Electronic Supporting Information

Dual electrically and thermally responsive broadband reflectors based on polymer network stabilized chiral nematic liquid crystals: the role of crosslink density

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Experimental Data:

Nematic liquid crystals E7, crosslinker RM-82 and chiral dopant CB-15 were purchased from Merck. Polymerizable chiral dopant CD-267 was obtained from Philips Research Lab. Photoinitiator Irgacure-651 and UV absorbing dye Tinuvin-328 were purchased from Ciba Specialty Chemicals Ltd. ITO coated glass cells were purchased Instec, Inc. Transmission data were taken with Shimadzu UV-Vis spectrophotometer. The reflectors were prepared as reported before.[S1] Temperature dependent measurements were carried out using the Linkam hot stage in the UV-Vis spectrophotometer.

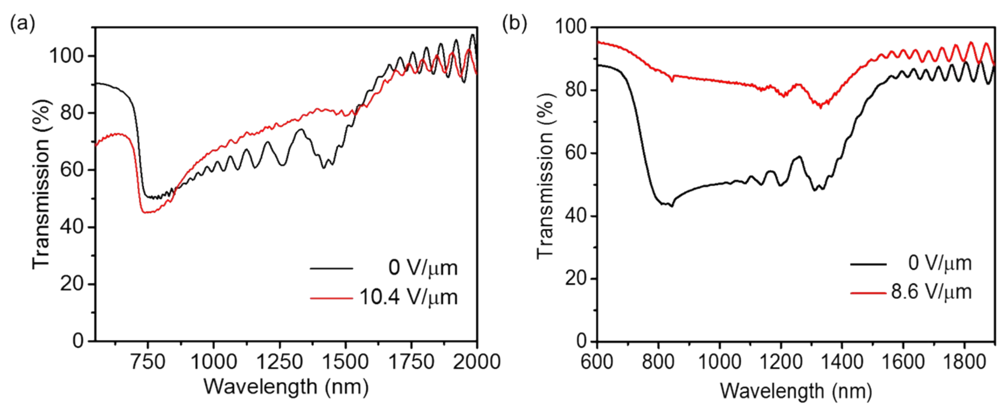

Fig. S1 Transmission spectrum of broadband reflector with (a) 3 wt% and (b) 0.7 wt% of the crosslinker concentration at on and off state (reproduce with permission from Nature Publishing Group). [S1]

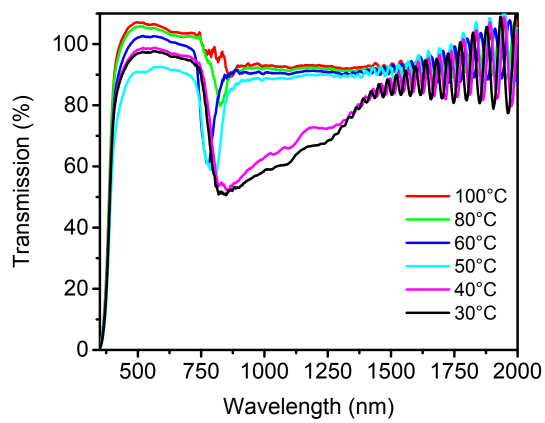

Fig. S2 Transmission spectrum of the 2 wt% broadband reflector on cooling from 100°C to room temperature.

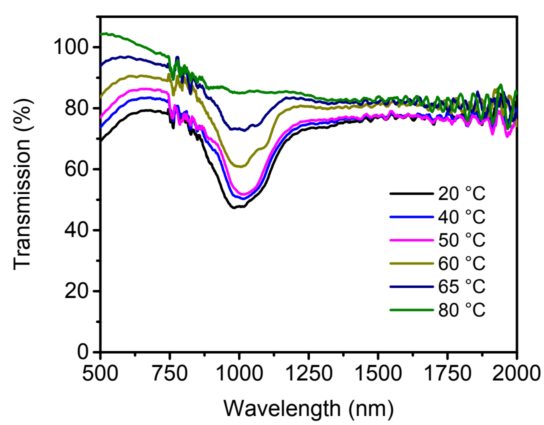

Fig. S3 Temperature dependent transmission spectra of the uniformly distributed polymer stabilized narrowband reflector with 2 wt% crosslinker.

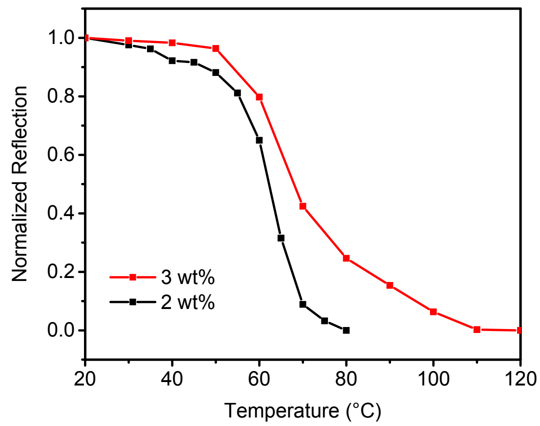

Fig. S4 Temperature dependent normalized reflection of narrowband reflectors with 2 and 3 wt% crosslinker. This graph shows that isotropic transition temperature increases with increase in crosslinker concentration.

S1 H. Khandelwal, R. C. G. M. Loonen, J. L. M. Hensen, M. G. Debije and A. P. H. J. Schenning, *Sci. Rep.*, 2015, **5**, 11773.