

## Supporting Information

### Novel cross-linkers for PDMS networks for controlled and well distributed grafting of functionalities by click chemistry

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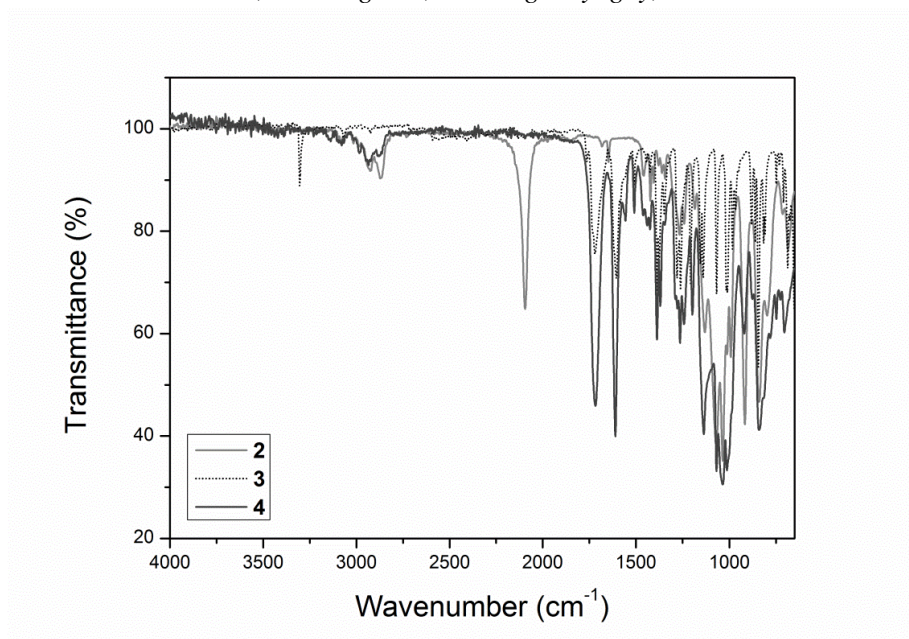


Figure S1: FTIR spectra of azide cross-linker (2), alkyne (3) and click product (4).

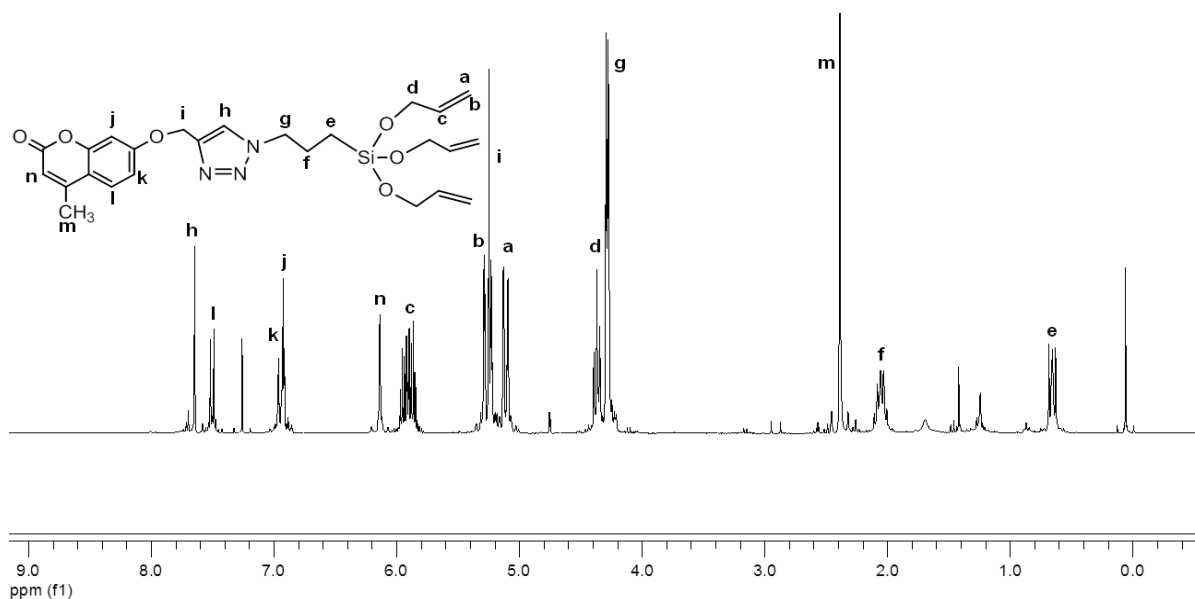


Figure S2: <sup>1</sup>H-NMR spectrum of 4 showing the formation of the triazole proton (h).

