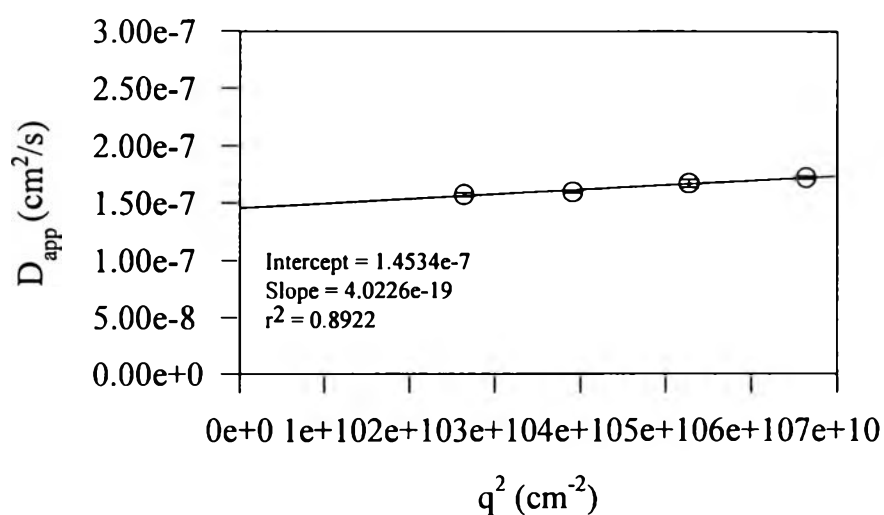


**Figure B6** Plot of the polydispersity as a function of HPC concentration at 30 °C for the HPC/water system at the fixed angle of 90 °.

### The HPC/OTG/Water System

**Table B7** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 1.02 mM.

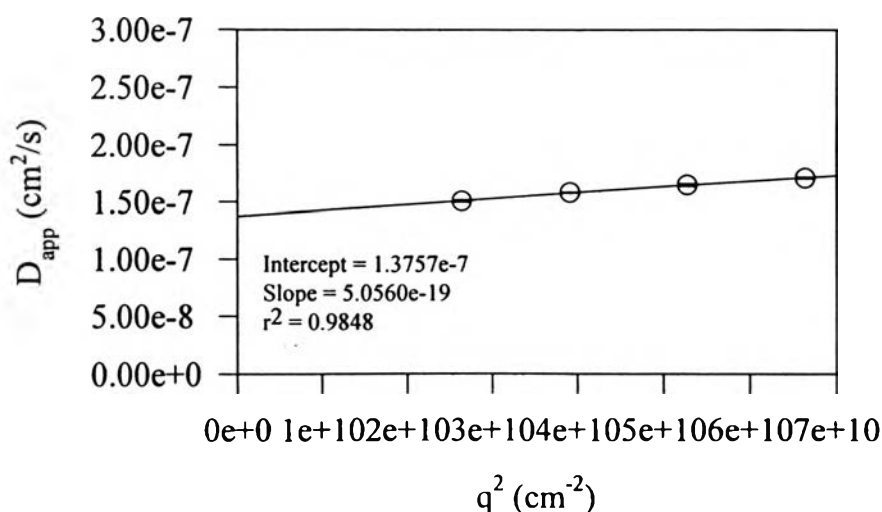
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.10	34.9	52.8	26.9	0.535	98.6	42.8	15.9e-8
	3.10	35.6	53.9	27.4	0.537	98.8	46.0	15.6e-8
	3.10	35.7	54.2	27.4	0.543	98.9	46.9	15.6e-8
Average	3.10	35.4	53.6	27.2	0.538	98.8	45.2	15.7e-8
SD	0.0000	.04359	0.7371	0.2887	4.1633e-3	0.1528	2.1548	1.7321e-9
75	2.00	34.7	52.4	26.7	0.537	98.9	48.3	16.0e-8
	2.00	35.1	54.0	26.8	0.560	98.9	48.7	15.8e-8
	2.00	34.8	52.8	26.7	0.544	99.3	48.3	16.0e-8
Average	2.00	34.9	53.1	26.7	0.547	99.0	48.4	15.9e-8
SD	0.0000	0.2082	0.8327	0.0577	0.0118	0.2309	0.2309	1.1547e-9
90	1.40	32.6	49.0	25.2	0.529	99.0	48.1	17.0e-8
	1.40	33.0	49.4	25.6	0.521	98.7	48.3	16.8e-8
	1.40	34.0	51.4	26.2	0.536	97.8	48.7	16.3e-8
Average	1.40	33.2	49.9	25.7	0.529	98.5	48.4	16.7e-8
SD	0.0000	0.7211	1.2858	0.5033	7.5056e-3	0.6245	0.3055	3.6056e-9
105	1.00	32.3	46.8	24.9	0.537	98.7	45.2	17.2e-8
	1.00	32.0	47.6	24.9	0.515	98.8	45.5	17.4e-8
	1.00	32.5	47.5	25.6	0.489	98.8	45.4	17.1e-8
Average	1.00	32.3	47.3	25.1	0.514	98.8	45.4	17.2e-8
SD	0.0000	0.2517	0.4359	0.4041	0.0240	0.0577	0.1528	15.3e-8



**Figure B7** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 1.02 mM.

**Table B8** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 3.00 mM.

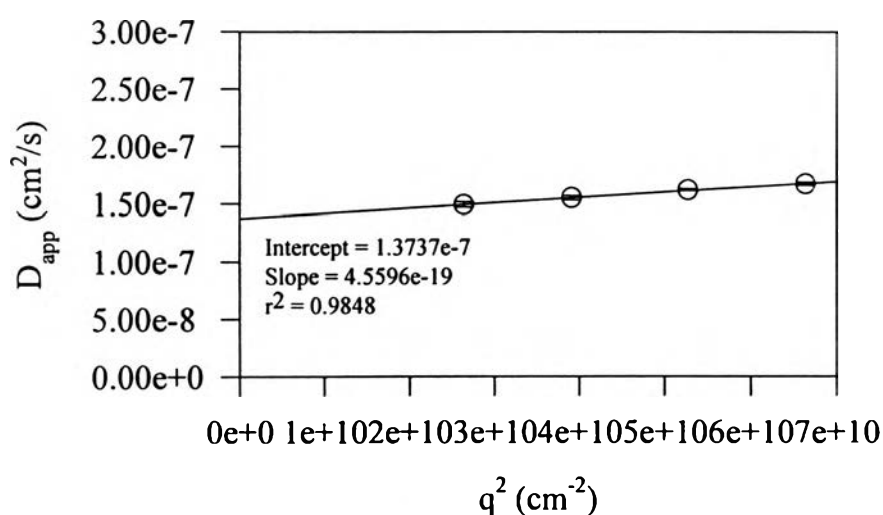
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.30	37.0	57.4	27.9	0.579	98.0	47.4	15.0e-8
	3.30	37.0	57.4	27.9	0.577	99.1	47.0	15.0e-8
	3.30	36.4	55.8	27.8	0.558	99.0	47.2	15.2e-8
Average	3.30	36.8	56.9	27.9	0.571	98.7	47.2	15.1e-8
SD	0.0000	0.3434	0.9238	0.0577	0.0116	0.6083	0.2000	1.1547e-9
75	2.00	35.1	53.6	26.9	0.552	99.8	46.1	15.8e-8
	2.00	35.2	53.8	27.0	0.550	98.5	46.8	15.8e-8
	2.00	35.4	54.5	27.0	0.563	99.0	46.9	15.7e-8
Average	2.00	35.2	54.0	27.0	0.555	99.1	46.6	15.8e-8
SD	0.0000	0.1528	0.4726	0.0577	7.0000e-3	0.6557	0.4359	5.7735e-10
90	1.40	33.5	51.0	25.7	0.546	99.2	49.7	16.6e-8
	1.40	33.8	51.4	26.0	0.545	98.6	49.8	16.4e-8
	1.40	34.0	51.9	26.0	0.552	98.4	49.7	16.3e-8
Average	1.40	33.8	51.4	25.9	0.548	98.7	49.7	16.4e-7
SD	0.0000	0.2517	0.4509	0.1732	3.7859e-3	0.4163	0.0577	1.5275e-9
105	1.00	32.7	48.2	25.3	0.530	99.1	49.6	17.0e-8
	1.00	32.5	48.9	25.1	0.528	99.2	49.7	17.1e-8
	1.00	32.1	48.2	24.9	0.525	99.0	50.2	17.3e-8
Average	1.00	32.4	48.4	25.1	0.528	99.1	49.8	17.1e-8
SD	0.0000	0.3055	0.4041	0.2000	2.5166e-3	0.1000	0.3215	1.5275e-9



**Figure B8** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 3.00 mM.

**Table B9** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 5.04 mM.

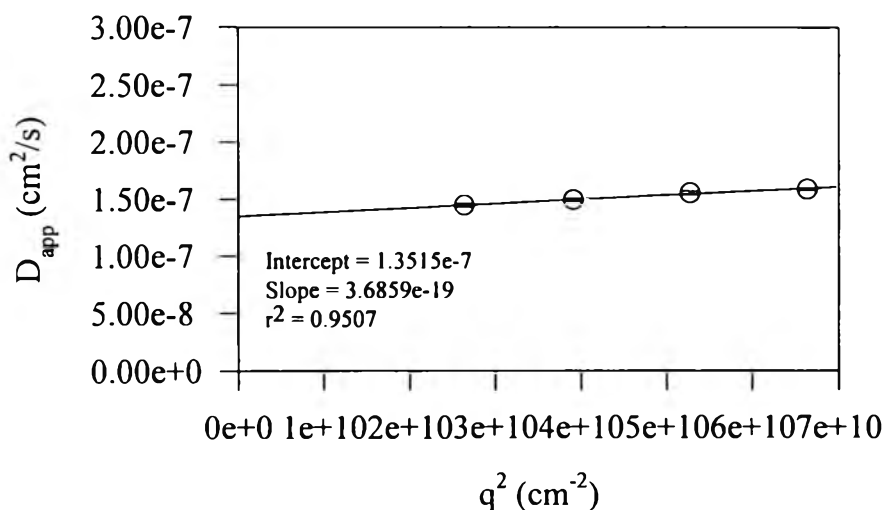
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.00	37.4	58.3	28.2	0.582	99.3	49.9	14.8e-8
	3.00	37.6	58.9	28.3	0.591	98.5	48.6	14.8e-8
	3.00	36.4	56.6	27.5	0.579	97.5	47.5	15.2e-8
Average	3.00	37.1	57.9	28.0	0.584	98.4	48.7	14.9e-8
SD	0.0000	0.6429	1.1930	0.4359	6.2450e-3	0.9018	1.2014	2.3094e-9
75	2.10	35.8	55.0	27.3	0.561	97.8	47.6	15.5e-8
	2.10	36.3	56.1	27.5	0.570	97.8	50.2	15.3e-8
	2.10	35.4	54.4	26.9	0.562	96.8	48.0	15.7e-8
Average	2.10	35.8	55.2	27.2	0.564	97.5	48.6	15.5e-8
SD	0.0000	0.4509	0.8622	0.3055	4.9329e-3	0.5774	1.4000	2.0000e-9
90	1.40	34.5	52.4	26.5	0.543	99.0	47.8	16.1e-8
	1.40	34.1	51.8	26.2	0.544	99.3	48.1	16.3e-8
	1.40	34.2	52.1	26.2	0.549	98.2	47.8	16.2e-8
Average	1.40	34.3	52.1	26.3	0.545	98.8	47.9	16.2e-8
SD	0.0000	0.2082	0.3000	0.1732	3.2146e-3	0.5686	0.1732	1.0000e-9
105	1.10	32.9	49.2	25.5	0.521	98.5	50.3	16.9
	1.10	33.4	50.5	25.7	0.538	99.1	50.4	16.6
	1.10	33.2	50.2	25.6	0.537	98.9	50.2	16.7
Average	1.10	33.2	50.0	25.6	0.5320	98.8	50.3	16.7
SD	0.0000	0.2517	0.6807	0.1000	9.5394e-3	0.3055	0.1000	0.1528



**Figure B9** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 5.04 mM.

**Table B10** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 7.00 mM.

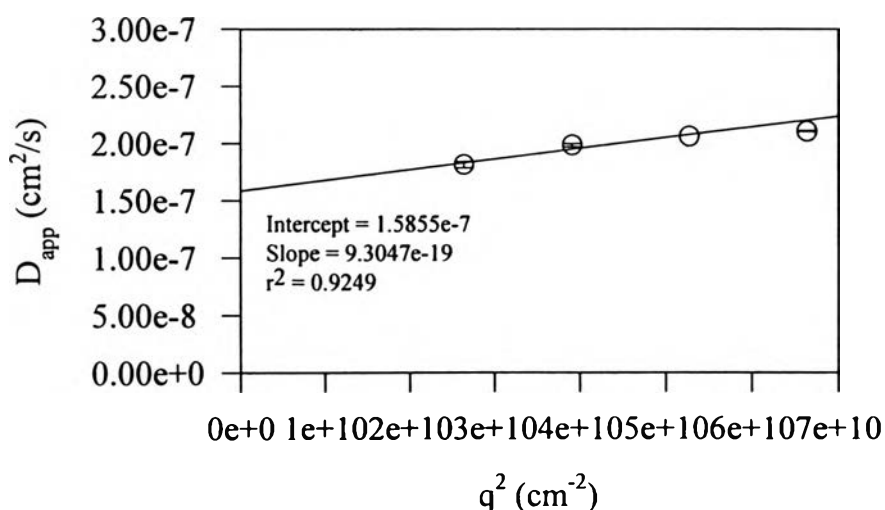
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.40	38.7	60.4	29.2	0.585	96.8	47.1	14.3e-8
	3.40	38.0	59.0	28.7	0.577	96.8	46.5	14.6e-8
	3.40	38.4	60.1	28.8	0.590	98.8	47.4	14.5e-8
Average	3.40	38.4	59.8	28.9	0.584	97.5	47.0	14.5e-8
SD	0.0000	0.3512	0.7371	0.2646	6.5574e-3	1.1547	0.4583	15.3e-9
75	2.10	37.0	56.8	28.2	0.561	96.7	50.3	15.0e-8
	2.10	37.5	58.8	28.1	0.594	97.4	51.0	14.8e-8
	2.10	37.0	57.8	27.8	0.589	97.0	49.8	15.0e-8
Average	2.10	37.2	57.8	28.0	0.581	97.0	50.4	14.9e-8
SD	0.0000	0.2887	1.0000	0.2082	0.0178	0.3512	0.6028	1.1547e-9
90	1.50	35.5	54.1	27.3	0.546	98.6	45.9	15.6e-8
	1.50	35.3	53.9	27.0	0.552	98.0	45.5	15.7e-8
	1.50	35.9	55.7	27.2	0.573	98.6	45.9	15.4e-8
Average	1.50	35.6	54.6	27.2	0.557	98.4	45.8	15.6e-8
SD	0.0000	0.3055	0.9866	0.1528	0.0142	0.3464	0.2309	1.5275e-9
105	1.10	35.0	54.4	26.5	0.578	98.9	45.9	15.9e-8
	1.10	35.0	53.7	26.8	0.556	98.4	46.3	15.8e-8
	1.10	34.8	53.8	26.4	0.571	97.3	46.3	16.0e-8
Average	1.10	34.9	54.0	26.6	0.568	98.2	46.2	15.9e-8
SD	0.0000	0.1155	0.3786	0.2082	0.0112	0.8185	0.2309	1.0000e-9



