SUPPORTING INFORMATION

Photoinduced structural modifications in multicomponent architectures containing azobenzene moieties as photoswitchable cores

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I - Crystallographic data

Table S1. X-ray diffraction data for molecule **2**.

Formula	$C_{52}H_{68}N_4$
M_r	749.1
Crystal system	triclinic
Space group	$P\bar{1}$
a / Å	11.2511(7)
b / Å	12.407(1)
c / Å	17.793(1)
α / °	96.813(4)
β / °	91.644(5)
γ / °	116.369(6)
V / Å^3	2200.3(3)
Z	2
D_c / g cm^{-3}	1.131
μ / mm^{-1}	0.492
F(000)	816
R(int)	0.080
θ range/°	5.00 - 54.16
No. of data collected	7070
No. of unique data	4871
No. of observed data [$I > 2\sigma(I)$]	3556
Goodness of fit	0.971
R_1, wR_2 [$I > 2\sigma(I)$]	0.0469, 0.1045
R_1, wR_2 (all data)	0.0668, 0.1105

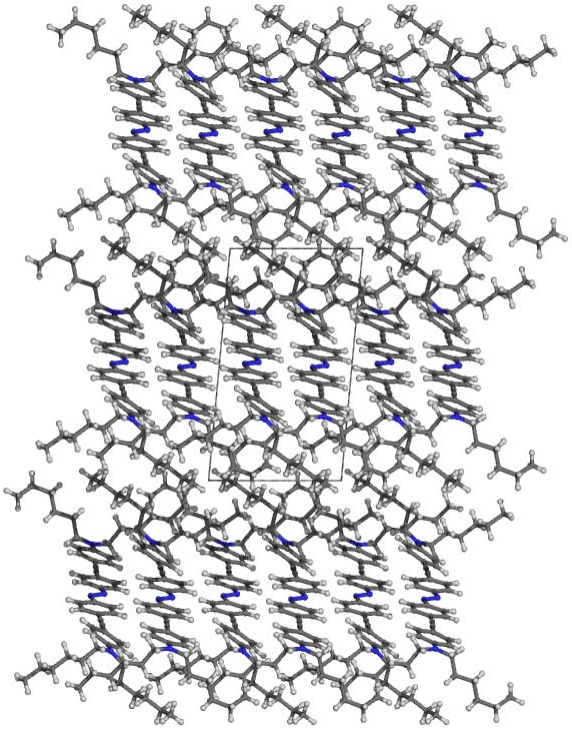

Fig. S1 Crystal packing of molecule **2** along the *y* crystallographic direction.

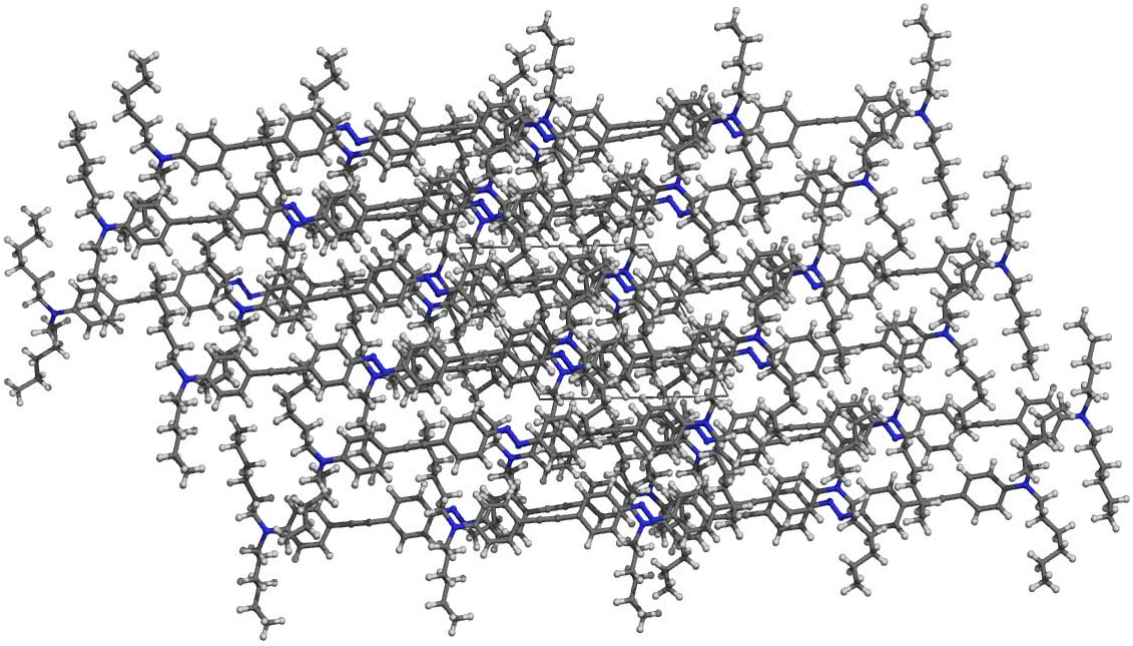

Fig. S2 Crystal packing of molecule **2** along the *z* crystallographic direction.