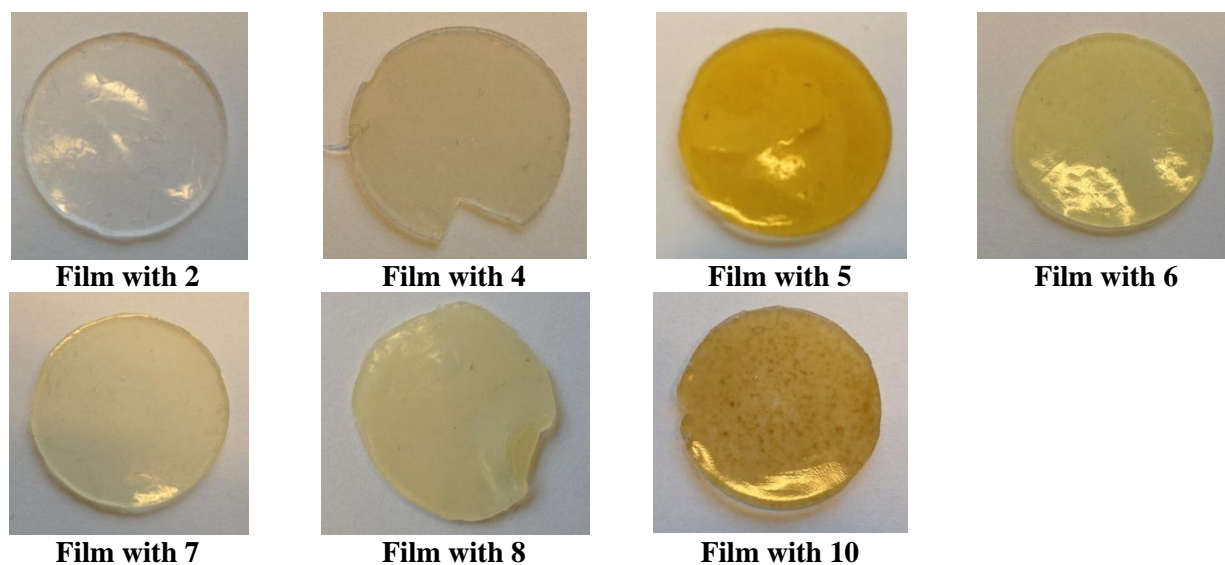


Figure S3: Photos of prepared films.

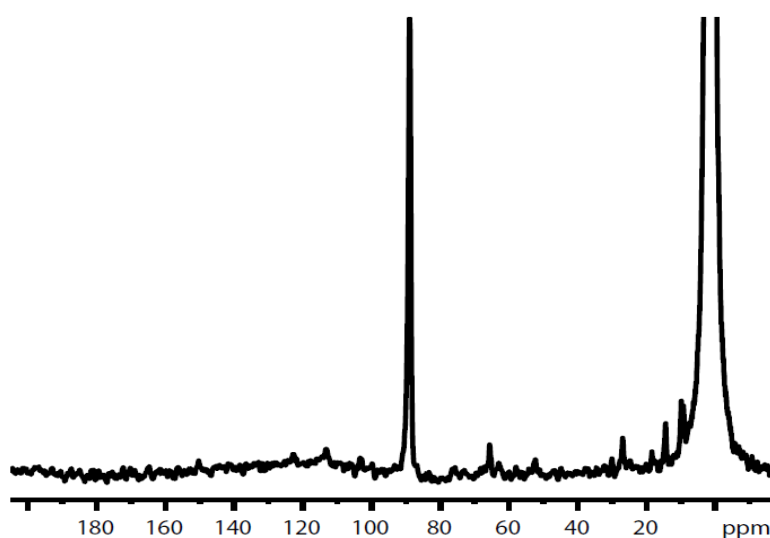


Figure S4:  $^{13}\text{C}$ -NMR solid state spectrum of film with 4. A Peak at 89 ppm corresponding to  $\sim 2\%$  of the  $\text{Si-CH}_3$  signal at 1 ppm could not be assigned and are probably due to some impurity in the network.

