

Ultrasonication induced sp^3 hybridization defects in Langmuir-Schaefer layers of turbostratic graphene

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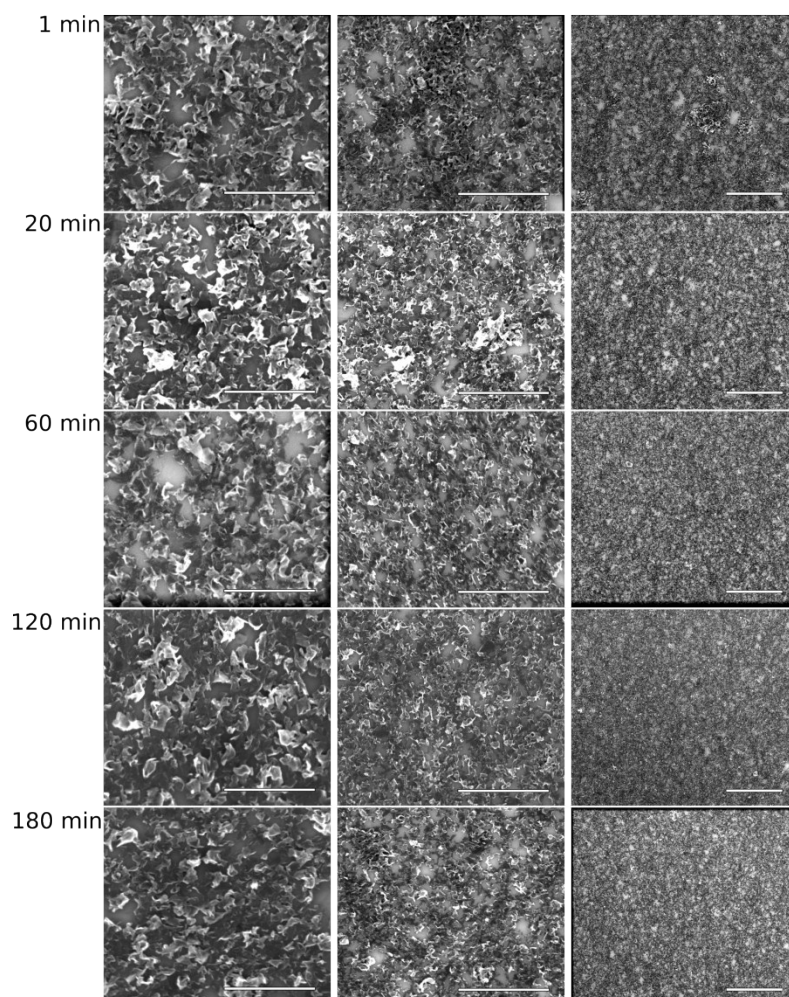


Fig. S1 SEM images of TG films transferred onto quartz substrate after 60 W sonication power and various sonication time; scale bar represents 1 μm, 2 μm and 5 μm left, middle and right column, respectively