II - Photochemistry

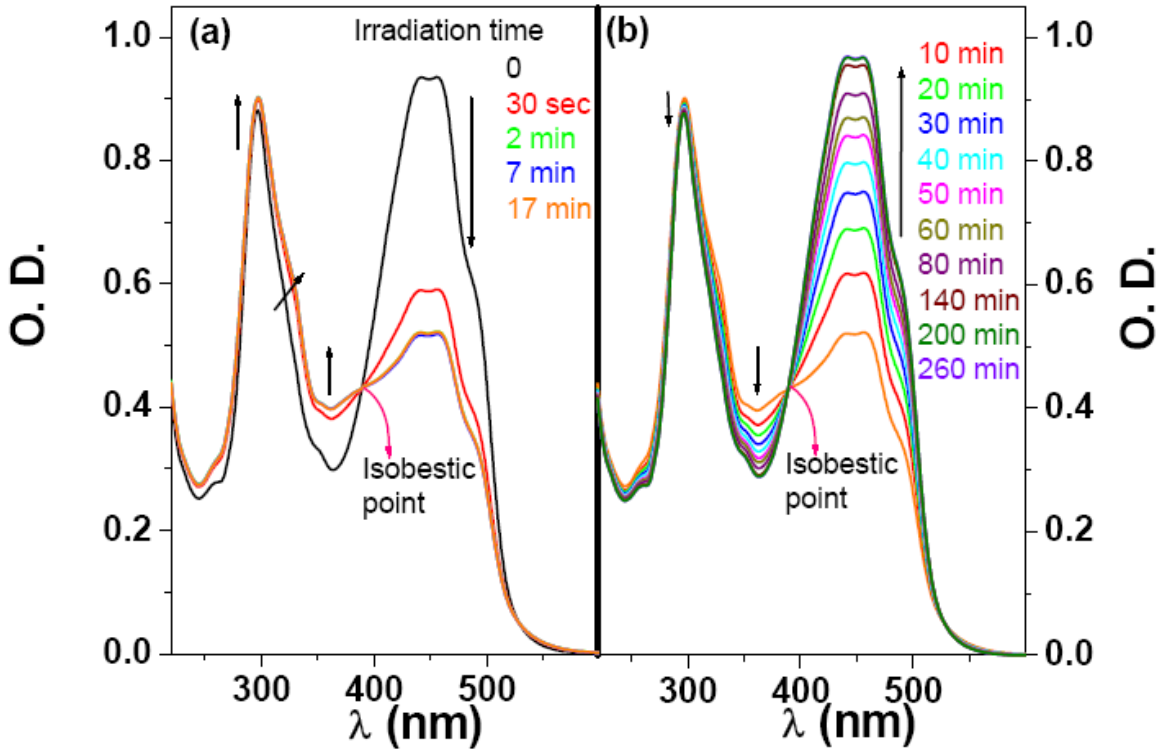

Fig. S3 (a) Time evolution of the absorption spectra of a 2.2 x 10^{-4} M^{-1} solution of *trans*-**2** in CHX under 450 nm light irradiation, until the photostationary state is reached. (b) Thermal back reaction in the dark.

III - Additional microscopic information

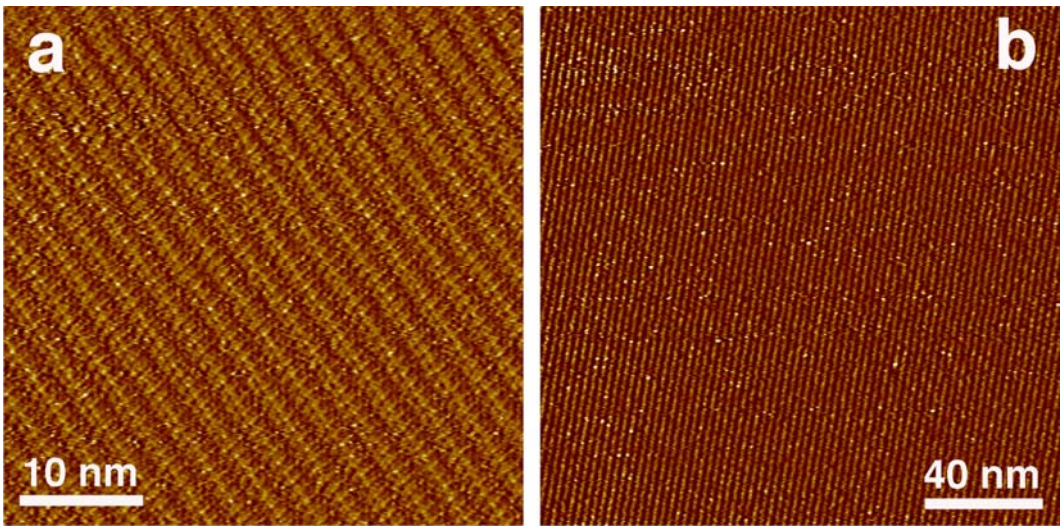

Fig. S4 Constant Height STM images of the SAM formed by *trans*-**2** at the HOPG-Phenyloctane interface. Tunneling conditons: average tunneling current (I_t)=10 pA, bias voltage (V_t)=500 mV.

