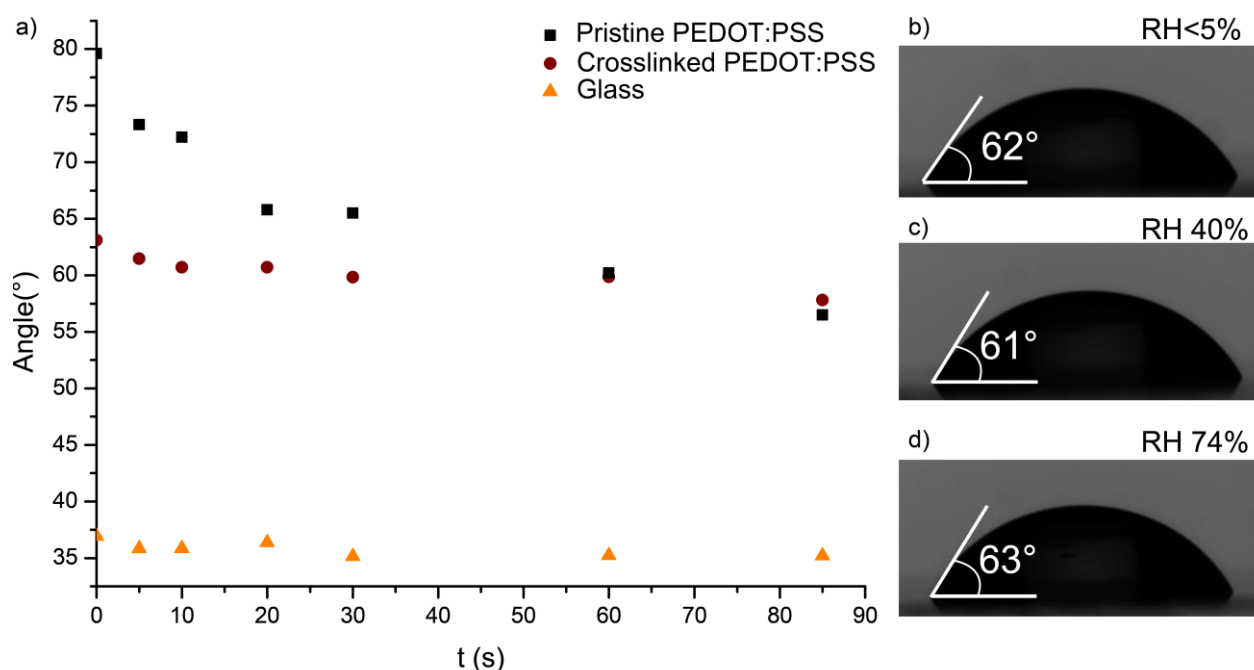


Supplementary information

Crosslinked PEDSOT:PSS	Sessile Drop	Captive Bubble
Immersion cycles with regular blow dry ¹	$79 \pm 1^\circ$	$39 \pm 1^\circ$
Continuous immersion ²	$80 \pm 3^\circ$	$39 \pm 2^\circ$

