

Table S1: Experimental results for Aquadag and fullerene soot.

Aquadag			Aquadag			Aquadag			Aquadag		
lot: 9054; "classic"			lot: 9054; "classic"			lot: 9627; "new bottle"			lot: 9627; "new bottle"		
investigator: PSI			investigator: UofA			investigator: PSI			investigator: UofA		
method: DMA+APM			method: DMA+CPMA			method: DMA+APM			method: DMA+CPMA		
diameter	mass	$\rho_{\text{eff}}$	diameter	mass	$\rho_{\text{eff}}$	diameter	mass	$\rho_{\text{eff}}$	diameter	mass	$\rho_{\text{eff}}$
nm	fg	kg/m <sup>3</sup>	nm	fg	kg/m <sup>3</sup>	nm	fg	kg/m <sup>3</sup>	nm	fg	kg/m <sup>3</sup>
61	0.116	979	70	0.158	879	70	0.178	990	70	0.161	899
152	1.27	692	80	0.227	846	150	1.26	712	80	0.231	862
252	5.36	640	90	0.309	810	250	5.35	654	90	0.311	815
402	18.6	546	100	0.405	774	400	20.3	605	100	0.414	791
703	68.1	374	125	0.733	716	700	69.9	389	125	0.743	727
			150	1.27	718				125	0.734	718
			175	2.06	732				150	1.28	723
			500	34.3	524				175	2.11	751
			175	2.09	744				200	3.15	752
			200	2.94	702				200	3.07	734
			300	8.67	613				300	9.12	645
			400	18.2	542				400	19.7	588
			175	2.04	727				500	34.3	524
			500	29.2	445				500	33.7	515
			500	31.2	477						
			400	19.2	572						
			70	0.155	864						
			150	1.27	718						
			125	0.734	717						

fullerene soot			fullerene soot		
stock: 40971			stock: 40971		
lot: FS12S011			lot: FS12S011		
investigator: PSI			investigator: PSI		
method: DMA+APM			method: APM+SP2		
diameter	mass	$\rho_{\text{eff}}$	diameter	mass	$\rho_{\text{eff}}$
nm	fg	kg/m <sup>3</sup>	nm	fg	kg/m <sup>3</sup>
172	1.93	725	71	0.198	1052
241	4.67	637	91	0.357	893
307	9.08	599	112	0.593	814
456	25.6	516	132	0.912	759
551	42.1	481	152	1.32	718
824	97.1	331	172	1.86	693
			193	2.51	673
			223	3.74	646
			253	5.42	639
			283	7.47	628
			313	9.92	615
			344	12.6	595
			374	15.7	576
			404	19.2	555
			434	23.0	537
			464	26.9	515
			514	35.0	491