**Figure B10** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 7.00 mM.

**Table B11.** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 9.00 mM.

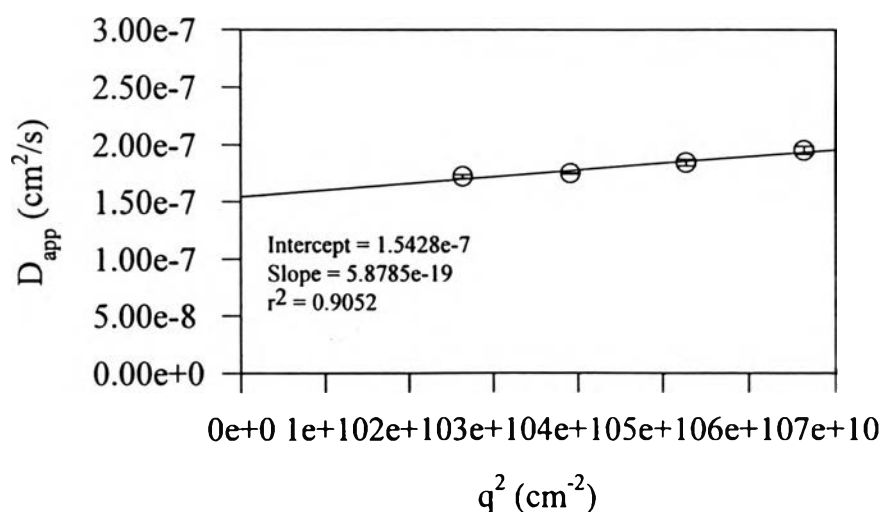
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.60	31.1	46.2	24.3	0.510	97.7	49.4	17.8e-8
	2.60	30.4	44.5	23.9	0.492	97.7	49.8	18.3e-8
	2.60	30.4	45.1	23.8	0.509	98.4	48.7	18.3e-8
Average	2.60	30.6	45.3	24.0	0.504	97.9	49.3	18.1e-8
SD	0.0000	0.4041	0.8622	0.2646	0.0101	0.4041	0.5568	2.8868e-9
75	1.60	28.1	40.4	22.4	0.467	98.7	50.6	19.7e-8
	1.60	28.0	40.5	22.3	0.474	98.9	50.0	19.8e-8
	1.60	27.8	39.5	22.3	0.454	98.3	50.4	20.0e-8
Average	1.60	28.0	40.1	22.3	0.465	98.6	50.3	19.8e-8
SD	0.0000	0.1528	0.5508	0.0577	0.0101	0.3055	0.3055	1.5275e-9
90	1.20	26.9	38.5	21.5	0.461	99.2	51.5	20.6e-8
	1.20	27.0	37.9	21.7	0.443	98.1	51.6	20.6e-8
	1.20	27.0	38.6	21.5	0.464	99.3	51.3	20.6e-8
Average	1.20	27.0	38.3	21.6	0.456	98.9	51.5	20.6e-8
SD	0.0000	0.0577	0.3786	0.1155	0.0114	0.6658	0.1528	0.0000
105	0.90	26.5	37.8	21.2	0.458	98.9	48.7	21.0e-8
	0.90	26.3	37.3	21.2	0.452	98.7	49.6	21.1e-8
	0.90	26.3	37.1	21.2	0.446	99.3	49.8	21.1e-8
Average	0.90	26.4	37.4	21.2	0.452	99.0	49.4	21.1e-8
SD	0.0000	0.1155	0.3606	0.0000	6.0000e-3	0.3055	0.5859	5.7735e-10



**Figure B11** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 9.00 mM.

**Table B12** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 11.04 mM.

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.60	31.9	49.6	24.1	0.579	97.9	46.3	17.4e-8
	2.60	32.5	50.6	24.5	0.584	98.8	47.7	17.1e-8
	2.60	32.4	50.5	24.4	0.583	98.5	47.2	17.1e-8
Average	2.60	32.3	50.2	24.3	0.582	98.4	47.1	17.2e-8
SD	0.0000	0.3215	0.5508	0.2082	2.6458e-3	0.4583	0.7095	1.7321e-9
75	1.80	31.3	48.9	24.0	0.568	99.9	52.5	17.5e-8
	1.80	31.6	49.0	24.0	0.572	99.2	53.1	17.5e-8
	1.80	31.9	49.7	24.1	0.583	99.1	53.9	17.4e-8
Average	1.80	31.6	49.2	24.0	0.574	99.4	53.2	17.5e-8
SD	0.0000	0.3000	0.4359	0.0577	7.7675e-3	0.4359	0.7024	5.7735e-10
90	1.30	29.7	44.8	22.9	0.532	98.4	50.3	18.1e-8
	1.30	29.7	45.1	22.8	0.543	98.5	50.7	18.7e-8
	1.30	30.2	46.4	23.1	0.553	98.3	51.1	18.4e-8
Average	1.30	29.9	45.4	22.9	0.543	98.4	50.7	18.4e-8
SD	0.0000	0.2887	0.8505	0.1528	0.0105	0.1000	0.4000	3.0000e-9
105	0.90	29.1	43.4	22.6	0.518	99.4	50.0	19.1e-8
	0.90	28.2	42.3	21.8	0.527	99.2	49.3	19.7e-8
	0.90	28.2	42.3	21.8	0.527	99.2	49.3	19.7e-8
Average	0.90	28.5	42.7	22.1	0.524	99.3	49.5	19.5e-8
SD	0.0000	0.5196	0.6351	0.4619	5.1962e-3	0.1155	0.4041	3.4641e-9

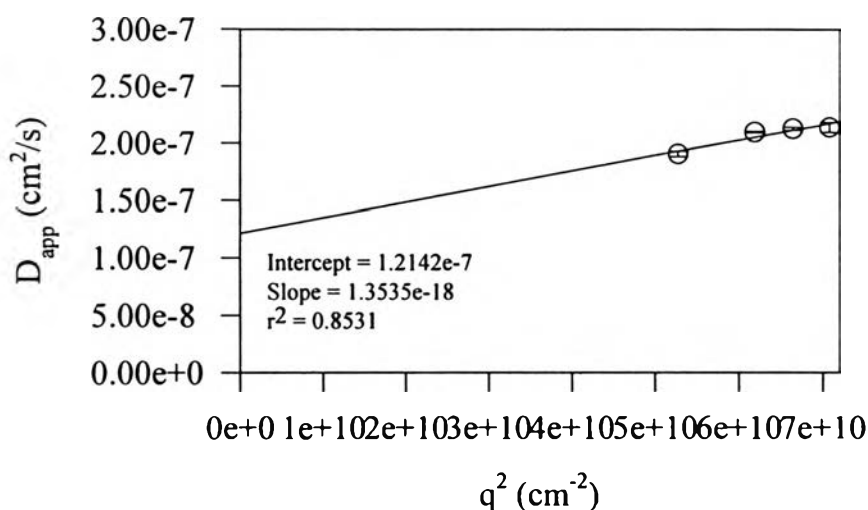


**Figure B12** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 11.04 mM.



**Table B13** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 13.20 mM.

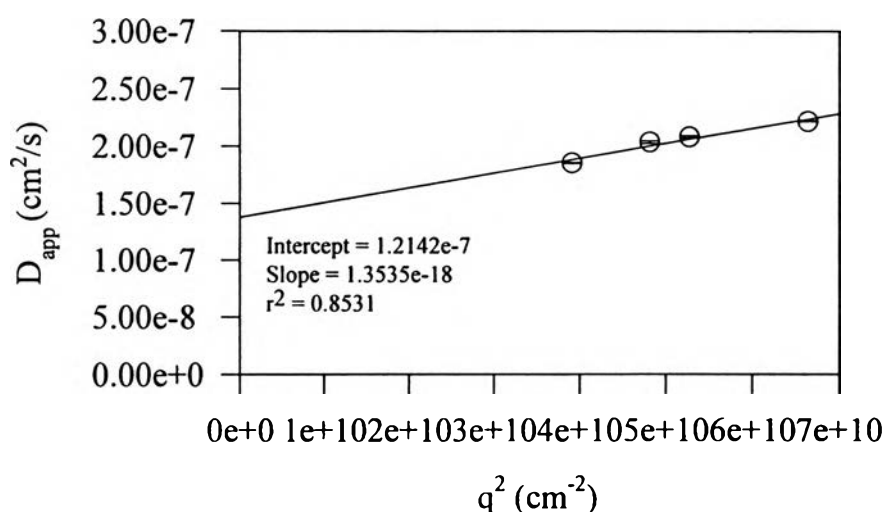
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
90	1.30	29.3	44.2	22.7	0.530	97.2	50.8	18.9e-8
	1.30	29.3	44.4	22.6	0.536	97.0	51.1	18.9e-8
	1.30	28.7	42.7	22.4	0.511	97.1	51.5	19.3e-8
Average	1.30	29.1	43.8	22.6	0.526	97.1	51.1	19.0e-8
SD	0.0000	0.3464	0.9292	0.1528	0.0131	0.1000	0.3512	2.3094e-9
100	1.00	26.4	38.2	20.9	0.477	97.4	52.7	21.0e-8
	1.00	26.5	37.8	21.2	0.460	99.5	52.2	20.9e-8
	1.00	26.5	38.0	21.1	0.468	99.3	52.5	21.0e-8
Average	1.00	26.5	38.0	21.1	0.468	98.7	52.5	21.0e-8
SD	0.0000	0.0577	0.2000	0.1528	8.5049e-3	1.1590	0.2517	5.7735e-10
105	0.90	26.0	37.8	20.6	0.480	98.7	51.1	21.3e-8
	0.90	26.4	38.2	20.9	0.479	99.0	50.8	21.1e-8
	0.90	26.0	37.6	20.6	0.478	98.2	50.9	21.4e-8
Average	0.90	26.1	37.9	20.7	0.479	98.6	50.9	21.3e-8
SD	0.0000	0.2309	0.3055	0.1732	1.0000e-3	0.4041	0.1528	1.5275e-9
110	0.80	25.4	35.7	20.4	0.443	94.8	49.4	21.9e-8
	0.80	25.2	36.0	20.1	0.461	97.4	50.3	22.1e-8
	0.80	25.1	35.5	20.1	0.449	98.6	50.5	22.2e-8
Average	0.80	25.2	35.7	20.2	0.451	96.9	50.1	22.1e-8
SD	0.0000	0.1528	0.2517	0.1732	9.1652e-3	1.9425	0.5859	1.5275e-9



**Figure B13** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 13.20 mM.

**Table B14** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 15.00 mM.

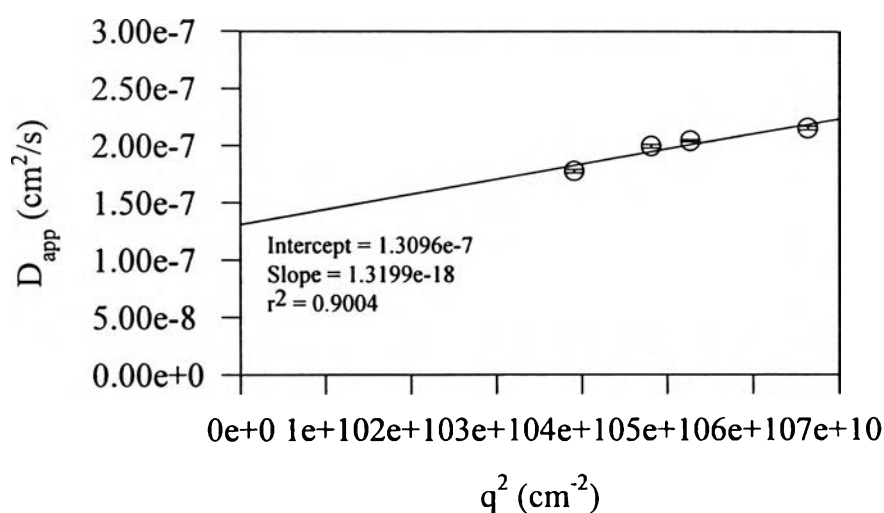
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
75	1.70	29.9	41.6	24.2	0.431	95.9	49.1	18.6e-8
	1.70	30.0	42.6	24.0	0.454	95.1	47.0	18.5e-8
	1.70	29.9	42.5	24.0	0.453	94.5	49.5	18.5e-8
Average	1.70	29.9	42.2	24.1	0.446	95.2	48.5	18.5e-8
SD	0.0000	0.0577	0.5508	0.1155	0.0130	0.7024	1.3429	5.7735e-10
85	1.30	27.2	36.2	22.6	0.384	97.6	49.9	20.4e-8
	1.30	27.2	36.7	22.5	0.396	97.3	50.5	20.4e-8
	1.30	27.5	37.1	22.6	0.399	97.6	50.9	20.2e-8
Average	1.30	27.3	36.7	22.6	0.393	97.5	50.4	20.3e-8
SD	0.0000	0.1732	0.4509	0.0577	7.9373e-3	0.1732	0.5033	1.1547e-9
90	1.20	26.8	35.2	22.4	0.372	98.0	49.9	20.7e-8
	1.20	26.5	35.1	22.0	0.382	98.1	50.4	20.9e-8
	1.20	26.7	35.2	22.2	0.379	99.6	50.3	20.8e-8
Average	1.20	26.7	35.2	22.2	0.378	98.6	50.2	20.8e-8
SD	0.0000	0.1528	0.0577	0.2000	5.1316e-3	0.8963	0.2646	1.0000e-9
105	0.90	25.0	31.9	21.1	0.347	98.9	51.1	22.2e-8
	0.90	25.1	31.9	21.1	0.343	97.6	50.9	22.1e-8
	0.90	25.1	31.7	21.2	0.340	98.4	50.7	22.2e-8
Average	0.90	25.1	31.8	21.1	0.343	98.3	50.9	22.2e-8
SD	0.0000	0.0577	0.1155	0.0577	3.5119e-3	0.6557	0.2000	5.7735e-10



**Figure B14** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 15.00 mM.

**Table B15** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 17.00 mM.

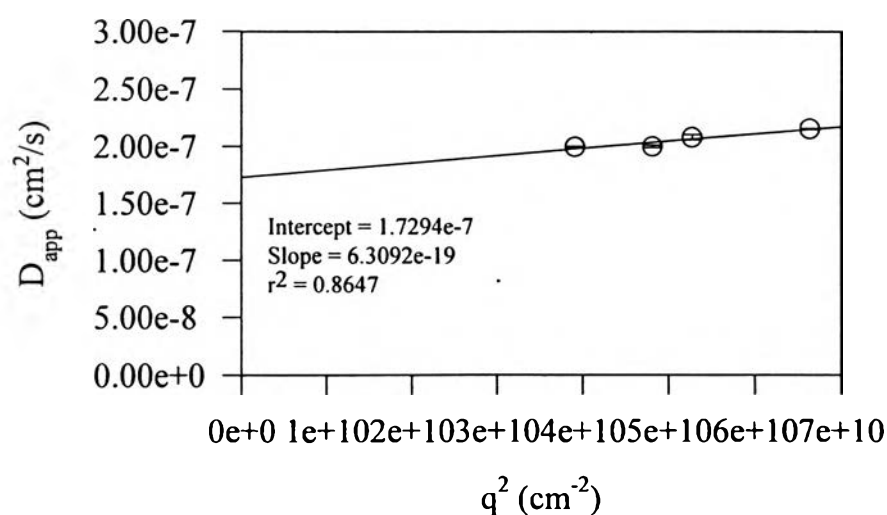
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
75	1.90	31.1	43.5	25.2	0.437	95.0	47.7	17.8e-8
	1.90	31.6	44.7	25.4	0.451	97.3	47.2	17.6e-8
	1.90	31.1	42.9	25.4	0.421	95.3	47.0	17.9e-8
Average	1.90	31.3	43.7	25.3	0.436	95.9	47.3	17.8e-8
SD	0.0000	0.2887	0.9165	0.1155	0.0150	1.2503	0.3606	1.5275e-9
85	1.40	28.0	36.8	23.4	0.373	98.8	50.3	19.8e-8
	1.40	27.9	36.4	23.3	0.367	97.3	50.4	19.9e-8
	1.40	27.7	36.3	23.1	0.372	97.8	50.0	20.1e-8
Average	1.40	27.9	36.5	23.3	0.371	98.0	50.2	19.9e-8
SD	0.0000	0.1528	0.2646	0.1528	3.2146e-3	0.7638	0.2082	1.5275e-9
90	1.20	27.0	34.2	22.9	0.340	98.9	50.6	20.5e-8
	1.20	27.3	35.1	23.0	0.352	98.0	50.6	20.3e-8
	1.20	27.2	34.6	23.0	0.344	97.2	50.3	20.4e-8
Average	1.20	27.2	34.6	23.0	0.345	98.0	50.5	20.4e-8
SD	0.0000	0.1528	0.4509	0.0577	6.1101e-3	0.8505	0.1732	1.0000e-9
105	0.90	25.8	31.9	22.1	0.322	98.8	51.7	21.5e-8
	0.90	25.5	30.9	22.0	0.305	98.5	51.8	21.7e-8
	0.90	25.9	32.1	22.1	0.324	98.5	52.0	21.4e-8
Average	0.90	25.7	31.6	22.1	0.317	98.6	51.8	21.5e-8
SD	0.0000	0.2082	0.6429	0.0577	0.0104	0.1732	0.1528	1.5275e-9