## Mechanical Characterization

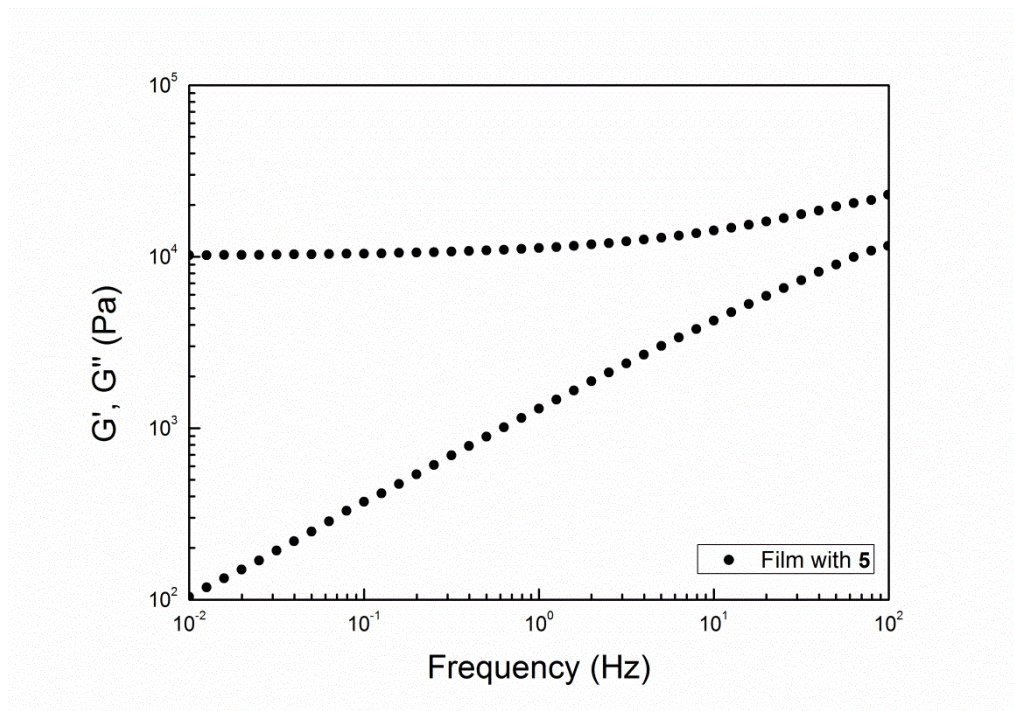


Figure S5: Storage modulus ( $G'$ ) and loss modulus ( $G''$ ) as functions of frequency for film prepared with 5.

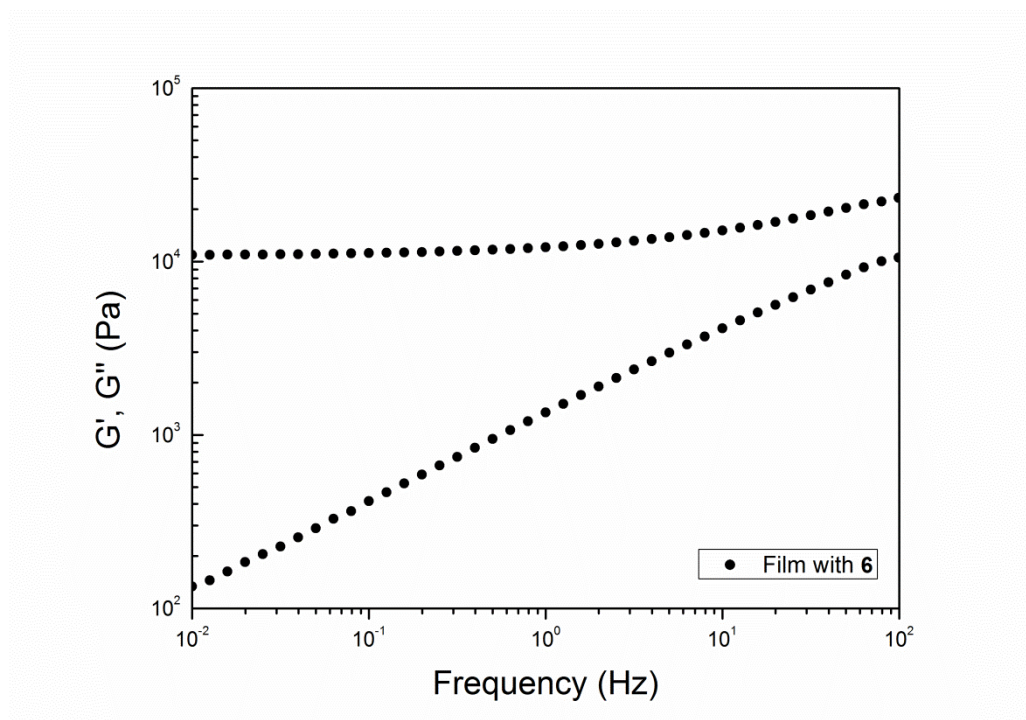


Figure S6: Storage modulus ( $G'$ ) and loss modulus ( $G''$ ) as functions of frequency for film prepared with 6.