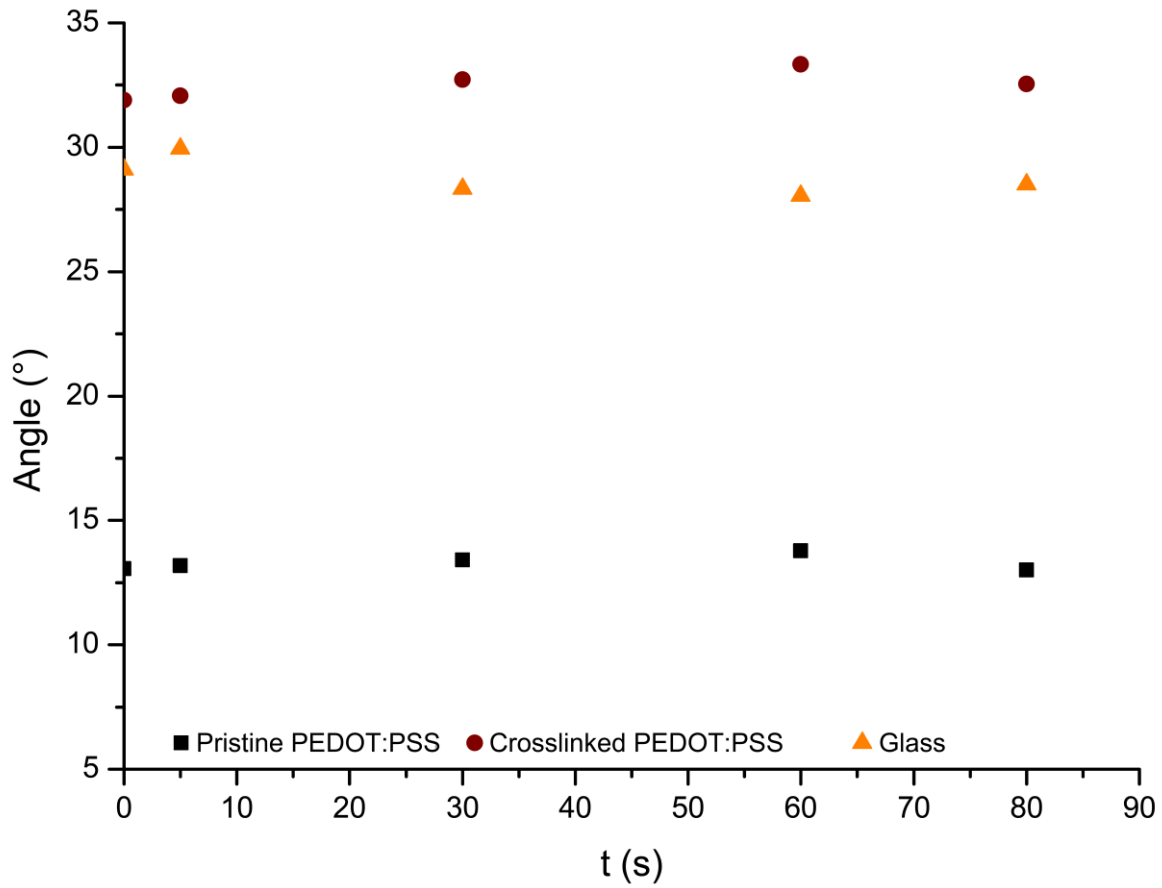
1: Sample has undergone 8 immersion cycles adding up to 1700min in water. 2: Sample has undergone an immersion under magnetic stirring (50 rpm) of 1700min.

Tab. S1 Static contact angle measurements on crosslinked PEDOT:PSS exposed to different aging protocols showing similar wetting properties after aging.



As results come from measurements performed on one droplet, the errors are due to uncertainties in the measurement of the angle and thus depend on the accuracy of the DSA3 software and the positioning of the interface. For all measurement, the error is estimated at 1° .

Fig. S2 Limitations of sessile drop technique: Evolution of static contact angle as a function of measurement duration on pristine PEDOT:PSS (black square), crosslinked PEDOT:PSS (red circle) and glass (orange triangle)(a). Side view of droplet showing the initial static contact angle on crosslinked PEDOT:PSS with varying relative humidity values: 5 relative humidity (b), 40% (c) and 74% (d).



As results come from measurements performed on one droplet, the errors are due to uncertainties in the measurement of the angle and thus depend on the accuracy of the DSA3 software and the positioning of the interface. For all measurement, the error is estimated at 1°.

Fig. S3 Reliability of captive bubble technique: Static contact angles are independent of measurement duration.

	Pristine PEDOT:PSS		Crosslinked PEDOT:PSS	
	Thickness (nm)	Ra (nm)	Thickness (nm)	Ra (nm)
Before immersion	105.4 ± 0.3	1.66	205 ± 1	1.73
After immersion	75 ± 1	1.98	195 ± 1	2.05
Percentage of changes	- 29%	+ 19%	- 4.7%	+ 18%

Tab. S4 The AFM measurements of thickness and roughness changes after water immersion cycles on pristine and crosslinked PEDOT:PSS.