**Figure B15** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 17.00 mM.

**Table B16** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 20.00 mM.

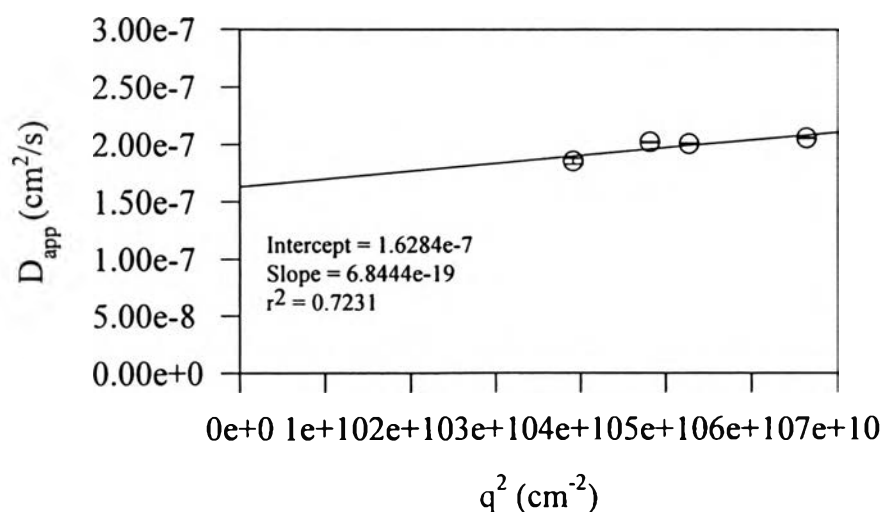
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
75	1.70	27.8	34.1	23.9	0.314	95.4	47.2	20.0e-8
	1.70	27.9	33.8	24.0	0.307	97.4	46.3	19.9e-8
	1.70	27.8	33.6	24.0	0.304	95.3	47.0	20.0e-8
Average	1.70	27.8	33.8	24.0	0.308	96.0	46.8	20.0e-8
SD	0.0000	0.0577	0.2517	0.0577	5.1316e-3	1.1846	0.4726	5.7735e-10
85	1.40	27.9	34.5	23.9	0.321	98.2	49.6	19.9e-8
	1.40	27.9	33.8	24.0	0.307	97.6	49.8	19.9e-8
	1.40	27.6	33.1	23.8	0.300	99.0	50.0	20.1e-8
Average	1.40	27.8	33.8	23.9	0.309	98.3	49.8	20.0e-8
SD	0.0000	0.1732	0.7000	0.1000	0.0107	0.7024	0.2000	1.1547e-9
90	1.20	27.1	32.1	23.5	0.292	98.8	49.7	20.5e-8
	1.20	26.7	31.1	23.3	0.280	98.7	49.2	20.8e-8
	1.20	26.5	30.6	23.1	0.276	98.5	49.7	21.0e-8
Average	1.20	26.8	31.3	23.3	0.283	98.7	49.5	20.8e-8
SD	0.0000	0.3055	0.7638	0.2000	8.3267e-3	0.1528	0.2887	2.5166e-9
105	0.90	25.7	29.3	22.5	0.267	97.6	50.5	21.6e-8
	0.90	25.8	29.2	22.8	0.260	99.8	50.7	21.5e-8
	0.90	25.8	29.1	22.7	0.260	99.3	50.6	21.5e-8
Average	0.90	25.8	29.2	22.7	0.262	98.9	50.6	21.5e-8
SD	0.0000	0.0577	0.1000	0.1528	4.0415e-3	1.1533	0.1000	5.7735e-10



**Figure B16** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 20.00 mM.

**Table B17** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 25.00 mM.

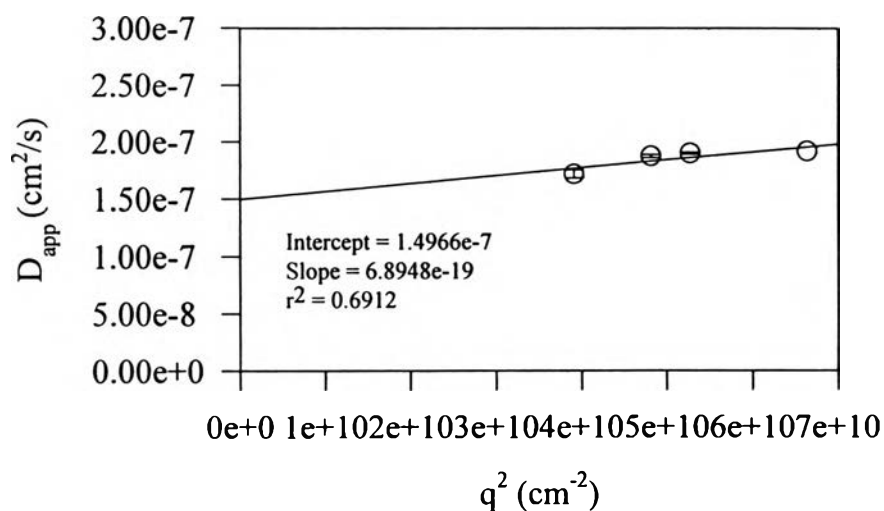
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
75	1.90	30.5	36.2	26.4	0.293	97.4	45.9	18.2
	1.90	29.9	34.6	26.2	0.275	98.8	49.3	18.6
	1.90	29.8	34.0	26.1	0.267	97.0	45.7	18.7
Average	1.90	30.1	34.9	26.2	0.278	97.7	47.0	18.5
SD	0.0000	0.3786	1.1372	0.1528	0.0133	0.9452	2.0232	0.2646
85	1.40	27.5	28.5	24.7	0.215	99.3	48.4	20.2e-8
	1.40	27.6	29.4	24.7	0.226	99.5	48.4	20.1e-8
	1.40	27.4	29.1	24.6	0.225	99.7	47.6	20.2e-8
Average	1.40	27.5	29.0	24.7	0.222	99.5	48.1	20.2e-8
SD	0.0000	0.1000	0.4583	0.0577	6.0828e-3	0.2000	0.4619	5.7735e-10
90	1.30	27.6	28.7	24.9	0.216	99.4	48.1	20.1e-8
	1.30	27.8	30.0	24.8	0.234	99.4	48.0	20.0e-8
	1.30	27.8	29.6	24.8	0.228	98.4	48.1	20.0e-8
Average	1.30	27.7	29.4	24.8	0.226	99.1	48.1	20.0e-8
SD	0.0000	0.1155	0.6658	0.0577	9.1652e-3	0.5774	0.0577	5.7735e-10
105	1.00	27.1	28.2	24.4	0.216	98.5	49.5	20.5e-8
	1.00	26.9	28.0	24.3	0.216	98.4	49.2	20.6e-8
	1.00	27.0	28.1	24.3	0.217	98.8	49.3	20.6e-8
Average	1.00	27.0	28.1	24.3	0.216	98.6	49.3	20.6e-8
SD	0.0000	0.1000	0.1000	0.0577	5.7735e-4	0.2082	0.1528	5.7735e-10



**Figure B17** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 25.00 mM.

**Table B18** Data for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed OTG concentration of 30.00 mM.

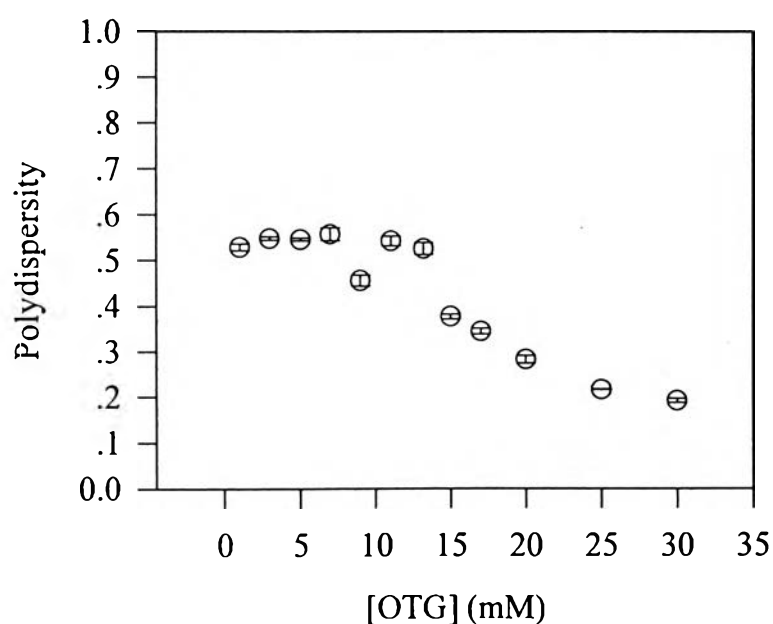
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
75	2.30	33.1	37.9	29.1	0.268	97.2	44.1	16.8e-8
	2.30	32.2	35.6	28.6	0.247	97.4	43.6	17.2e-8
	2.30	31.7	34.6	28.1	0.242	98.0	43.6	17.5e-8
Average	2.30	32.3	36.0	28.6	0.252	97.5	43.8	17.2e-8
SD	0.0000	0.7095	1.6921	0.5000	0.0138	0.4163	0.2887	3.5119e-9
85	1.50	29.8	29.9	27.0	0.200	98.8	45.8	18.6e-8
	1.50	29.6	30.6	26.7	0.213	99.9	45.6	18.7e-8
	1.50	29.3	28.7	26.8	0.188	98.8	45.6	18.9e-8
Average	1.50	29.6	29.7	26.8	0.200	99.2	45.7	18.7e-8
SD	0.0000	0.2517	0.9609	0.1528	0.0125	0.6351	0.1155	1.5275e-9
90	1.40	29.4	29.3	26.7	0.196	98.7	45.8	18.9e-8
	1.40	29.1	28.4	26.5	0.187	99.4	45.6	19.1e-8
	1.40	29.3	28.9	26.6	0.193	99.5	45.6	19.0e-8
Average	1.40	29.3	28.9	26.6	0.192	99.2	45.7	19.0e-8
SD	0.0000	0.1528	0.4509	0.1000	4.5826e-3	0.4359	0.1155	1.0000e-9
105	1.10	28.8	28.3	26.3	0.190	98.5	46.9	19.2e-8
	1.10	28.9	28.3	26.4	0.188	99.6	47.0	19.2e-8
	1.10	28.9	28.2	26.3	0.188	99.0	47.0	19.2e-8
Average	1.10	28.9	28.3	26.3	0.189	99.0	47.0	19.2e-8
SD	0.0000	0.0577	0.0577	0.0577	1.1547e-3	0.5508	0.0577	0.0000



**Figure B18** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed OTG concentration of 30.00 mM.

**Table B19** Data of the center of mass diffusion coefficient ( $D_c$ ) and the hydrodynamic radius ( $R_h$ ) as a function of OTG concentration at 30 °C for the HPC/OTG/water system for the fixed HPC concentration of 5 g/l.

[OTG] (mM)	$D_c$ (cm <sup>2</sup> /s)	$R_h$ (nm)
1.02	1.4535e-7	19.1
3.00	1.3757e-7	20.2
5.04	1.3737e-7	20.2
7.00	1.3515e-7	20.6
9.00	1.5855e-7	17.6
11.04	1.5428e-7	18.0
13.20	1.2143e-7	23.0
15.00	1.3796e-7	20.2
17.00	1.3096e-7	21.2
20.00	1.7294e-7	16.1
25.00	1.6284e-7	17.1
30.00	1.4966e-7	18.6

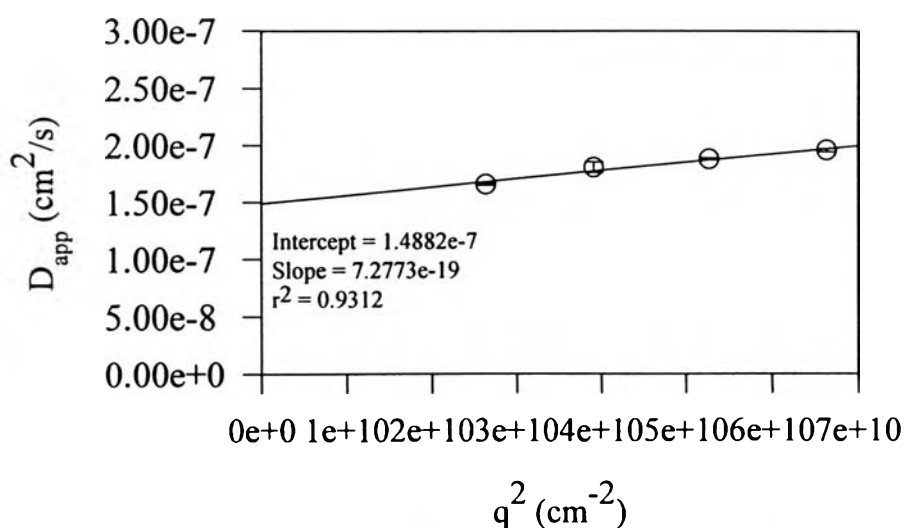


**Figure B19** Plot of the polydispersity as a function of OTG concentration at 30 °C for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed angle of 90 °.

The HPC/CTAB/Water System

**Table B20** Data for the HPC/CTAB/water system at the fixed HPC concentration of 1 g/l and at the fixed CTAB concentration of 0.05 mM.

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.00	33.7	49.2	26.6	0.489	93.8	34.6	16.5e-8
	3.00	33.7	49.6	26.4	0.500	96.3	35.9	16.5e-8
	3.00	33.3	48.2	26.4	0.478	95.2	36.8	16.7e-8
Average	3.00	33.6	49.0	26.5	0.489	95.1	35.8	16.6e-8
SD	0.0000	0.2309	0.7211	0.1155	0.0110	1.2530	1.1060	1.1547e-9
75	1.70	31.7	45.9	25.1	0.477	95.8	41.0	17.5e-8
	1.70	30.4	42.9	24.5	0.446	95.0	39.9	18.3e-8
	1.70	30.3	41.5	24.8	0.413	92.1	39.6	18.3e-8
Average	1.70	30.8	43.4	24.8	0.445	94.3	40.2	18.0e-8
SD	0.0000	0.7810	2.2480	0.3000	0.0320	1.9468	0.7371	4.6188e-9
90	1.30	29.6	41.8	23.8	0.448	98.2	37.4	18.8e-8
	1.30	29.3	39.9	24.0	0.408	98.3	36.5	18.9e-8
	1.30	29.7	40.8	24.3	0.416	97.4	36.4	18.7e-8
Average	1.30	29.5	40.8	24.0	0.424	98.0	36.8	18.8e-8
SD	0.0000	0.2082	0.9504	0.2517	0.0212	0.4933	0.5508	1.0000e-9
105	0.80	28.1	38.4	23.0	0.411	94.2	35.6	19.7e-8
	0.80	28.7	41.6	22.7	0.480	97.3	35.3	19.4e-8
	0.80	28.3	39.3	23.0	0.427	96.5	34.8	19.6e-8
Average	0.80	28.4	39.8	22.9	0.493	96.0	35.2	19.6e-8
SD	0.0000	0.3055	1.6503	0.1732	0.0361	1.6093	0.4041	1.5275e-9

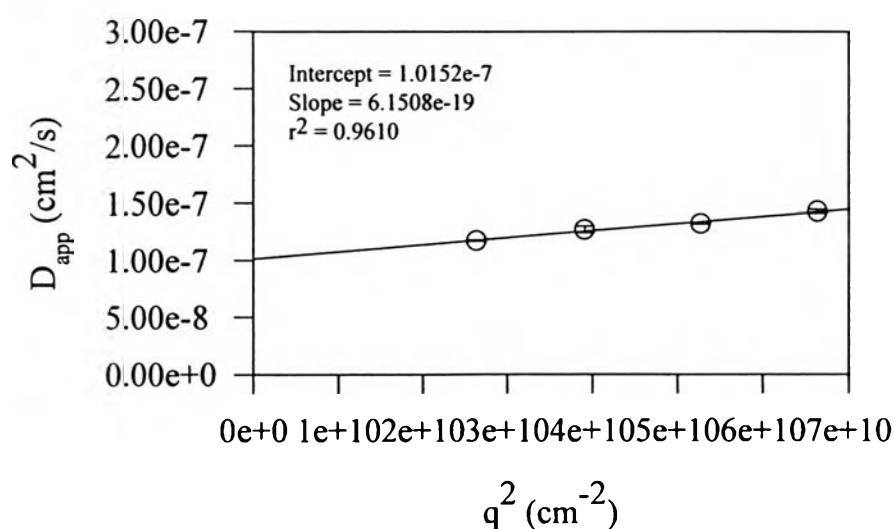


**Figure B20** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 1 g/l and the fixed CTAB concentration of 0.05 mM.



**Table B21** Data for the HPC/CTAB/water system at the fixed HPC concentration of 1 g/l and at the fixed CTAB concentration of 0.50 mM.