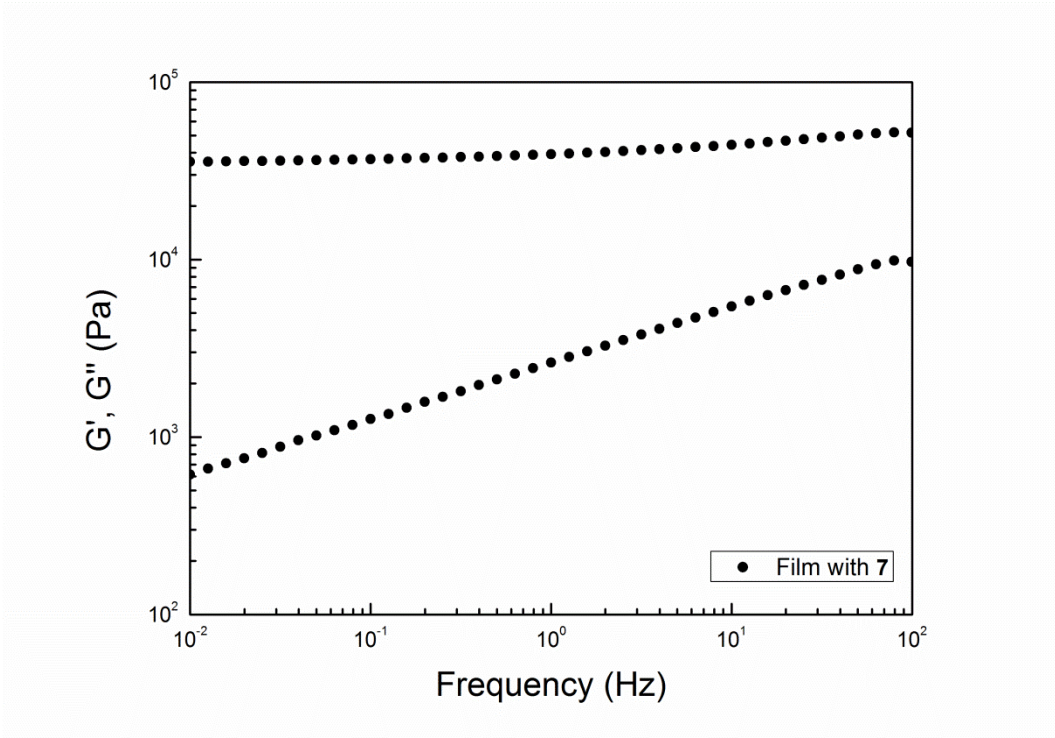


Figure S7: Storage modulus ( $G'$ ) and loss modulus ( $G''$ ) as functions of frequency for film prepared with 7.