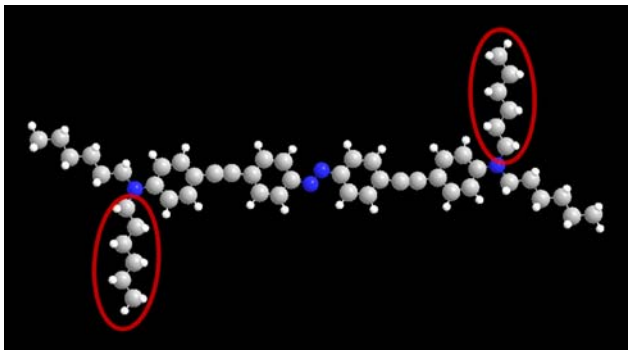

Fig. S5 CPK model of **2** molecule highlighting the alkyl chain branches that are most likely not physisorbed on HOPG.

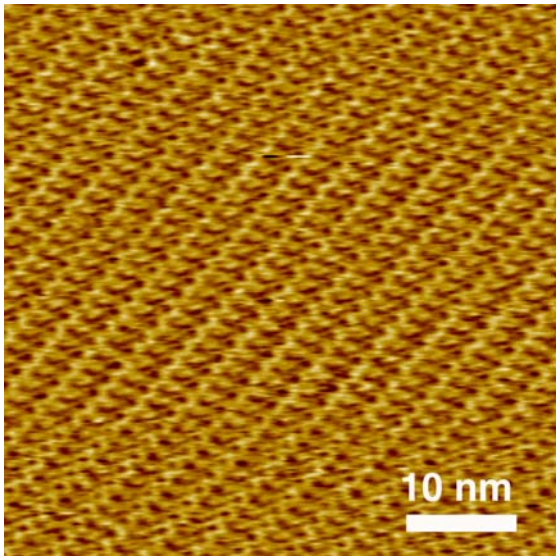

Fig. S6 STM image of the **2** SAM after 3 hours of irradiation *ex-situ*. Tunneling conditions: (I_t) =10 pA, (V_t)=500 mV.

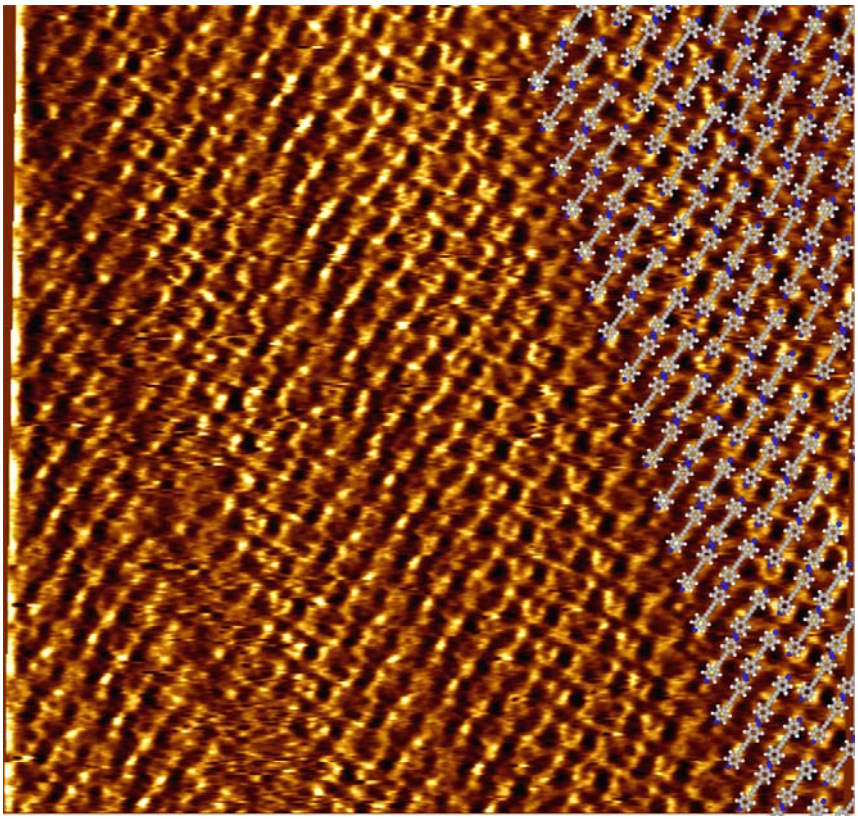

Fig. S7 STM current image of the SAM formed by *trans*-**3** in 1-phenyloctane at the HOPG-solution interface (N'-Alkyl chains are not shown for clarity). Image size: 23×24 nm^2. Tunneling conditions: average tunneling current (I_t) = 10 pA, bias voltage (V_t) = 300 mV. The CPK molecular models and the unit cell are superimposed.