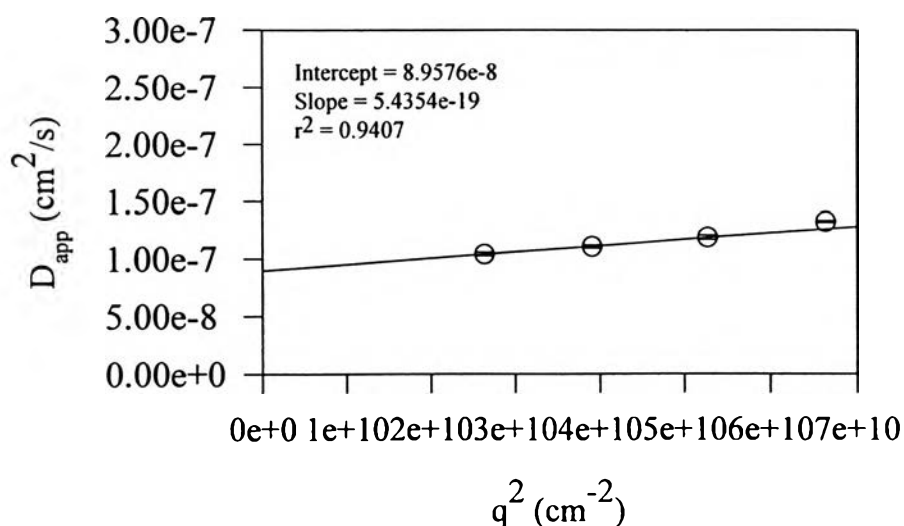
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.70	47.0	73.3	35.5	0.583	96.4	40.1	11.8e-8
	3.70	47.5	74.3	35.7	0.588	96.2	41.6	11.7e-8
	3.70	47.6	74.6	35.7	0.595	94.8	42.4	11.7e-8
Average	3.70	47.4	74.1	35.6	0.589	95.8	41.4	11.7e-7
SD	0.0000	0.3215	0.6807	0.1155	6.0277e-3	0.8718	1.1676	5.7735e-10
75	2.40	43.6	66.2	33.5	0.542	95.6	44.6	12.7e-8
	2.40	44.9	69.1	34.2	0.562	96.3	45.7	12.4e-8
	2.40	42.6	65.1	32.6	0.552	95.0	45.7	13.0e-8
Average	2.40	43.7	66.8	33.4	0.552	95.6	45.3	12.7e-8
SD	0.0000	1.1533	2.0664	0.8021	0.0100	0.6506	0.6351	3.0000e-9
90	1.80	42.0	63.4	32.4	0.534	96.8	40.3	13.2e-8
	1.80	41.8	63.8	32.1	0.548	98.1	41.9	13.3e-8
	1.80	42.0	63.9	32.3	0.543	97.4	40.9	13.2e-8
Average	1.80	41.9	63.7	32.3	0.542	97.4	41.0	13.2e-8
SD	0.0000	0.1155	0.2646	0.1528	7.0946e-3	0.6506	0.8083	5.7735e-10
105	1.30	38.5	57.2	30.1	0.511	98.5	39.8	14.4e-8
	1.30	40.0	60.6	30.8	0.539	96.1	40.0	13.9e-8
	1.30	39.4	59.2	30.4	0.529	98.8	39.7	14.1e-8
Average	1.30	39.3	59.0	30.4	0.526	97.8	39.8	14.1e-8
SD	0.0000	0.7550	1.7088	0.3512	0.0142	1.4799	0.1528	2.5166e-9



**Figure B21** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 1 g/l and the fixed CTAB concentration of 0.50 mM.

**Table B22** Data for the HPC/CTAB/water system at the fixed HPC concentration of 1 g/l and at the fixed CTAB concentration of 0.80 mM.

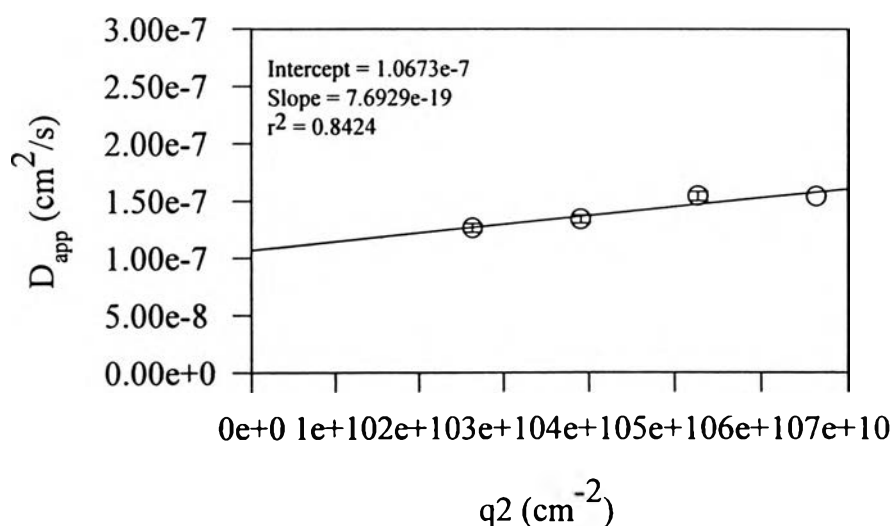
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	4.00	52.4	87.8	37.8	0.675	95.7	38.2	10.6e-8
	4.00	53.7	88.6	38.4	0.690	93.9	38.5	10.3e-8
	4.00	53.6	88.8	38.3	0.697	94.6	37.9	10.3e-8
	Average	4.00	53.2	88.4	38.2	0.687	94.7	38.2
SD	0.000	0.7134	0.5292	0.3215	0.0112	0.9074	0.3000	1.7321e-9
75	2.70	49.5	80.1	36.1	0.652	96.8	40.8	11.2e-8
	2.70	50.0	81.4	36.3	0.663	96.5	40.4	11.1e-8
	2.70	50.7	82.8	36.7	0.669	93.5	40.8	10.9e-8
	Average	2.70	50.1	81.4	36.4	0.661	95.6	40.7
SD	0.0000	0.6028	1.3503	0.3055	8.6217e-3	1.8248	0.2309	1.5275e-9
90	1.90	48.0	78.2	34.9	0.661	95.9	39.7	11.6e-8
	1.90	46.2	74.6	33.8	0.645	96.2	40.0	12.0e-8
	1.90	46.8	75.8	34.2	0.651	95.2	40.4	11.9e-8
	Average	1.90	47.0	76.2	34.3	0.652	95.8	10.0
SD	0.0000	0.9165	1.8330	0.5568	8.0829e-3	0.5132	0.3512	2.0817e-9
105	1.40	42.1	66.4	31.4	0.604	97.8	39.0	13.2e-8
	1.40	41.6	65.1	31.3	0.589	94.0	38.1	13.3e-8
	1.40	41.2	64.5	30.9	0.591	97.9	38.1	13.5e-8
	Average	1.40	41.6	65.3	31.2	0.595	95.6	38.4
SD	0.0000	0.4509	0.9713	0.2646	8.1445e-3	2.2234	0.5196	1.5275e-9



**Figure B22** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 1 g/l and the fixed CTAB concentration of 0.80 mM.

**Table B23** Data for the HPC/CTAB/water system at the fixed HPC concentration of 1 g/l and at the fixed CTAB concentration of 1.00 mM.

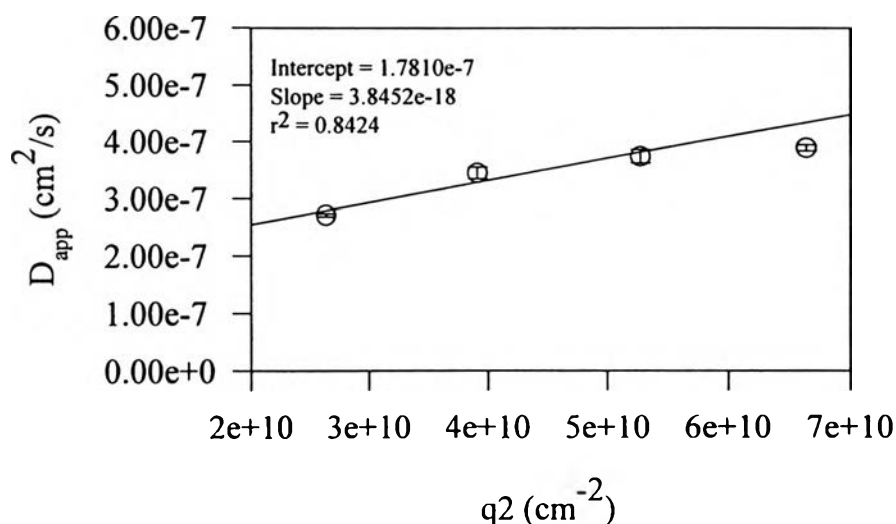
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.50	43.3	72.3	30.0	0.718	89.7	41.3	12.8e-8
	3.50	45.5	76.9	31.8	0.743	85.9	41.1	12.2e-8
	3.50	43.2	70.0	31.4	0.635	90.0	39.2	12.9e-8
Average	3.50	44.0	73.1	31.1	0.699	88.5	40.5	12.6e-8
SD	0.0000	1.3000	3.5133	0.9452	0.0565	2.2855	1.1590	3.7859e-9
75	2.20	40.4	66.9	28.8	0.701	94.8	41.5	13.8e-8
	2.20	41.4	69.0	29.4	0.711	91.8	41.9	13.4e-8
	2.20	42.2	70.5	29.8	0.717	92.3	43.3	13.1e-8
Average	2.20	41.3	68.8	29.3	0.710	93.0	42.2	13.4e-8
SD	0.0000	0.9018	1.8083	0.5033	8.0829e-3	1.6073	0.9452	3.5119e-9
90	1.50	35.2	56.4	26.0	0.630	95.6	40.5	15.8e-8
	1.50	35.7	57.5	26.2	0.640	95.2	41.7	15.5e-8
	1.50	36.9	59.9	26.9	0.655	92.0	41.8	15.0e-8
Average	1.50	35.9	57.9	26.4	0.642	94.3	41.3	15.4e-8
SD	0.0000	0.8737	1.7898	0.4726	0.0126	1.9732	0.7234	4.0415e-9
105	1.10	36.0	58.1	26.4	0.644	98.7	37.7	15.4e-8
	1.10	36.2	58.8	26.3	0.661	96.4	38.3	15.4e-8
	1.10	36.0	58.4	26.2	0.656	95.8	28.5	15.4e-8
Average	1.10	36.1	58.4	26.3	0.654	97.0	34.8	15.4e-8
SD	0.0000	0.1155	0.6512	0.1000	8.7369e-3	1.5308	5.4930	0.0000



**Figure B23** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 1 g/l and the fixed CTAB concentration of 1.00 mM.

**Table B24** Data for the HPC/CTAB/water system at the fixed HPC concentration of 1 g/l and at the fixed CTAB concentration of 2.00 mM.

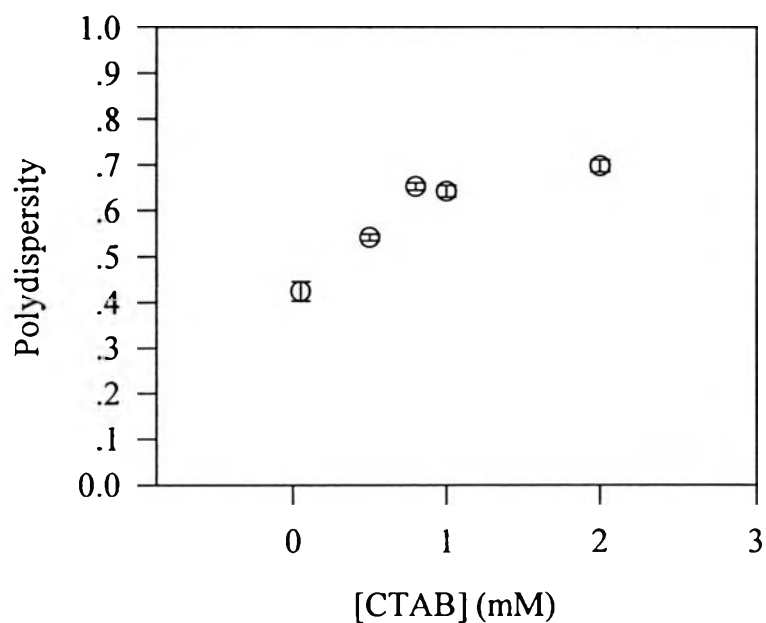
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.50	20.4	34.1	14.5	0.712	89.4	32.4	27.2e-8
	2.50	20.3	33.8	14.4	0.714	91.6	32.7	27.4e-8
	2.50	20.7	34.6	14.6	0.720	79.9	30.7	26.8e-8
Average	2.50	20.5	34.2	14.5	0.715	87.0	31.9	27.1e-8
SD	0.0000	0.2082	0.4041	0.1000	4.1633e-3	6.2180	1.0786	3.0551e-9
75	1.60	16.0	26.6	11.3	0.711	91.8	34.7	34.7e-8
	1.60	15.7	25.4	11.5	0.646	92.7	35.3	35.3e-8
	1.60	16.1	26.1	11.8	0.647	92.1	34.4	34.4e-8
Average	1.60	15.9	26.0	11.5	0.668	92.2	34.8	34.8e-8
SD	0.0000	0.2082	0.6028	0.2517	0.0372	0.4583	0.4583	4.5826e-9
90	0.80	15.4	25.6	10.9	0.707	91.5	26.8	36.1e-8
	0.80	14.4	23.7	10.4	0.682	92.2	26.4	38.4e-8
	0.80	14.8	24.5	10.5	0.702	91.7	28.4	37.5e-8
Average	0.80	14.9	24.6	10.6	0.697	91.8	27.2	37.3e-8
SD	0.0000	0.5033	0.9539	0.2646	0.0132	0.3606	1.0583	1.1590e-8
105	0.70	14.2	23.0	10.3	0.656	92.1	39.1	39.1e-8
	0.70	14.5	23.7	10.5	0.672	89.9	38.3	38.3e-8
	0.70	14.1	23.1	10.2	0.669	93.7	39.3	39.3e-8
Average	0.70	14.3	23.3	10.3	0.666	91.9	38.9	38.9e-8
SD	0.0000	0.2082	0.3786	0.1528	8.5049e-3	1.9079	0.5292	5.2915e-9



**Figure B24** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 1 g/l and the fixed CTAB concentration of 2.00 mM.

**Table B25** Data of the center of mass diffusion coefficient ( $D_c$ ) and the hydrodynamic radius ( $R_h$ ) as a function of CTAB concentration at 30 °C for the HPC/CTAB/water system for the fixed HPC concentration of 1 g/l.

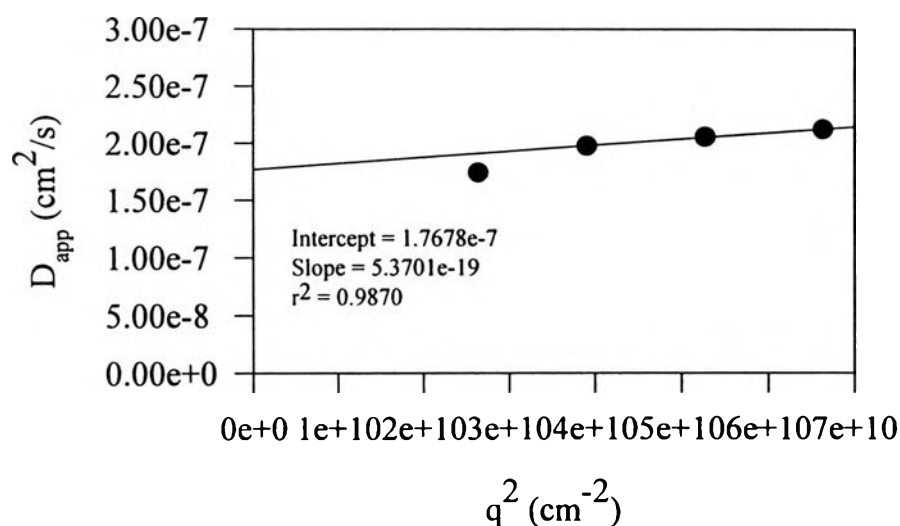
[CTAB] (mM)	$D_c$ (cm <sup>2</sup> /s)	$R_h$ (nm)
0.05	1.4882e-7	18.7
0.50	1.0152e-7	27.4
0.80	8.9576e-8	31.1
1.00	1.0673e-7	26.1
2.00	1.7810e-7	15.6



**Figure B25** Plot of the polydispersity as a function of CTAB concentration at 30 °C for the HPC/OTG/water system at the fixed HPC concentration of 1 g/l and at the fixed angle of 90 °.

**Table B26** Data for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l and at the fixed CTAB concentration of 0.05 mM.