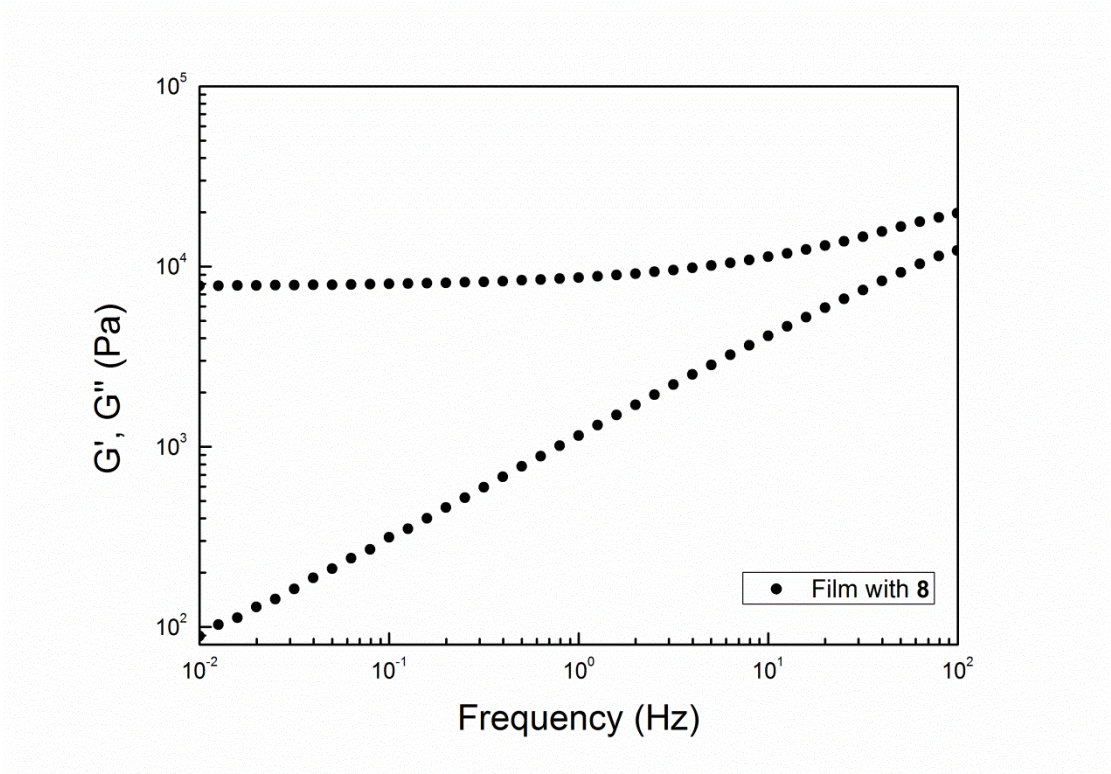
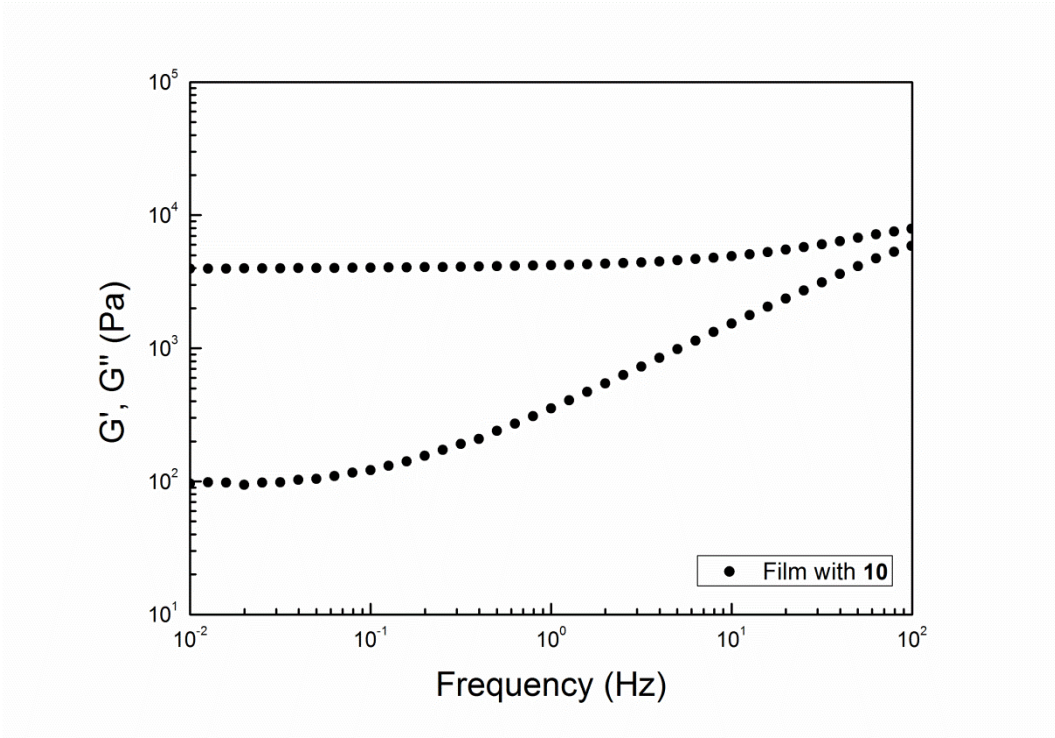


Figure S8: Storage modulus ( $G'$ ) and loss modulus ( $G''$ ) as functions of frequency for film prepared with 8.



**Figure S9:** Storage modulus ( $G'$ ) and loss modulus ( $G''$ ) as functions of frequency for film prepared with 10.