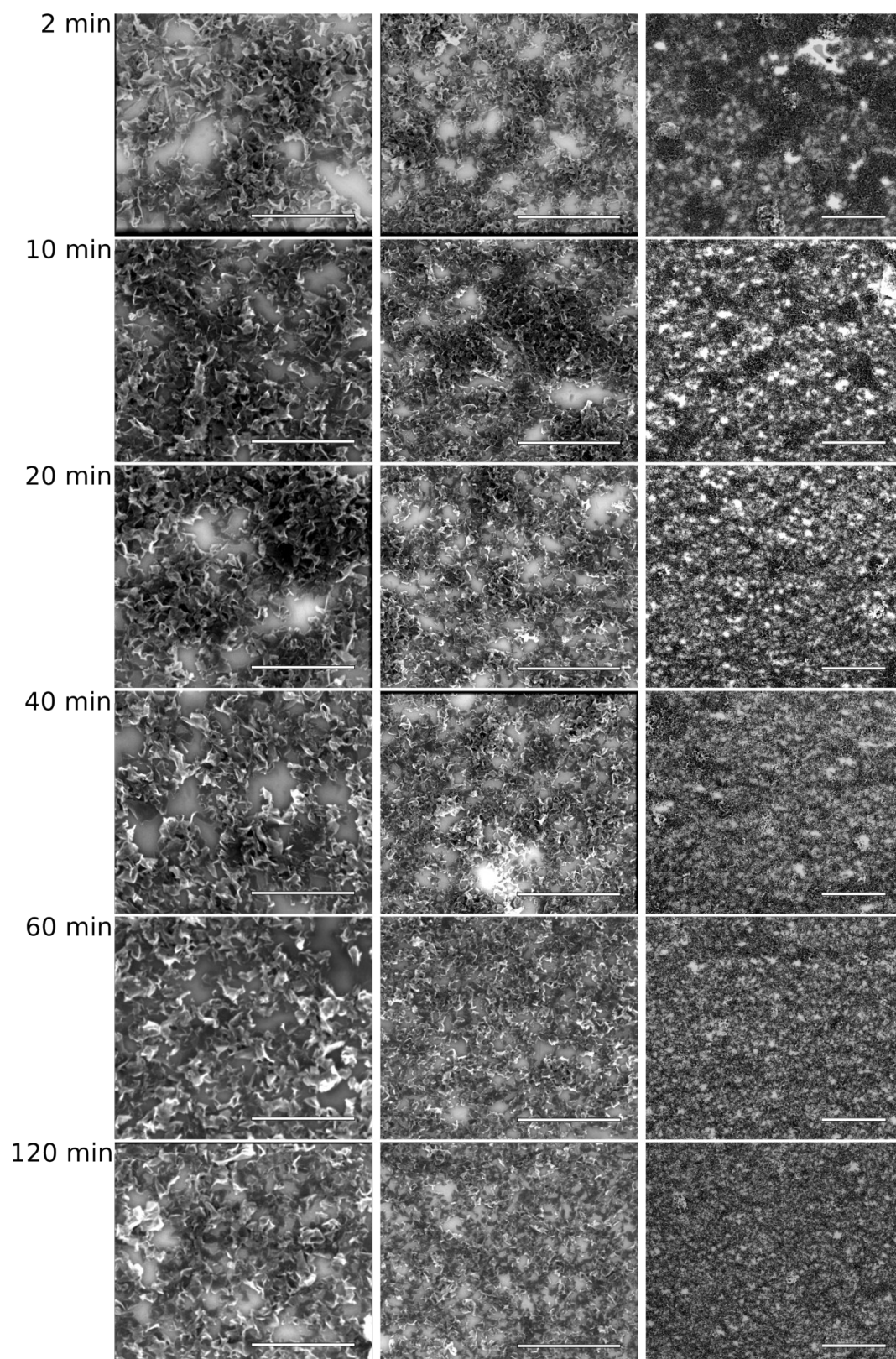


Fig. S2 SEM images of TG films transferred onto quartz substrate after 20 W sonication power and various sonication time; scale bar represents 1 μm , 2 μm and 5 μm left, middle and right column, respectively

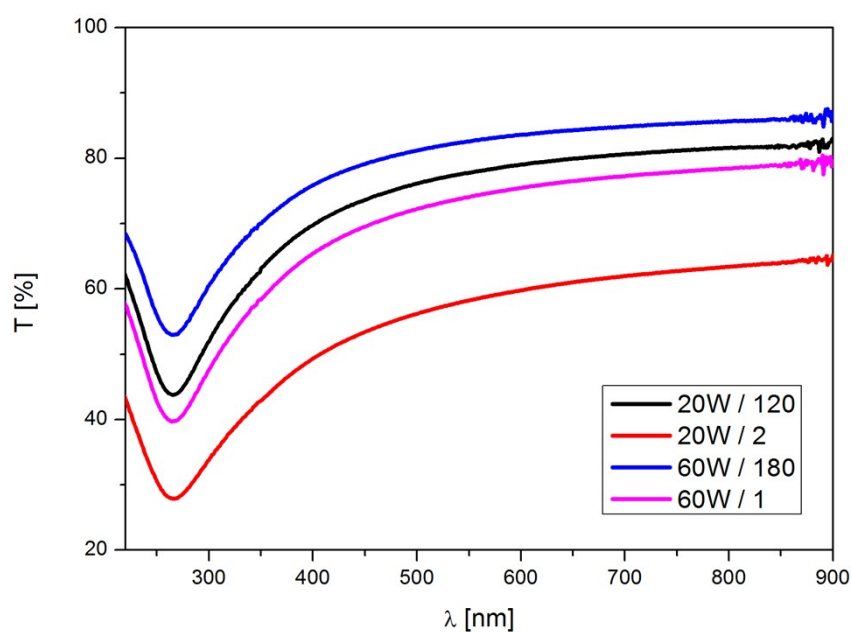


Fig. S3 Transmittance spectra of TG films; in sample labels the sonication power is followed after slash with the number that stands for the total time of sonication

Tab. S1 Raman peak parameters

Sample	D		G		D'		2D	
	C [cm ⁻¹]	A [a.u. cm ⁻¹]	C [cm ⁻¹]	A [a.u. cm ⁻¹]	C [cm ⁻¹]	A [a.u. cm ⁻¹]	C [cm ⁻¹]	A [a.u. cm ⁻¹]
20W/2	1331	49892	1584	59605	1619	6683	2656	94839
20W/10	1330	46669	1583	51889	1618	5677	2656	81779
20W/20	1331	49151	1584	47046	1618	5867	2656	72980
20W/40	1330	52157	1583	57296	1617	6804	2655	95387
20W/60	1330	45830	1582	51839	1617	5330	2656	82275
20W/120	1330	42146	1583	40422	1617	5216	2656	69400
60W/1	1331	36558	1584	39726	1618	4193	2657	63454
60W/20	1332	19964	1584	22221	1619	1856	2658	33496
60W/60	1332	21243	1584	22700	1619	2025	2658	31986
60W/120	1332	20773	1584	24771	1619	1917	2658	34658
60W/180	1332	24687	1584	31130	1618	2076	2658	40546