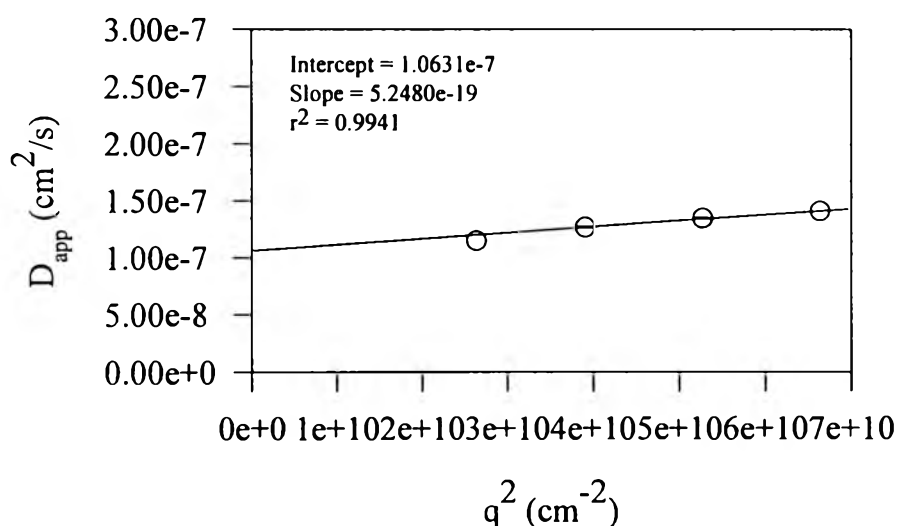
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.00	31.9	45.4	25.3	0.483	93.1	43.7	17.4e-8
	3.00	31.9	46.5	25.3	0.484	90.8	43.8	17.4e-8
	3.00	31.2	44.8	24.9	0.465	94.5	43.8	17.8e-8
Average	3.00	31.7	45.6	25.2	0.477	92.8	43.8	17.5e-8
SD	0.0000	0.4041	0.8622	0.2309	0.01707	1.8682	0.0577	2.3094e-9
75	1.70	28.1	38.8	22.9	0.423	94.9	46.1	19.8e-8
	1.70	28.2	38.9	22.9	0.423	94.6	46.0	19.7e-8
	1.70	28.0	37.7	23.1	0.394	92.9	45.7	19.8e-8
Average	1.70	28.1	38.5	23.0	0.413	94.1	45.9	19.8e-8
SD	0.0000	0.1000	0.6658	0.1155	0.0167	1.0786	0.2082	5.7735e-10
90	1.30	27.0	35.5	22.5	0.375	96.3	44.8	20.6e-8
	1.30	27.0	35.9	22.4	0.385	98.6	45.0	20.6e-8
	1.30	27.2	36.3	22.5	0.388	93.6	45.1	20.4e-8
Average	1.30	27.1	35.9	22.5	0.383	96.2	45.0	20.5e-8
SD	0.0000	0.1155	0.4000	0.0577	6.8059e-3	2.5027	0.1528	1.1547e-9
105	0.90	26.1	34.7	21.7	0.383	97.4	41.9	21.2e-8
	0.90	26.1	34.3	21.8	0.372	94.8	42.5	21.2e-8
	0.90	26.1	34.5	21.7	0.379	95.7	42.5	21.3e-8
Average	0.90	26.1	34.5	21.7	0.378	96.0	42.3	21.2e-8
SD	0.0000	0.0000	0.2000	0.0577	5.5378e-3	1.3204	0.3464	5.7735e-10



**Figure B26** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 3 g/l and the fixed CTAB concentration of 0.05 mM.

**Table B27** Data for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l and at the fixed CTAB concentration of 0.50 mM.

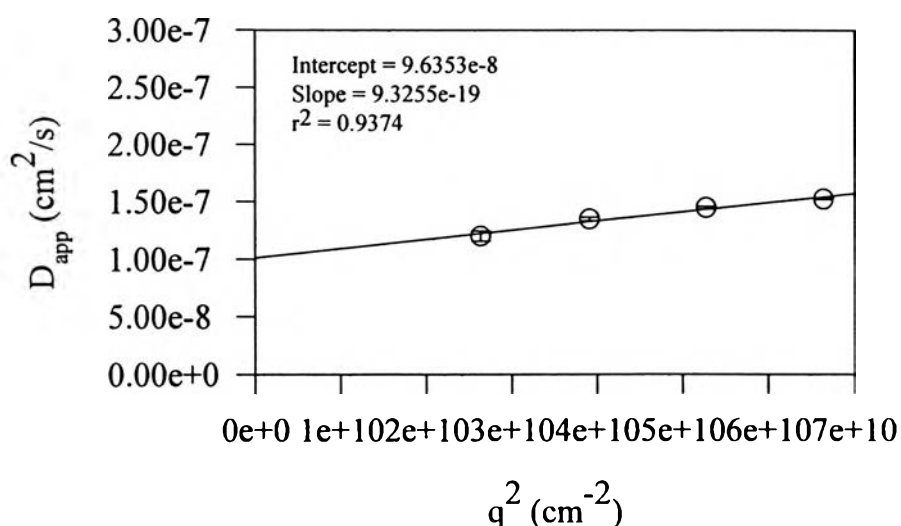
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	5.00	48.4	75.6	36.4	0.586	94.8	45.6	11.5e-8
	5.00	48.2	75.2	36.4	0.583	93.0	46.1	11.5e-8
	5.00	48.2	74.8	36.4	0.578	94.5	47.6	11.5e-8
Average	5.00	48.3	75.2	36.4	0.582	94.1	46.4	11.5e-8
SD	0.0000	0.1155	0.4000	0.0000	4.0415e-3	0.9644	1.0408	0.0000
75	3.40	43.7	66.2	33.7	0.538	99.3	49.0	12.7e-8
	3.40	43.8	66.5	33.6	0.544	97.5	48.9	12.7e-8
	3.40	44.0	68.5	33.1	0.584	97.3	49.2	12.6e-8
Average	3.40	43.8	67.1	33.5	0.555	98.0	49.0	12.7e-8
SD	0.0000	0.1528	1.2503	0.3215	0.0250	1.1015	0.1528	5.7735e-10
90	1.70	41.4	63.6	31.5	0.561	99.7	46.6	13.4e-8
	1.70	41.3	63.3	31.6	0.546	97.5	46.4	13.5e-8
	1.70	41.3	63.7	31.4	0.567	97.9	46.7	13.4e-8
Average	1.70	41.3	63.5	31.5	0.558	98.4	46.6	13.4e-8
SD	0.0000	0.0577	0.2082	0.1000	0.0108	1.1719	0.1528	5.7735e-10
105	1.30	39.5	60.2	30.3	0.549	97.9	47.0	14.1e-8
	1.30	39.3	59.7	30.2	0.542	96.1	47.0	14.1e-8
	1.30	39.4	59.6	30.4	0.537	96.7	44.5	14.1e-8
Average	1.30	39.4	59.8	30.3	0.523	96.9	46.2	14.1e-8
SD	0.0000	0.1000	0.3215	0.1000	6.0277e-3	0.9165	1.4434	0.0000



**Figure B27** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 3 g/l and the fixed CTAB concentration of 0.50 mM.

**Table B28** Data for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l and at the fixed CTAB concentration of 0.80 mM.

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.40	44.3	68.4	33.7	0.568	94.1	45.3	12.5e-8
	3.40	47.4	76.1	34.9	0.634	86.3	44.4	11.7e-8
	3.40	47.2	75.3	34.9	0.622	87.3	44.5	11.8e-8
Average	3.40	46.3	73.3	34.5	0.608	89.2	44.7	12.0e-8
SD	0.0000	1.7349	4.2336	0.6928	0.0352	4.2442	0.4933	4.3589e-9
75	2.50	40.9	61.7	31.6	0.533	92.3	46.3	13.6e-8
	2.50	41.8	63.4	32.2	0.539	91.0	46.2	13.3e-8
	2.50	41.1	61.8	31.7	0.532	93.7	46.6	13.5e-8
Average	2.50	41.3	62.3	31.8	0.535	92.3	46.4	13.5e-8
SD	0.0000	0.4726	0.9539	0.3215	3.7859e-3	1.3503	0.2082	1.5275e-9
90	1.50	38.4	57.6	29.8	0.523	95.3	44.8	14.4 e-8
	1.50	38.6	58.0	29.8	0.529	95.9	44.4	14.4 e-8
	1.50	38.0	56.5	29.6	0.512	96.8	44.3	14.6e-8
Average	1.50	38.3	57.4	29.7	0.521	96.0	44.5	14.6e-8
SD	0.0000	0.3055	0.7767	0.1155	8.6217e-3	0.7550	0.2646	0.0000
105	1.20	36.5	52.9	28.9	0.478	94.2	43.9	15.2e-8
	1.20	36.4	53.4	28.6	0.496	98.1	44.3	15.3e-8
	1.20	36.5	53.7	28.7	0.498	95.4	43.5	15.2e-8
Average	1.20	36.5	53.3	28.7	0.491	95.9	43.9	15.2e-8
SD	0.0000	0.0577	0.4041	0.1528	0.0110	1.9975	0.4000	5.7735e-10

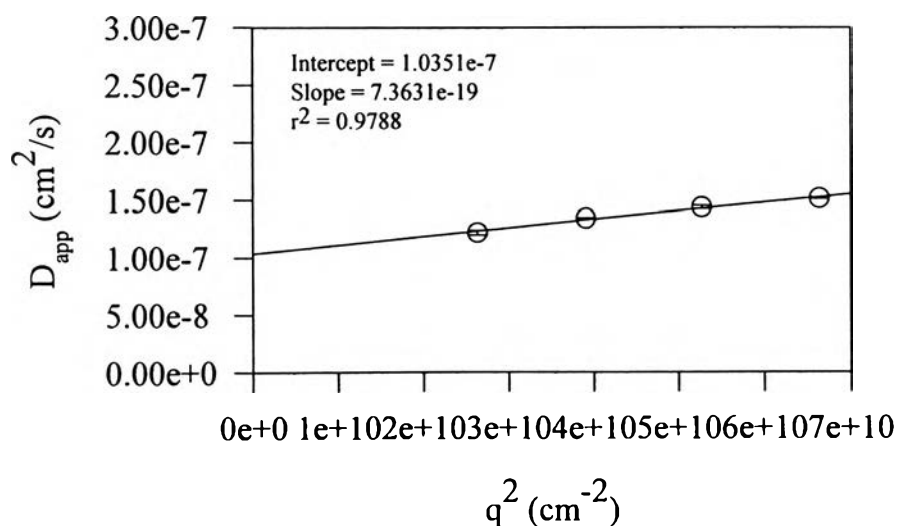


**Figure B28** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 3 g/l and the fixed CTAB concentration of 0.80 mM.



**Table B29** Data for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l and at the fixed CTAB concentration of 1.00 mM.

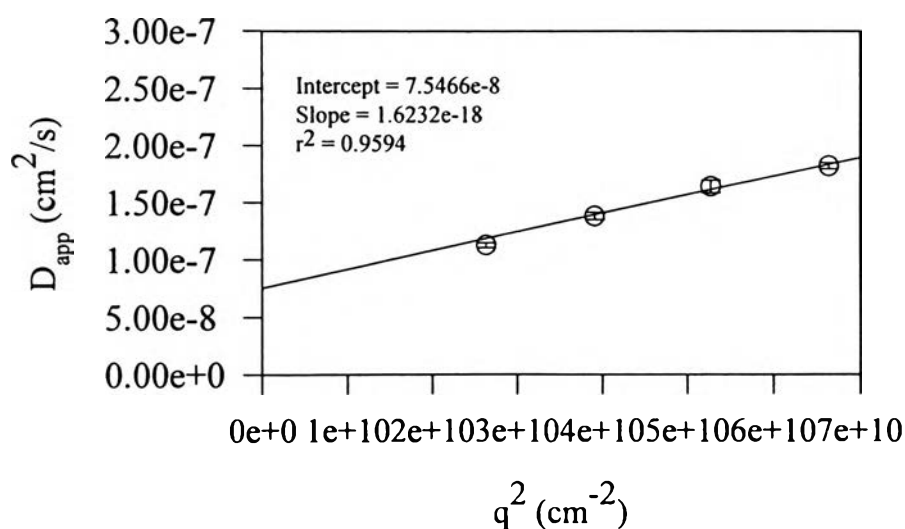
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	4.00	46.9	76.3	34.0	0.662	93.2	44.6	11.8e-8
	4.00	47.2	77.1	34.1	0.671	93.9	44.4	11.8e-8
	4.00	46.2	75.0	33.6	0.658	94.5	44.5	12.0e-8
Average	4.00	46.8	73.1	33.9	0.664	93.9	44.5	11.9e-8
SD	0.0000	0.5132	1.0599	0.2646	6.6583e-3	0.6506	0.1000	1.1547e-9
75	2.30	41.4	66.3	30.5	0.629	97.8	45.6	13.4e-8
	2.30	41.8	67.0	30.8	0.632	96.6	45.6	13.3e-8
	2.30	41.5	66.4	30.6	0.629	98.6	45.3	13.4e-8
Average	2.30	41.6	66.6	30.6	0.630	97.7	45.5	13.4e-7
SD	0.0000	0.2082	0.3786	0.1528	1.7321e-3	1.0066	0.1732	5.7735e-10
90	1.60	38.9	61.6	29.0	0.609	95.4	43.3	14.3e-8
	1.60	38.6	61.7	28.9	0.613	97.8	43.5	14.3e-8
	1.60	38.3	60.0	28.6	0.600	98.1	43.1	14.5e-8
Average	1.60	38.6	61.1	28.8	0.607	97.1	43.3	14.4e-8
SD	0.0000	0.3000	0.9539	0.2082	6.6583e-3	1.4799	0.2000	1.1547e-9
105	1.20	36.8	57.4	27.6	0.588	96.2	43.5	15.1e-8
	1.20	36.6	57.1	27.5	0.586	98.0	43.4	15.2e-8
	1.20	36.7	57.4	27.6	0.588	98.0	43.7	15.1e-8
Average	1.20	36.7	57.3	27.6	0.587	97.4	43.5	15.1e-8
SD	0.0000	0.1000	0.1732	0.0577	1.1547e-3	1.0392	0.1528	5.7735e-10



**Figure B29** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 3 g/l and the fixed CTAB concentration of 1.00 mM.

**Table B30** Data for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l and at the fixed CTAB concentration of 2.00 mM.

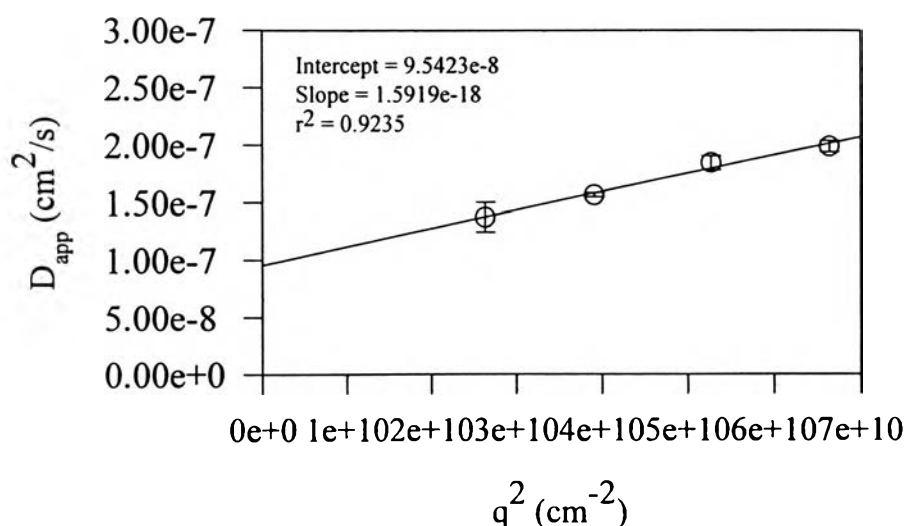
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	4.20	49.1	85.7	32.9	0.831	89.1	41.6	11.3e-8
	4.20	50.6	89.5	33.3	0.866	92.4	39.6	11.0e-8
	4.20	48.9	86.0	32.4	0.851	91.5	38.6	11.4e-8
Average	4.20	49.5	87.1	32.9	0.849	91.0	39.9	11.2e-8
SD	0.0000	0.9292	2.1127	0.4509	0.0176	1.7059	1.5275	2.0817e-9
75	2.40	39.8	69.2	26.9	0.815	92.9	46.1	13.9e-8
	2.40	39.7	68.9	26.8	0.813	91.6	45.2	14.0e-8
	2.40	41.4	72.5	27.6	0.837	88.6	46.4	13.4e-8
Average	2.40	40.3	70.2	27.1	0.822	91.0	45.9	13.8e-8
SD	0.0000	0.9539	1.9975	0.4359	0.0133	2.2053	0.6245	3.2146e-9
90	1.70	33.8	57.4	23.5	0.753	94.0	43.9	16.4e-8
	1.70	32.8	55.2	23.0	0.736	96.2	44.0	16.9e-8
	1.70	35.1	60.0	24.2	0.772	94.4	43.9	15.8e-8
Average	1.70	33.9	57.5	23.6	0.754	94.9	43.9	16.4e-8
SD	0.0000	1.1533	2.4028	0.6028	0.0180	1.1719	0.0577	5.5076e-9
105	1.10	30.4	51.9	20.9	0.774	94.2	42.1	18.3e-8
	1.10	31.0	53.0	21.3	0.777	91.4	41.4	17.9e-8
	1.10	30.2	51.5	20.8	0.769	95.8	42.2	18.4e-8
Average	1.10	30.5	52.1	21.0	0.773	93.8	41.9	18.2e-8
SD	0.0000	0.4163	0.7767	0.2646	4.0415e-3	2.2271	0.4359	2.6458e-9



**Figure B30** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 3 g/l and the fixed CTAB concentration of 2.00 mM.

**Table B31** Data for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l and at the fixed CTAB concentration of 3.00 mM.

