Supplementary Materials

Absorption and Isomerization of Azobenzene guest molecules in Polymeric Nanoporous Crystalline Phases

Nicola Coscia [1], Antonietta Cozzolino [1], Manohar Golla [1] and Paola Rizzo [1,*]

[1]Department of Chemistry and Biology, INSTM Research Unit, Università degli Studi di Salerno, via Giovanni Paolo II, 84084 Fisciano (SA), Italy

*Paola Rizzo, Department of Chemistry and Biology, Università degli Studi di Salerno, Via Giovanni Paolo II, 84084, Fisciano, Italy. Tel. +39 (0) 89 969582 Fax.: +39 (0) 89 969603.

prizzo@unisa.it

UV-vis spectra of 0.2 wt% azobenzene/methanol solution before (black line) and after photo-isomerization (green line) and as collected at different times during spontaneous cis-trans isomerization (colored curves) are reported in Figure S1. Half-time of cis-trans azobenzene isomerization in 0.2 wt% azobenzene/methanol was ~240 h (10 days).

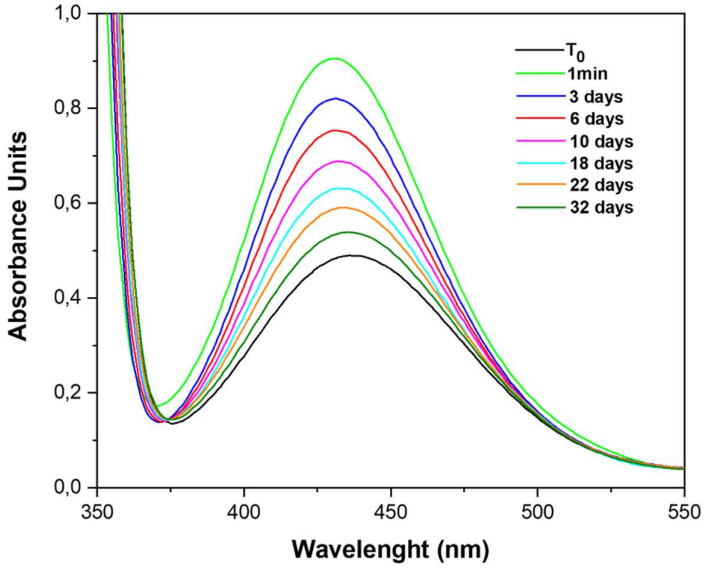

Figure S1. UV-Visible spectra in the range 350-550 nm of 0.2 wt% azobenzene/methanol solution before (black line), after photoisomerization (green line) and as collected at different times during spontaneous cis-trans isomerization (colored curves).

UV-Visible spectra of 50 μm thick films: α CC PPO (red line), β CC PPO (blue line), amorphous PPO (black line) and δ CC s-PS (green line) after immersion for 30 minutes in 2 wt% azobenzene/methanol solution are reported in Figure S2.

The content of azobenzene, evaluated by thermogravimetric measurements (TGA), was 7,3 wt%, 9 wt% and 2,8 wt% for α, β CC and amorphous PPO films, respectively and 1 wt% for δ CC s-PS films.

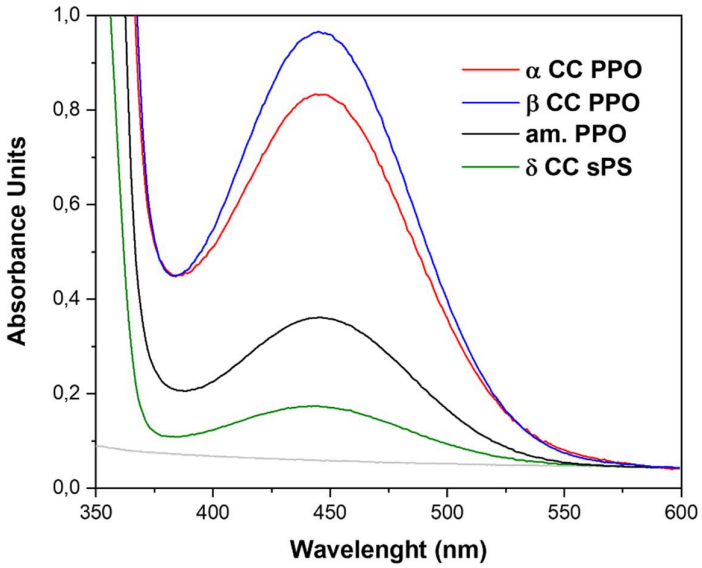

Figure S2. UV-Visible spectra in the range 350-600 nm of α CC PPO (red line), β CC PPO (blue line), amorphous PPO (black line) and δ CC s-PS (green line) films after immersion for 30 minutes in 2 wt% azobenzene/methanol solution. PPO film spectra (gray line) is also reported for comparison.