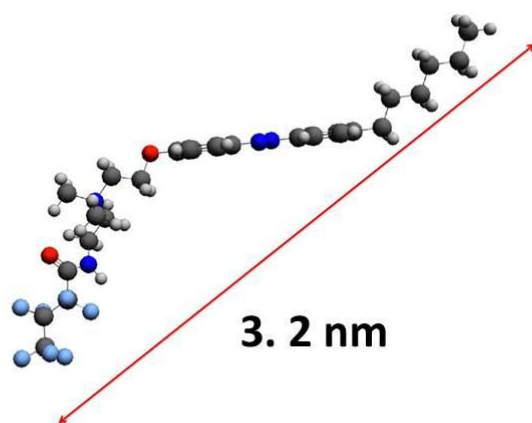


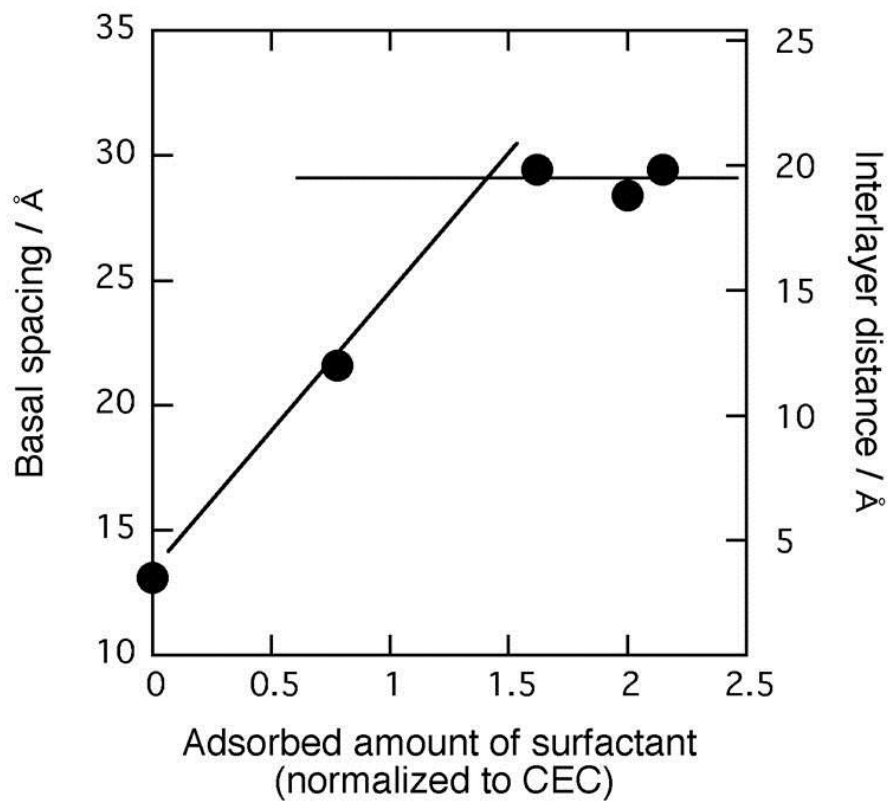
Electronic supplementary information

ESI-1



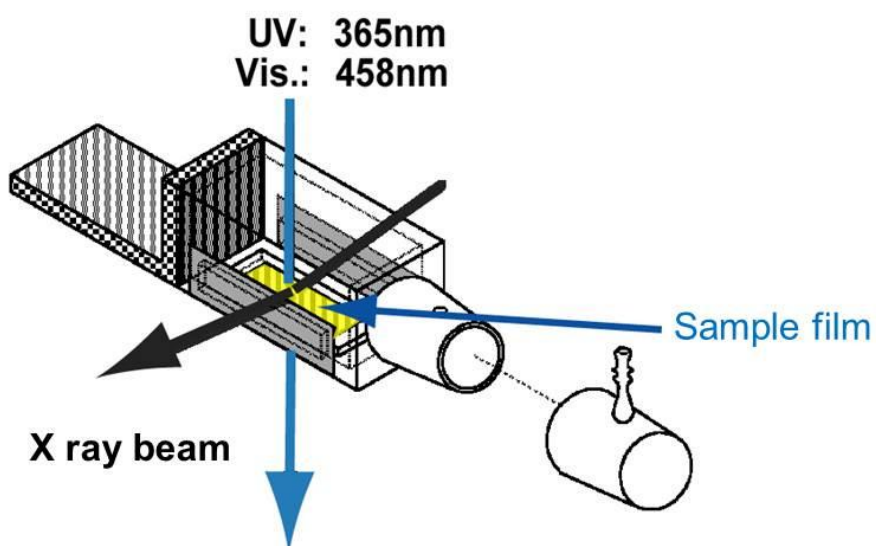
ESI-1 Molecular length of the C₃F-Azo (3.2 nm) estimated by structural optimization by means of Gaussian09 (B3LYP/6-31G*).

ESI-2



ESI-2 Maximum amount of C3F-Azo adsorbed on the clay.

ESI-3



A cell specially designed for the simultaneous measurement of XRD during photoreaction.

ESI-3 Specially designed cell for simultaneous measurement of XRD during photoreaction.