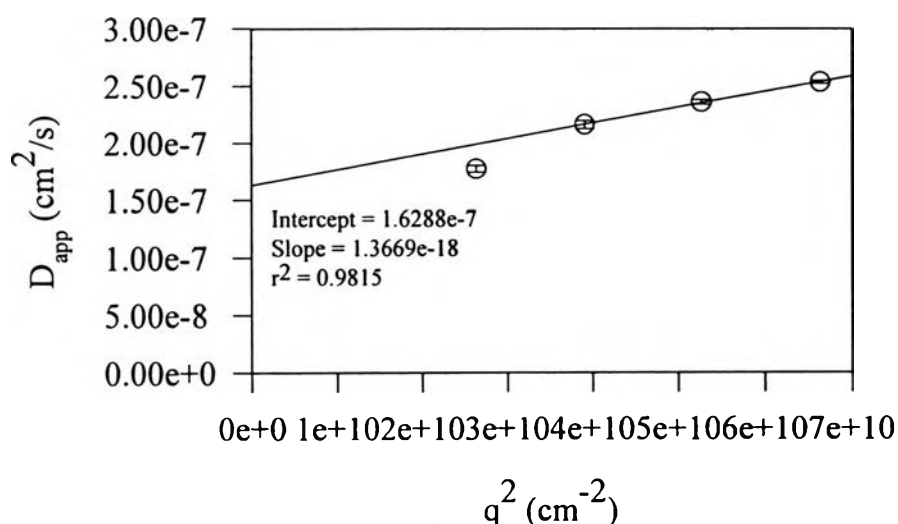
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	4.10	36.5	61.4	25.6	0.734	96.4	41.4	15.2e-8
	4.10	43.5	76.0	29.1	0.832	90.6	43.5	12.8e-8
	4.10	42.2	73.5	28.4	0.832	89.7	39.1	13.1e-8
Average	4.10	40.7	70.3	27.7	0.799	92.2	41.3	13.7e-8
SD	0.0000	3.7233	7.8083	1.8520	0.0566	3.6364	2.2008	1.3077e-8
75	2.60	35.1	59.8	24.3	0.761	94.3	48.4	15.8e-8
	2.60	35.7	61.1	24.6	0.773	95.1	49.1	15.5e-8
	2.60	35.8	61.1	24.7	0.770	93.1	49.0	15.5e-8
Average	2.60	35.5	60.7	24.5	0.768	94.2	48.8	15.6e-8
SD	0.0000	0.3786	0.7506	0.2082	6.2450e-3	1.0066	0.3786	1.7321e-9
90	1.60	30.6	52.5	21.1	0.768	96.3	46.9	18.1e-8
	1.60	30.8	52.7	21.2	0.772	98.1	47.1	18.0e-8
	1.60	29.1	49.3	20.3	0.746	95.5	46.1	19.1e-8
Average	1.60	30.2	51.5	20.9	0.762	96.6	46.7	18.4e-8
SD	0.0000	0.9292	1.9079	0.4933	0.0140	1.3317	0.5292	6.0828e-9
105	0.90	28.6	50.6	18.9	0.864	94.5	44.2	19.4e-8
	0.90	26.6	49.5	18.6	0.852	95.1	42.6	19.8e-8
	0.90	27.0	47.1	18.5	0.804	97.2	44.1	20.4e-8
Average	0.90	27.4	49.1	18.7	0.840	95.6	43.6	19.9e-8
SD	0.0000	1.0583	1.7898	0.2082	0.0317	1.4177	0.8963	5.0332e-9



**Figure B31** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 3 g/l and the fixed CTAB concentration of 3.00 mM.

**Table B32** Data for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l and at the fixed CTAB concentration of 4.00 mM.

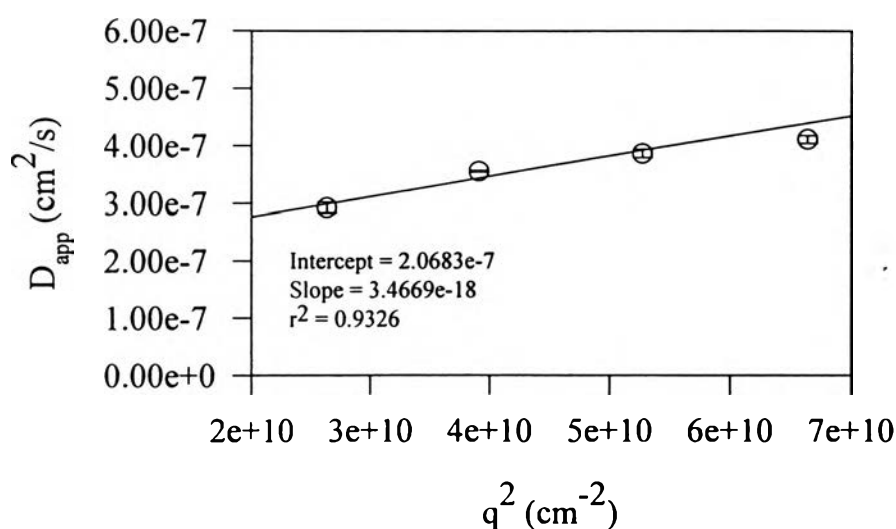
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.30	30.9	53.2	21.1	0.804	94.6	44.6	18.0e-8
	3.30	31.8	55.1	21.6	0.824	96.8	45.1	17.4e-8
	3.30	31.2	53.9	21.3	0.797	96.1	45.3	17.8e-8
Average	3.0	31.3	54.1	21.3	0.808	95.8	45.0	17.7e-8
SD	0.0000	0.4583	0.9609	0.2517	0.0140	1.1240	0.3606	3.0551e-9
75	1.90	25.5	43.5	17.6	0.766	95.4	46.2	21.8e-8
	1.90	25.5	43.4	17.6	0.766	97.6	47.0	21.8e-8
	1.90	26.2	45.0	18.0	0.780	95.4	47.5	21.2e-8
Average	1.90	25.7	44.0	17.7	0.771	96.1	46.9	21.6e-8
SD	0.0000	0.4041	0.8963	0.2309	8.0829e-3	1.2702	0.6557	3.4641e-9
90	1.30	23.7	40.5	16.4	0.766	94.4	45.4	23.4e-8
	1.30	23.6	40.2	16.4	0.761	97.2	45.2	23.5e-8
	1.30	23.4	39.7	16.2	0.758	97.0	46.1	23.8e-8
Average	1.30	23.6	40.1	16.3	0.7617	96.2	45.6	23.6e-8
SD	0.0000	0.1528	0.4041	0.1155	4.0415e-3	1.5620	0.4726	2.0817e-9
105	0.90	22.0	37.6	15.1	0.772	96.7	41.6	25.3e-8
	0.90	22.0	37.7	15.1	0.778	96.3	41.9	25.2e-8
	0.90	21.8	37.2	15.0	0.769	97.4	42.4	25.5e-8
Average	0.90	21.9	37.5	15.1	0.773	96.8	42.0	25.3e-8
SD	0.0000	0.1155	0.2646	0.0577	4.5826e-3	0.5568	0.4041	1.5275e-9



**Figure B32** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 3 g/l and the fixed CTAB concentration of 4.00 mM.

**Table B33** Data for the HPC/CTAB/water system at the fixed HPC concentration of 3 g/l and at the fixed CTAB concentration of 4.40 mM.

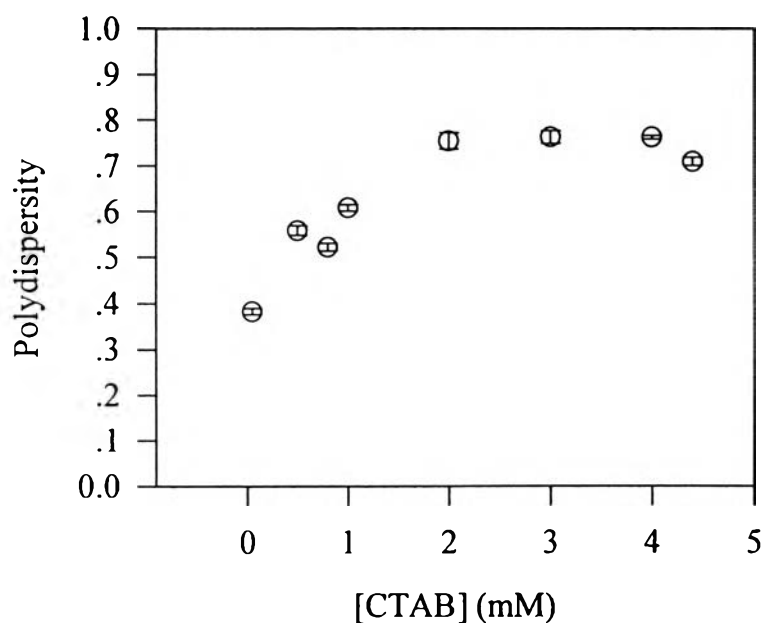
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.30	18.3	29.2	13.5	0.626	93.1	38.7	30.3e-8
	3.30	19.5	31.5	14.3	0.645	90.7	39.6	28.4e-8
	3.30	19.0	30.5	14.0	0.635	91.9	39.3	29.2e-8
Average	3.30	18.9	30.4	13.9	0.635	91.9	39.2	29.3e-8
SD	0.0000	0.6028	1.1533	0.4041	0.0000	1.2000	0.4583	9.5394e-9
75	1.10	15.7	26.5	10.9	0.747	92.3	42.6	35.5e-8
	1.10	15.6	26.3	10.8	0.748	93.0	43.0	35.7e-8
	1.10	15.7	26.5	10.9	0.749	91.8	43.5	35.4e-8
Average	1.10	15.7	26.4	10.9	0.748	92.4	43.0	35.5e-8
SD	0.0000	0.0577	0.1155	0.0577	1.0000e-3	0.6028	0.4509	1.5275e-9
90	0.80	14.7	24.6	10.4	0.718	92.8	37.7	37.7e-8
	0.80	14.2	23.6	10.1	0.707	93.5	38.6	39.1e-8
	0.80	14.3	23.7	10.2	0.701	93.5	38.4	38.9e-8
Average	0.80	14.4	24.0	10.2	0.709	93.3	38.2	38.6e-8
SD	0.0000	0.2646	0.5508	0.1528	9.0115e-3	0.4041	0.4726	7.5719e-9
105	0.60	13.6	22.5	9.6	0.705	93.9	35.6	37.7e-8
	0.60	13.7	22.9	9.7	0.715	89.2	33.7	39.1e-8
	0.60	13.3	22.1	9.4	0.708	95.6	38.4	38.9e-8
Average	0.60	13.5	22.5	9.6	0.709	92.9	35.9	38.6e-8
SD	0.0000	0.2082	0.4000	0.1528	5.1316e-3	3.3151	2.3643	7.5719e-9



**Figure B33** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 3 g/l and the fixed CTAB concentration of 4.40 mM.

**Table B34** Data of the center of mass diffusion coefficient ( $D_c$ ) and the hydrodynamic radius ( $R_h$ ) as a function of CTAB concentration at 30 °C for the HPC/CTAB/water system for the fixed HPC concentration of 3 g/l.

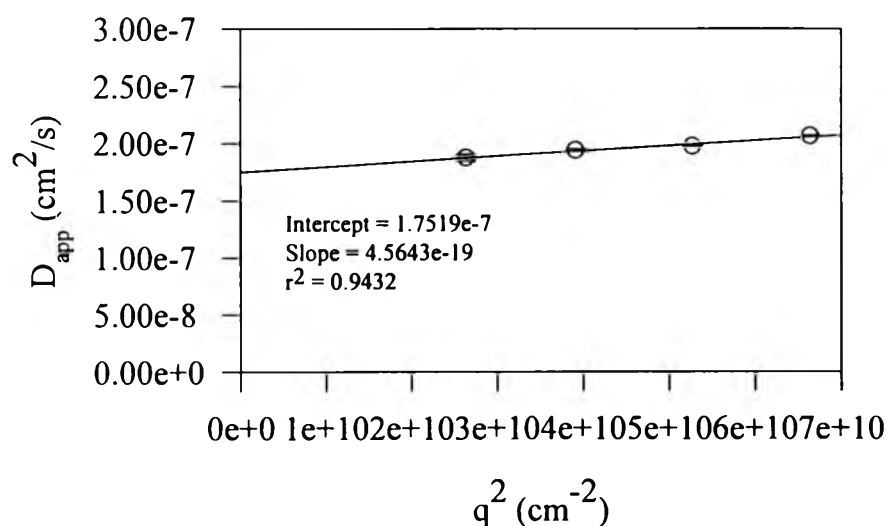
[CTAB] (mM)	$D_c$ (cm <sup>2</sup> /s)	$R_h$ (nm)
0.05	1.7678e-7	15.7
0.50	1.0631e-7	26.2
0.80	9.6353e-8	28.9
1.00	1.0351e-7	26.9
2.00	7.5466e-8	36.9
3.00	9.5424e-8	29.2
4.00	1.6288e-7	17.1
4.40	2.0683e-7	13.5



**Figure B34** Plot of the polydispersity as a function of CTAB concentration at 30 °C for the HPC/OTG/water system at the fixed HPC concentration of 3 g/l and at the fixed angle of 90 °.

**Table B35** Data for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l and at the fixed CTAB concentration of 0.05 mM.

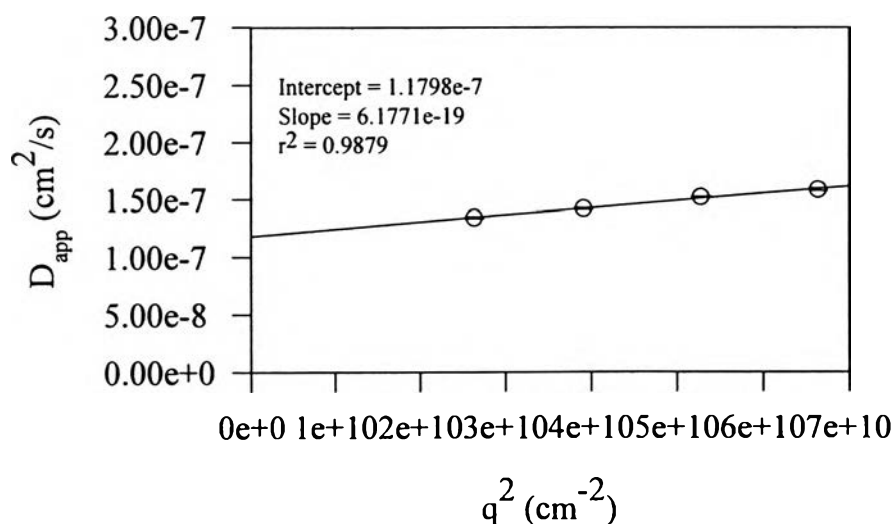
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	2.60	29.2	40.7	23.5	0.431	97.6	50.2	19.0e-8
	2.60	29.6	42.0	23.7	0.454	95.5	50.2	18.8e-8
	2.60	30.3	43.7	24.0	0.476	95.6	50.2	18.4e-8
Average	2.60	29.7	42.1	23.7	0.454	96.2	50.2	18.7e-8
SD	0.0000	0.5568	1.5044	0.2517	0.0225	1.1846	0.0000	3.0551e-9
75	1.70	28.5	39.6	23.1	0.428	97.5	51.9	19.5e-8
	1.70	28.9	40.6	23.3	0.444	96.4	52.3	19.3e-8
	1.70	28.8	40.7	23.1	0.450	93.0	52.6	19.8e-8
Average	1.70	28.7	40.3	23.2	0.441	95.6	52.3	19.5e-8
SD	0.0000	0.2082	0.6083	0.1155	0.0114	2.3459	0.3512	2.5166e-9
90	1.40	28.1	38.6	23.0	0.4152.34	94.9	51.3	19.8e-8
	1.40	28.1	39.3	22.7	0.436	97.5	51.8	19.8e-8
	1.40	28.2	39.0	23.0	0.422	97.0	52.0	19.7e-8
Average	1.40	28.1	39.0	22.9	0.429	96.5	51.7	19.8e-8
SD	0.0000	0.0577	0.3512	0.1732	9.8995e-3	1.3796	0.3606	5.7735e-10
105	0.90	26.9	37.1	21.9	0.424	98.2	52.1	20.7e-8
	0.90	27.1	35.5	22.6	0.370	98.2	51.5	20.6e-8
	0.90	27.0	36.7	22.2	0.405	99.0	51.6	20.6e-8
Average	0.90	27.0	36.4	22.2	0.400	98.5	51.7	20.6e-8
SD	0.0000	0.1000	0.8327	0.3512	0.0274	0.4619	0.3215	5.7735e-10



**Figure B35** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed CTAB concentration of 0.05 mM.

**Table B36** Data for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l and at the fixed CTAB concentration of 0.50 mM.

Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.40	41.8	64.1	31.9	0.557	99.5	53.3	13.3e-8
	3.40	41.6	63.8	31.8	0.556	99.6	53.2	13.4e-8
	3.40	41.3	63.0	31.6	0.550	96.2	53.2	13.5e-8
Average	3.40	41.6	63.6	31.7	0.554	98.4	53.2	13.4e-8
SD	0.0000	0.2517	0.5686	0.1528	3.7859e-3	1.9348	0.0577	1.0000e-9
75	2.20	39.2	59.3	30.2	0.536	97.4	54.2	14.2e-8
	2.20	39.0	58.6	30.2	0.528	98.5	54.2	14.3e-8
	2.20	39.4	59.5	30.4	0.535	98.1	54.4	14.1e-8
Average	2.20	39.2	59.1	30.3	0.533	98.0	54.3	14.2e-8
SD	0.0000	0.2000	0.4726	0.1155	4.3589e-3	0.5568	0.1155	1.0000e-9
90	1.60	36.9	52.2	28.7	0.520	98.4	51.9	15.1e-8
	1.60	36.9	55.0	28.7	0.515	98.4	51.6	15.1e-8
	1.60	36.6	54.0	28.7	0.510	97.7	52.1	15.2e-8
Average	1.60	36.8	53.7	28.7	0.515	98.2	51.9	15.1e-8
SD	0.0000	0.1732	1.4189	0.0000	5.0000e-3	0.4041	0.2517	5.7735e-10
105	1.20	27.8	51.0	27.8	0.481	99.0	52.8	15.9e-8
	1.20	28.9	50.5	27.9	0.470	99.5	53.0	15.9e-8
	1.20	27.9	52.4	27.9	0.500	99.6	53.4	15.7e-8
Average	1.20	28.2	51.3	27.9	0.484	99.4	53.1	15.8e-8
SD	0.0000	0.6083	0.9849	0.0577	0.0152	0.3215	0.3055	1.1547e-9

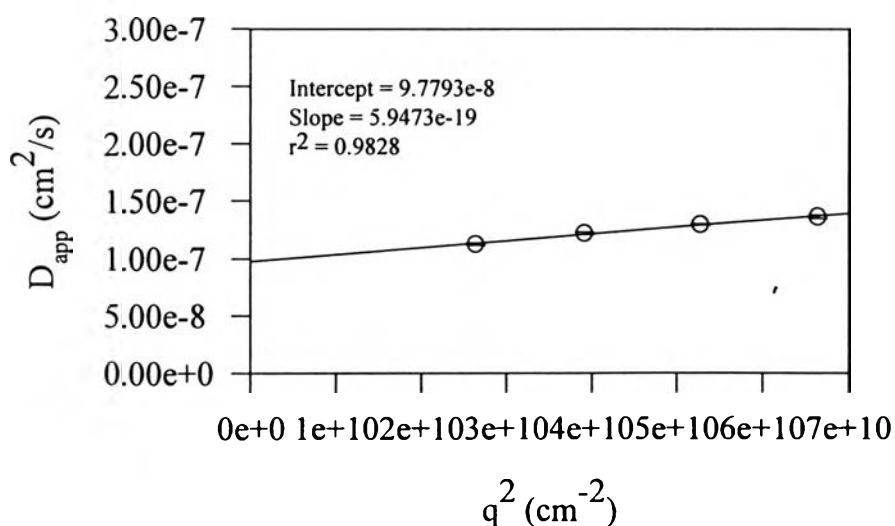


**Figure B36** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed CTAB concentration of 0.50 mM.



**Table B37** Data for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l and at the fixed CTAB concentration of 0.80 mM.

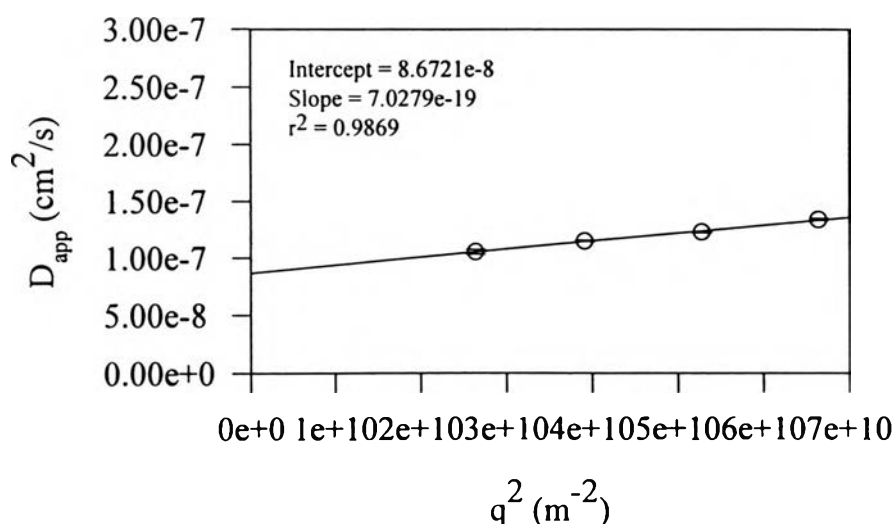
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.80	48.9	78.5	35.9	0.636	96.5	52.0	11.4e-8
	3.80	49.7	80.5	36.3	0.650	95.2	51.3	11.2e-8
	3.80	49.7	80.2	36.4	0.644	95.7	51.6	11.2e-8
Average	3.80	49.4	79.7	36.2	0.643	95.8	51.6	11.3e-8
SD	0.0000	0.4619	1.0786	0.2646	7.0238e-3	0.6557	0.3512	1.1547e-9
75	2.50	45.8	71.5	34.5	0.585	98.1	53.3	12.1e-8
	2.50	45.4	71.4	33.9	0.599	98.1	53.5	12.3e-8
	2.50	45.7	72.3	34.0	0.608	97.4	54.2	12.2e-8
Average	2.50	45.6	71.7	34.1	0.597	97.9	53.7	12.2e-8
SD	0.0000	0.2082	0.4933	0.3215	0.0116	0.4041	0.4726	1.0000e-9
90	1.70	43.2	68.8	32.0	0.618	94.2	52.7	12.9e-8
	1.70	42.9	65.6	32.8	0.654	95.6	52.2	13.0e-8
	1.70	42.7	67.0	32.0	0.599	96.7	52.3	13.0e-8
Average	1.70	42.9	67.1	32.3	0.624	95.5	52.4	13.0e-8
SD	0.0000	0.2517	1.6042	0.4619	0.0279	1.2530	0.2646	5.7735e-10
105	1.40	40.5	63.2	30.4	0.587	98.7	54.6	13.8e-8
	1.40	40.6	62.1	31.1	0.551	98.1	52.7	13.7e-8
	1.40	41.1	62.8	31.5	0.550	99.3	53.2	13.5e-8
Average	1.40	40.7	62.7	31.0	0.563	98.7	53.5	13.7e-8
SD	0.0000	0.3215	0.5568	0.5568	0.0211	0.6000	0.9849	1.5275e-9



**Figure B37** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed CTAB concentration of 0.80 mM.

**Table B38** Data for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l and at the fixed CTAB concentration of 1.00 mM.

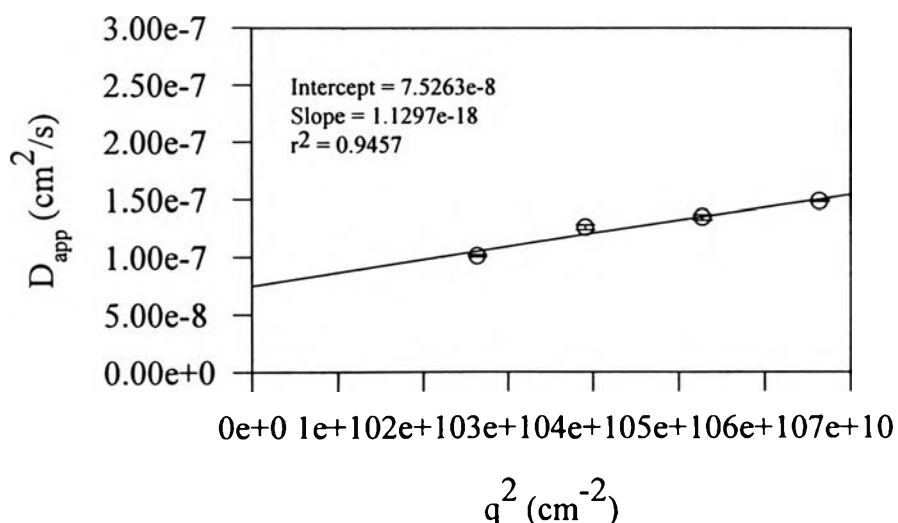
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	4.10	53.9	90.0	38.1	0.717	97.8	52.4	10.3e-8
	4.10	52.6	87.4	37.4	0.705	97.1	52.4	10.6e-8
	4.10	52.2	96.2	37.3	0.694	98.1	52.4	10.7e-8
Average	4.10	52.9	91.2	37.6	0.705	97.7	52.4	10.5e-8
SD	0.0000	0.8888	4.5211	0.4359	0.0115	0.5132	0.0000	2.0817e-9
75	2.70	48.2	78.2	35.1	0.644	98.7	53.3	11.5e-8
	2.70	49.0	79.1	35.3	0.665	99.5	53.2	11.4e-8
	2.70	48.4	79.0	35.0	0.667	99.0	53.1	11.5e-8
Average	2.70	48.5	78.8	35.1	0.659	99.1	53.2	11.5e-8
SD	0.0000	0.4163	0.4933	0.1528	0.0127	0.4041	0.1000	5.7735e-10
90	1.80	45.5	73.8	33.1	0.655	97.2	51.4	12.2e-8
	1.80	45.3	73.6	32.9	0.659	97.2	51.7	12.3e-8
	1.80	45.1	73.0	33.0	0.648	96.9	51.4	12.3e-8
Average	1.80	45.3	73.5	33.0	0.654	97.1	51.5	12.3e-8
SD	0.0000	0.2000	0.4163	0.1000	5.5678e-3	0.1732	0.1732	5.7735e-10
105	1.40	41.7	66.1	31.0	0.612	98.2	52.9	13.4e-8
	1.40	41.2	65.2	30.7	0.610	98.7	53.4	13.5e-8
	1.40	41.9	66.6	31.0	0.618	97.1	53.1	13.3e-8
Average	1.40	41.6	66.0	30.9	0.613	98.0	53.1	13.4e-8
SD	0.0000	0.3606	0.7095	0.1732	4.1633e-3	0.8185	0.2517	1.0000e-9



**Figure B38** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed CTAB concentration of 1.00 mM.

**Table B39** Data for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l and at the fixed CTAB concentration of 2.00 mM.

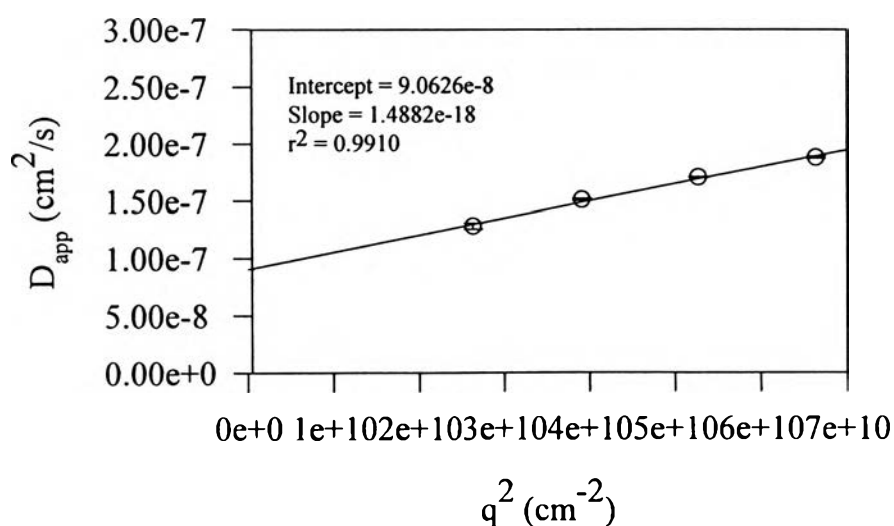
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	4.80	55.8	97.5	37.3	0.832	90.2	50.8	10.0e-8
	4.80	55.3	95.0	37.2	0.833	93.6	52.2	10.1e-8
	4.80	54.6	98.3	36.8	0.818	97.3	53.1	10.2e-8
Average	4.80	55.2	96.9	37.0	0.828	93.7	52.0	10.1e-8
SD	0.0000	0.6028	1.7214	0.2828	8.3865e-3	3.5511	1.1590	1.0000e-9
75	2.50	40.8	77.9	30.2	0.816	95.1	53.2	12.4e-8
	2.50	43.3	75.0	29.4	0.804	96.4	53.7	12.8e-8
	2.50	44.7	77.7	30.1	0.818	97.4	53.5	12.5e-8
Average	2.50	42.9	76.9	29.9	0.813	96.3	53.5	12.6e-8
SD	0.0000	1.9757	1.6197	0.4359	7.5719e-3	1.1533	0.2517	2.0817e-9
90	1.80	41.8	71.9	28.5	0.790	93.0	51.9	13.3e-8
	1.80	40.6	69.5	27.9	0.778	97.4	51.8	13.7e-8
	1.80	41.8	72.0	28.5	0.791	96.5	51.5	13.3e-8
Average	1.80	41.4	71.1	28.3	0.786	95.6	51.7	13.4e-8
SD	0.0000	0.6928	1.4154	0.3464	7.2342e-3	2.3245	0.2082	2.3094e-9
105	1.30	37.7	64.4	25.9	0.774	97.9	52.7	14.8e-8
	1.30	37.5	64.0	25.8	0.771	94.7	51.7	14.9e-8
	1.30	37.3	63.7	25.7	0.769	96.9	52.2	14.9e-8
Average	1.30	37.5	64.0	25.8	0.771	96.5	52.2	14.9e-8
SD	0.0000	0.2000	0.3512	0.1000	2.5166e-3	1.6371	0.5000	5.7735e-10



**Figure B39** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed CTAB concentration of 2.00 mM.

**Table B40** Data for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l and at the fixed CTAB concentration of 3.00 mM.

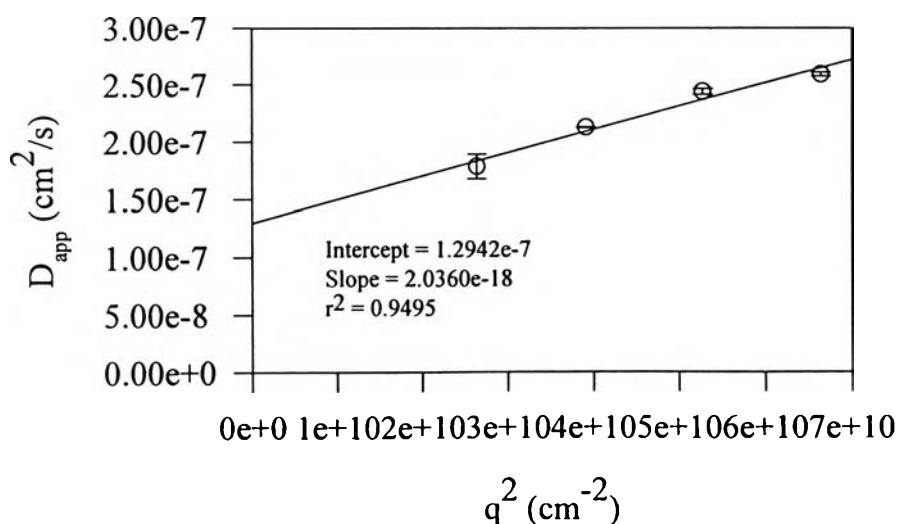
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	Z <sub>Ave</sub> (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.80	40.6	70.5	28.4	0.840	93.6	49.7	13.1e-8
	3.80	42.6	70.7	28.9	0.856	93.4	50.2	12.7e-8
	3.80	43.7	77.0	29.2	0.858	91.9	50.0	12.6e-8
Average	3.80	42.3	72.7	28.8	0.851	93.0	50.0	12.8e-8
SD	0.00	1.5716	3.6964	0.4041	9.8658e-3	0.9292	0.2517	2.6458e-9
75	2.30	37.1	65.5	24.9	0.820	96.5	52.7	15.0e-8
	2.30	37.0	64.3	24.9	0.818	92.6	52.7	15.1e-8
	2.30	36.7	63.7	24.8	0.810	96.4	52.6	15.2e-8
Average	2.30	36.9	64.5	24.9	0.816	95.2	52.7	15.1e-8
SD	0.0000	0.2082	0.9165	0.0577	5.2915e-3	2.2234	0.0577	1.0000e-9
90	1.60	32.7	56.0	22.5	0.774	95.3	49.7	17.0e-8
	1.60	32.6	55.7	22.5	0.771	96.0	49.8	17.1e-8
	1.60	32.6	56.0	22.5	0.773	96.8	50.3	17.0e-8
Average	1.60	32.6	55.9	22.5	0.773	96.0	49.9	17.0e-8
SD	0.0000	0.0577	0.1732	0.0000	1.5275e-3	0.7506	0.3215	5.7735e-10
105	1.30	29.7	49.8	21.0	0.723	97.7	49.9	18.7e-8
	1.30	29.6	51.2	20.5	0.779	97.1	49.5	18.8e-8
	1.30	29.5	50.5	20.3	0.775	97.3	50.6	18.9e-8
Average	1.30	29.6	50.5	20.6	0.759	97.4	50.0	18.8e-8
SD	0.0000	0.1000	0.7000	0.3606	0.0312	0.3055	0.5568	1.0000e-9



**Figure B40** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed CTAB concentration of 3.00 mM.

**Table B41** Data for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l and at the fixed CTAB concentration of 4.00 mM.

