

# Ladder Polyphenylsilsesquioxanes and Their Niobium–Siloxane Composite as Coating Materials: Spectroscopy and Atomic Oxygen Resistance Study

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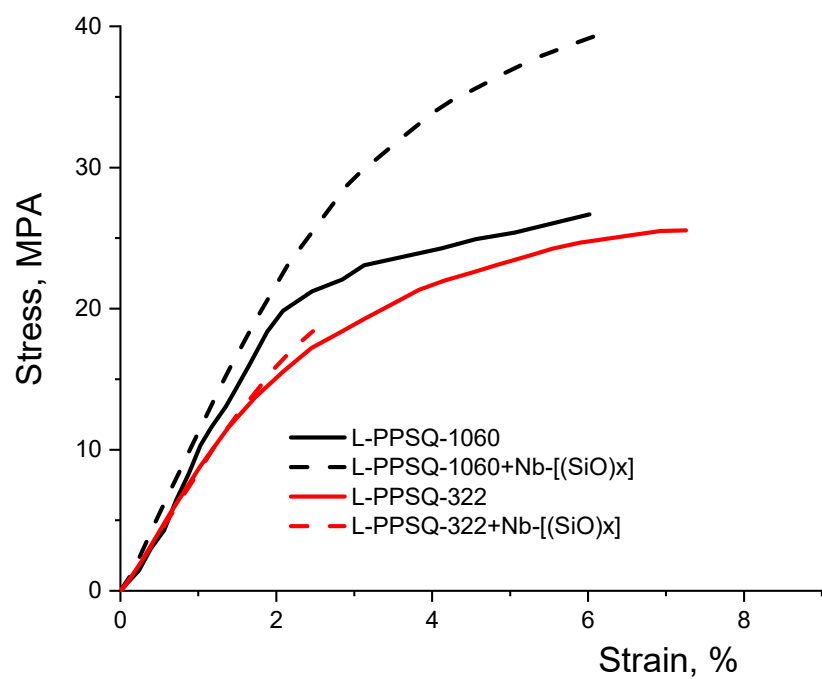
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**Table S1.** Transmission coefficients  $\tau_{vis}$  and  $\tau_D$  normalized to thickness 25  $\mu\text{m}$ .

Sample	$\tau_{vis}$ (380–700 nm)			$\tau_D$ (589 nm)		
	$\tau_1^{TS}$	$\tau_1^{DT}$	$\tau_1^{DR}$	$\tau_D^{TS}$	$\tau_D^{DT}$	$\tau_D^{DR}$
L-PPSQ-322	0.95	0.99	0.99	0.98	0.99	0.99
L-PPSQ-322 [ox]	0.96	0.99	0.97	0.98	0.99	0.97
L-PPSQ-322-Nb-[(SiO) <sub>x</sub> ]	0.34	0.95	0.97	0.61	0.95	0.98
L-PPSQ-322-Nb-[(SiO) <sub>x</sub> ] [ox]	0.38	0.95	0.94	0.65	0.95	0.97
L-PPSQ-1060	0.78	0.89	0.89	0.87	0.90	0.92
L-PPSQ-1060 [ox]	0.73	0.88	0.91	0.86	0.89	0.93
L-PPSQ-1060-Nb-[(SiO) <sub>x</sub> ]	0.55	0.95	0.95	0.83	0.95	0.97
L-PPSQ-1060-Nb-[(SiO) <sub>x</sub> ] [ox]	0.54	0.95	0.3	0.83	0.96	0.97
PDMS-Nb-[(SiO) <sub>x</sub> ]	0.90	0.93	0.93	0.93	0.99	0.97

The “[ox]” index denotes the samples exposed by atomic oxygen.



**Figure S1.** The stress - strain curves of the samples studied after AO irradiation.