C – peak position, A – integral intensity

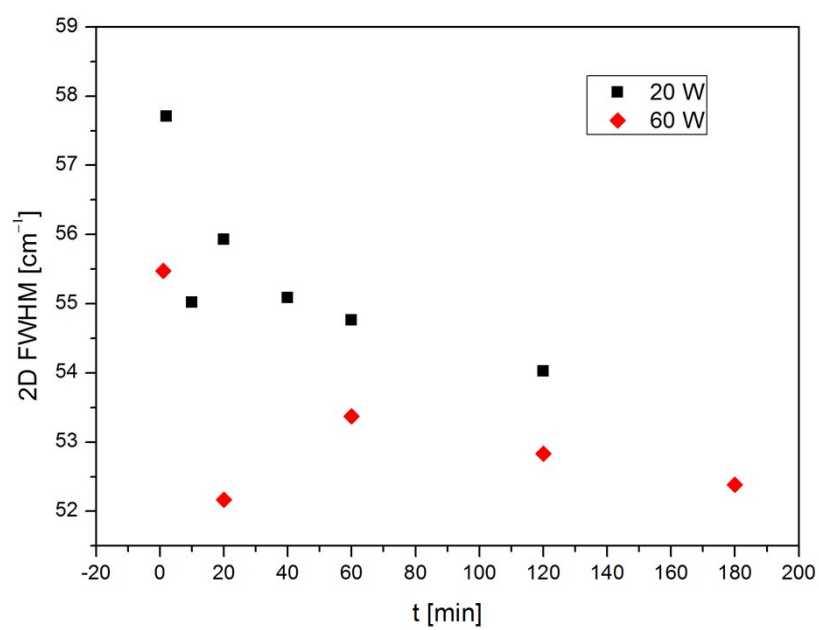


Fig. S4 Full width at half maximum of 2D peak vs. sonication time for 20 W and 60 W sonication power

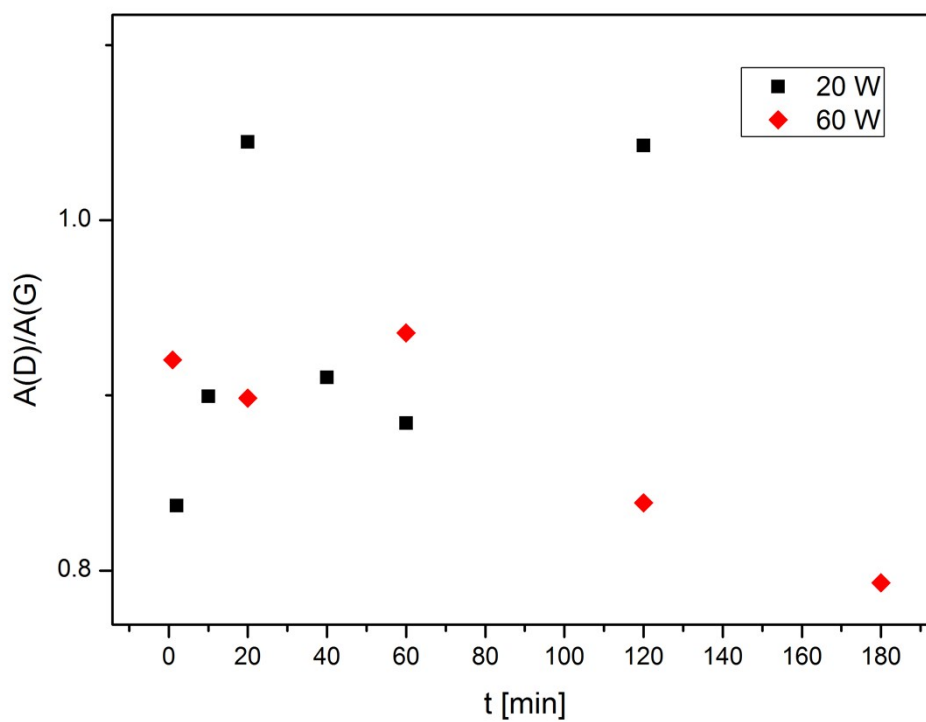


Fig. S5 Integral intensities ratio of D and G peak vs. sonication time for sample 20 W and 60 W