Supporting Data Information

Establishment of a derivatization method to quantify thiol function in sulfur-containing plasma polymer films

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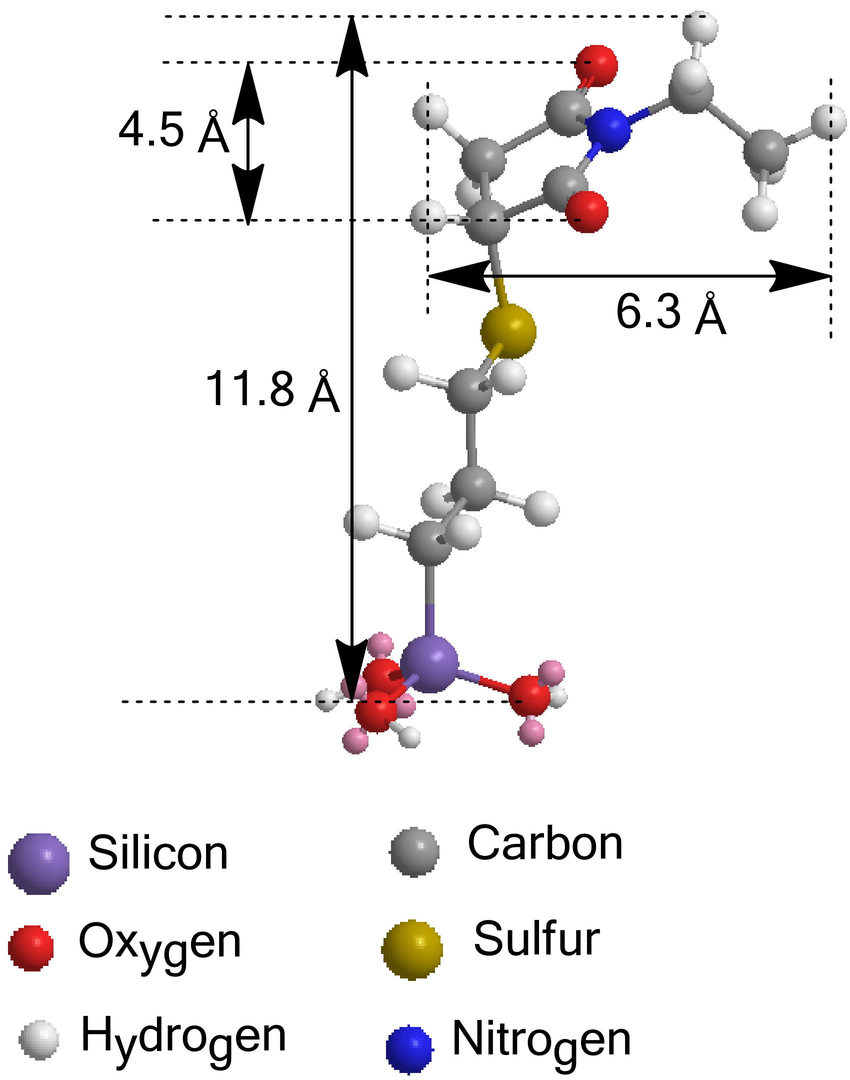

Figure S1: Schematic description of a MPTS-SAM exhibiting a N-ethylmaleimide grafted at the sulfur extremity. The molecule geometry was optimized using MOPAC theoretical calculations (PM3 Optimization).

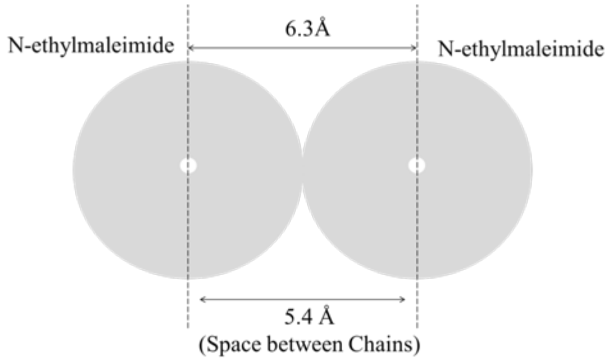

Figure S2: Schematic diagram of the minimal space between two N-ethylmaleimide molecules assimilated to cylinders.

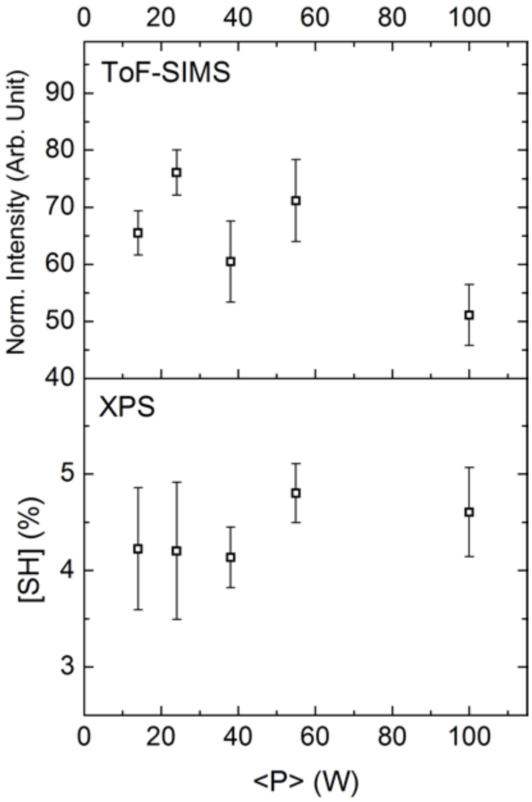

Figure S3: Evolution of the [SH] (calculated using equation 2) measured by XPS and the normalized ToF-SIMS intensity of peak corresponding to $[C_6H_8NO_2S]^-$ as a function of <P>. The errors bars correspond to the standard deviations calculated from XPS and ToF-SIMS measurements using different areas on the sample's surface. For all the experiments, the duration reaction was fixed to 86h. This condition allows to reach a complete derivatization reaction.

The Table S1 collects the elemental composition of the Pr-PPF as-deposited and after the chemical derivatization reaction during 86h. This condition allows to reach a complete derivatization reaction.

<P> (W)	Pr-PPF as-deposited		Pr-PPF after CD during 86 h				
	%C	%S	%C	%S	%O	%N	[SH]
14	50.22 ±0.05	49.76±0.06	57.12±0.25	29.16±0.49	11.51±0.13	2.2±0.53	4.22±0.88
38	64.42±0.52	34.57±0.52	65.43±1.7	20.83±0.41	10.52±1.2	2.49±0.27	4.6±0.46
100	71.44±0.6	28.52±0.6	64.73±1.54	23.07±0.87	9.55±1.73	2.14±0.13	4.13±0.31