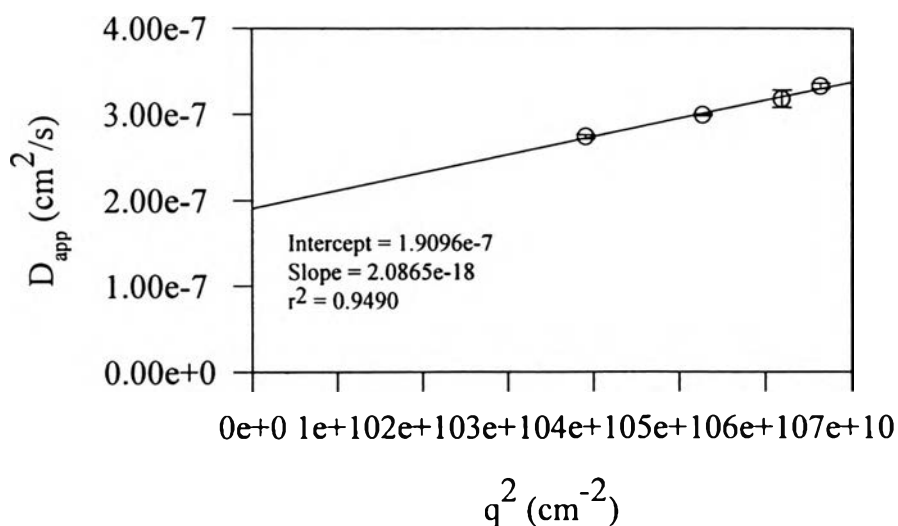
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
60	3.50	29.2	49.3	20.4	0.741	95.6	45.8	19.0e-8
	3.50	31.6	54.1	21.7	0.775	94.6	45.2	17.6e-8
	3.50	32.9	54.1	23.7	0.682	95.2	45.0	16.9e-8
	Average	3.50	31.2	52.5	21.9	0.733	95.1	45.3
SD	0.0000	1.8771	2.7713	1.6623	0.0471	0.5033	0.4163	1.0693e-8
75	1.90	26.0	44.5	17.9	0.774	92.1	48.0	21.3e-8
	1.90	26.1	44.6	16.0	0.773	95.0	48.7	21.3e-8
	1.90	26.2	44.8	18.0	0.774	95.1	48.8	21.2e-8
	Average	1.90	26.1	44.6	17.3	0.774	94.1	48.5
SD	0.0000	0.1000	0.1528	1.1269	5.7735e-4	1.7039	0.4359	5.7735e-10
90	1.20	23.0	39.4	15.8	0.775	96.0	47.6	24.1e-8
	1.20	22.6	38.5	15.5	0.769	94.9	48.0	24.6e-8
	1.20	22.8	39.0	15.7	0.772	96.3	48.0	24.4e-8
	Average	1.20	22.8	39.0	15.7	0.772	95.7	47.9
SD	0.0000	0.2000	0.4509	0.1528	3.0000e-3	0.7371	0.2309	2.5166e-9
105	1.00	21.3	35.7	15.0	0.723	96.7	48.6	26.1e-8
	1.00	21.5	36.0	15.1	0.726	97.6	49.0	25.8e-8
	1.00	21.5	36.1	15.1	0.728	97.3	49.2	25.8e-8
	Average	1.00	21.4	35.9	15.1	0.726	97.2	48.9
SD	0.0000	0.1155	0.2082	0.0577	2.5166e-3	0.4583	0.3055	1.7321e-9



**Figure B41** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed CTAB concentration of 4.00 mM.

**Table B42** Data for the HPC/CTAB/water system at the fixed HPC concentration of 5 g/l and at the fixed CTAB concentration of 5.00 mM.

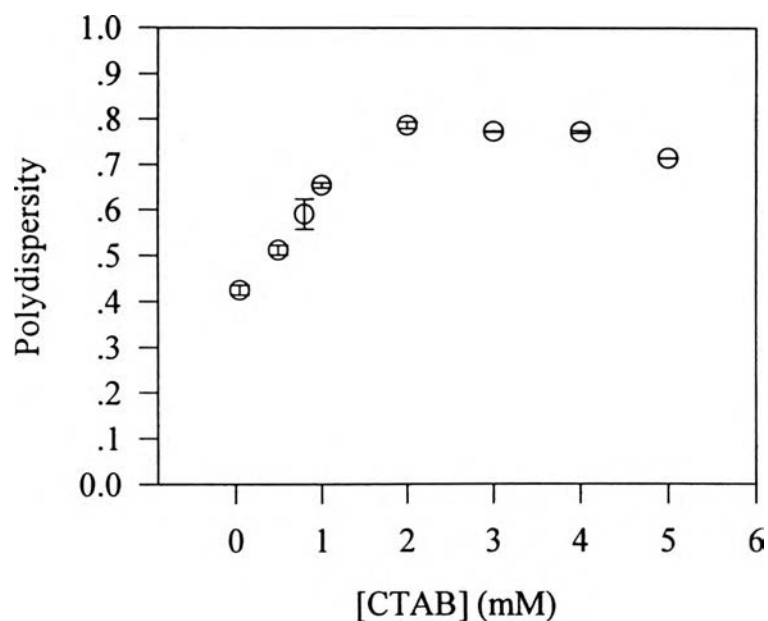
Angle (degree)	Sample ( $\mu$ s)	Mean (nm)	Width	ZAve (nm)	Poly-dispersity	In Range	Merit	D <sub>app</sub> (cm <sup>2</sup> /s)
75	1.70	20.4	34.3	14.3	0.733	94.8	47.8	27.3e-8
	1.70	20.0	33.7	14.1	0.730	95.8	47.5	27.7e-8
	1.70	20.4	34.4	14.3	0.735	94.6	47.7	27.2e-8
Average	1.70	20.3	34.1	14.2	0.733	95.1	47.7	27.4e-8
SD	0.0000	0.2309	0.3786	0.1155	2.5166e-3	0.6429	0.1528	2.6458e-9
90	1.20	18.6	31.1	13.2	0.714	95.2	46.7	29.8e-8
	1.20	18.5	30.9	13.1	0.713	95.5	46.5	30.0e-8
	1.20	18.5	30.9	13.1	0.715	96.4	46.7	29.9e-8
Average	1.20	18.5	31.0	13.1	0.714	95.7	46.6	29.9e-8
SD	0.0000	0.0577	0.1155	0.0577	1.0000e-3	0.6245	0.1155	1.0000e-9
100	0.90	17.2	28.8	12.1	0.726	96.4	47.7	32.3e-8
	0.90	16.8	28.0	11.9	0.712	90.4	47.0	30.6e-8
	0.90	17.1	28.7	12.1	0.723	95.9	47.5	32.4e-8
Average	0.90	17.0	28.5	12.0	0.720	94.2	47.4	31.8e-8
SD	0.0000	0.2082	0.4359	0.1155	7.3711e-3	3.3292	0.3606	1.0116e-8
105	0.80	16.7	28.0	11.7	0.729	93.2	45.6	33.2e-8
	0.80	16.8	28.3	11.8	0.729	97.5	46.4	33.0e-8
	0.80	16.5	27.7	11.6	0.725	95.2	46.0	33.6e-8
Average	0.80	16.7	28.0	11.7	0.728	95.3	46.0	33.3e-8
SD	0.0000	0.1528	0.3000	0.1000	2.3094e-3	2.1517	0.4000	3.0551e-9



**Figure B42** Plot of the apparent diffusion coefficient as a function of scattering vector at 30 °C for the fixed HPC concentration of 5 g/l and the fixed CTAB concentration of 5.00 mM.

**Table B43** Data of the center of mass diffusion coefficient ( $D_c$ ) and the hydrodynamic radius ( $R_h$ ) as a function of CTAB concentration at 30 °C for the HPC/CTAB/water system for the fixed HPC concentration of 5 g/l.

[CTAB] (mM)	$D_c$ (cm <sup>2</sup> /s)	$R_h$ (nm)
0.05	1.7519e-7	15.9
0.50	1.1801e-7	23.6
0.80	9.7793e-8	28.4
1.00	8.6926e-8	32.0
2.00	7.5264e-8	37.0
3.00	9.0627e-8	30.0
4.00	1.2942e-7	21.5
5.00	1.9097e-7	14.6



**Figure B43** Plot of the polydispersity as a function of CTAB concentration at 30 °C for the HPC/OTG/water system at the fixed HPC concentration of 5 g/l and at the fixed angle of 90 °.

### C. Surface Tension Measurement

#### The OTG/Water System

**Table C1** Surface tension as a function of the total OTG solution at 30 °C for the OTG/water system (Figure 3.5)

[OTG] mM	Surface tension (mN/m)		Average	SD
	1	2		
2.00	40.3	39.7	40.00	0.4243
4.00	33.8	33.2	33.50	0.4243
6.00	29.3	29.6	29.45	0.2121
8.00	27.6	28.0	27.80	0.2828
8.50	27.9	27.3	27.60	0.4243
9.00	27.8	27.3	27.55	0.3536
9.50	27.6	27.6	27.60	0.0000
10.00	27.6	27.7	27.65	0.0707
11.00	27.7	27.6	27.65	0.0707
12.00	27.6	27.6	27.60	0.0000
13.00	27.6	27.6	27.60	0.0000
14.00	27.6	27.6	27.60	0.0000
15.00	27.6	27.6	27.60	0.0000

#### The CTAB/Water System

**Table C2** Surface tension as a function of the total CTAB solution at 30 °C for the CTAB/water system (Figure 3.7)

[CTAB] mM	Surface tension (mN/m)		Average	SD
	1	2		
0.05	56.4	56.3	56.35	0.0707
0.10	53.7	53.6	53.65	0.0707
0.50	43.0	42.9	42.95	0.0707
0.70	40.4	40.5	40.45	0.0707
0.80	38.9	38.9	38.90	0.0000
0.85	38.4	38.5	38.45	0.0707
1.00	37.4	37.6	37.50	0.1414
1.50	37.4	37.5	37.45	0.0707
2.00	37.8	37.9	37.85	0.0707
2.50	37.8	38.0	37.90	0.1414
3.00	37.8	38.0	37.90	0.1414
3.50	37.0	37.0	37.00	0.0000
4.00	37.0	37.0	37.00	0.0000
5.00	37.0	37.2	37.10	0.1414
6.00	37.0	37.2	37.10	0.1414
7.00	37.5	37.7	37.60	0.1414
8.00	37.0	37.1	37.05	0.0707
9.00	37.5	37.7	37.60	0.1414
10.00	37.0	37.2	37.10	0.1414



### The HPC/OTG/Water System

**Table C3** Surface tension as a function of the total OTG concentration at 30 °C for the HPC/OTG/water system and for the fixed HPC concentration of 5 g/l (Figure 3.10)

[OTG] (mM)	Surface tension (mN/m)		Average	SD
	1	2		
0.00	41.2	41.2	41.20	0.0000
0.08	41.2	41.2	41.20	0.0000
0.20	40.5	40.5	40.50	0.0000
0.42	40.5	40.4	40.45	0.0707
1.02	40.1	40.0	40.05	0.0707
5.04	33.9	33.9	33.90	0.0000
8.04	29.8	29.8	29.80	0.0000
10.20	29.8	29.8	29.80	0.0000
16.20	29.8	29.7	29.75	0.0707
20.04	29.8	29.9	29.85	0.0707

### The HPC/CTAB/Water System

**Table C4** Surface tension as a function of the total CTAB solution at 30 °C for the HPC/CTAB/water system and for the fixed HPC concentration of 1 g/l (Figure 3.15 (a))

[CTAB] (mM)	Surface tension (mN/m)		Average	SD
	1	2		
0.05	41.9	41.8	41.85	0.0707
0.10	40.9	40.9	40.90	0.0000
0.50	39.7	39.7	39.70	0.0000
0.70	39.1	39.1	39.10	0.0000
0.80	39.0	39.0	39.00	0.0000
0.85	39.2	39.2	39.20	0.0000
0.90	39.2	39.2	39.20	0.0000
1.00	39.0	39.0	39.00	0.0000
1.50	38.9	38.9	38.90	0.0000
2.00	38.6	38.7	38.65	0.0707
2.50	38.5	38.6	38.65	0.0707
3.00	38.4	38.4	38.40	0.0000
3.50	37.7	37.7	37.70	0.0000
4.00	37.6	37.7	37.65	0.0707
5.00	37.6	37.7	37.65	0.0707
6.00	37.6	37.5	37.55	0.0707
7.00	37.4	37.5	37.45	0.0707
8.00	37.2	37.3	37.25	0.0707
9.00	37.1	37.2	37.15	0.0707
10.00	37.1	37.1	37.05	0.0707

**Table C5** Surface tension as a function of the total CTAB solution at 30 °C for the HPC/CTAB/water system and for the fixed HPC concentration of 5 g/l (Figure 3.15 (b))

[CTAB] (mM)	Surface tension (mN/m)		Average	SD
	1	2		
0.05	41.0	41.2	41.10	0.1414
0.10	40.4	40.6	40.50	0.1414
0.50	39.7	39.9	39.80	0.1414
0.70	38.7	38.7	38.70	0.0000
0.80	38.7	38.8	38.75	0.0707
0.85	38.8	38.8	38.80	0.0000
0.90	38.9	39.0	38.95	0.0707
1.00	39.0	39.1	39.05	0.0707
1.50	38.8	38.9	38.90	0.1414
2.00	38.6	38.7	38.65	0.0707
2.50	38.4	38.5	38.45	0.0707
3.00	38.4	38.2	38.30	0.1414
3.50	38.1	38.2	38.15	0.0707
4.00	37.7	37.7	37.70	0.0000
5.00	37.6	37.7	37.65	0.0707
6.00	37.8	37.8	37.80	0.0000
7.00	37.4	37.5	37.45	0.0707
8.00	37.5	37.5	37.50	0.0000
9.00	37.4	37.3	37.35	0.0707
10.00	37.2	37.3	37.25	0.0707

### D. $dn/dc$ Measurement

**Table D1** Refractive index of HPC as a function of HPC concentration  
(Figure 2.10)

[HPC] (g/l)	dn				Average	SD
	1	2	3	4		
0.10	1.81e-5	1.85e-5	1.89e-5	1.93e-5	1.8700e-5	5.1640e-7
0.20	3.49e-5	3.52e-5	3.56e-5	3.60e-5	3.5425e-5	4.7871e-7
0.30	5.25e-5	5.28e-5	5.32e-5	5.35e-5	5.3000e-5	4.3970e-7
0.40	6.82e-5	6.86e-5	6.89e-5	6.93e-5	6.8750e-5	4.6547e-7
0.50	8.26e-5	8.29e-5	8.32e-5	8.36e-5	8.3075e-5	4.2720e-7
0.60	9.86e-5	9.89e-5	9.92e-5	9.96e-5	9.9075e-5	4.2720e-7

### E. Conductivity Measurement

#### The CTAB/Water System

**Table E1** Conductivity as a function of CTAB concentration at 30 °C for  
the CTAB/water system (Figure 3.8)

[CTAB] (mM)	Conductivity ( $\mu\text{s/cm}$ )
0.05	8.5
0.10	12.4
0.50	48.7
0.70	67.0
0.80	76.9
0.85	79.5
0.90	85.0
1.00	90.6
1.50	104.5
2.00	118.5
2.50	131.8
3.00	142.1
3.50	154.4
4.00	165.7
5.00	180.4
6.00	208.0
7.00	231.0
8.00	260.0
9.00	276.0
10.00	300.0

**Table E2** Conductivity as a function of the total CTAB concentration at 30 °C for the HPC/CTAB/water system and for the fixed HPC concentration of 1 g/l (Figure3.16)

[CTAB] (mM)	Conductivity ( $\mu\text{s/cm}$ )
0.05	9.5
0.10	15.0
0.50	49.2
0.70	64.6
0.80	92.7
0.85	74.6
0.90	84.1
1.00	90.6
1.50	108.2
2.00	130.0
2.50	140.6
3.00	150.6
3.50	163.2
4.00	175.5
5.00	194.0
6.00	210.0
7.00	241.0
8.00	261.0
9.00	281.0
10.00	305.0

**Table E3** Conductivity as a function of the total CTAB concentration at 30 °C for the HPC/CTAB/water system and for the fixed HPC concentration of 5 g/l (Figure 3.16)

[CTAB] (mM)	Conductivity ( $\mu\text{s/cm}$ )
0.10	23.0
0.50	52.5
0.70	67.1
0.80	73.1
0.85	76.9
0.90	85.1
1.00	84.4
1.50	107.9
2.00	130.4
2.50	145.8
3.00	162.7
3.50	182.1
4.00	196.2
5.00	227.0
6.00	253.0
7.00	263.0
8.00	298.0
9.00	328.0
10.00	335.0

## CURRICULUM VITAE

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