Electronic Supplementary Information

Photoswitchable interactions between photochromic organic diarylethene and surface plasmon resonance of gold nanoparticles in hybrid thin films

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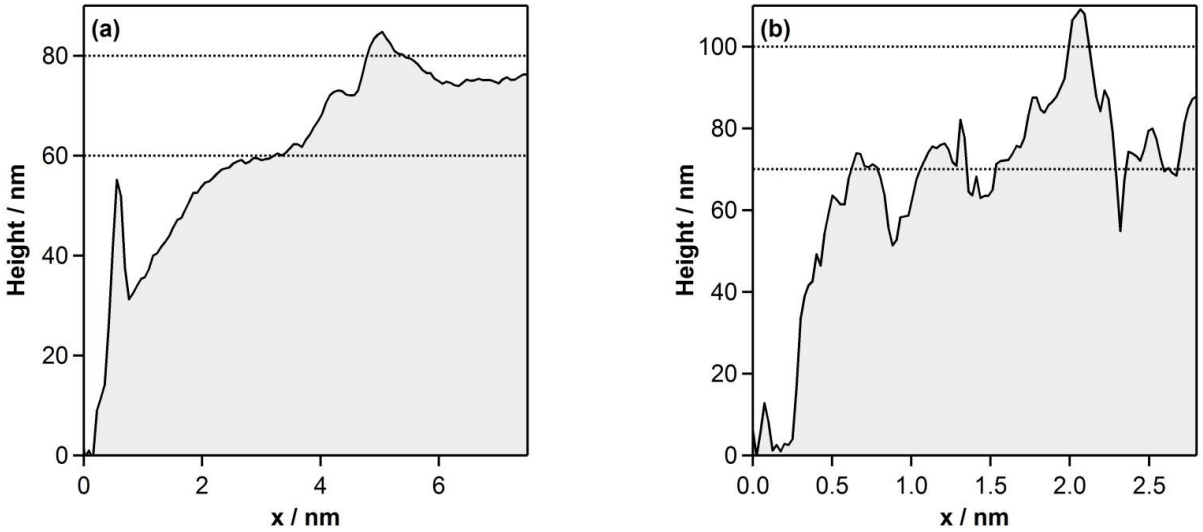

Figure S1. AFM profiles of (a) **D1** and (b) **D2** organic layers deposited on a glass substrate. Thickness measurements of 60-80 nm for **D1** and 70-100 nm for **D2** layers were recorded.

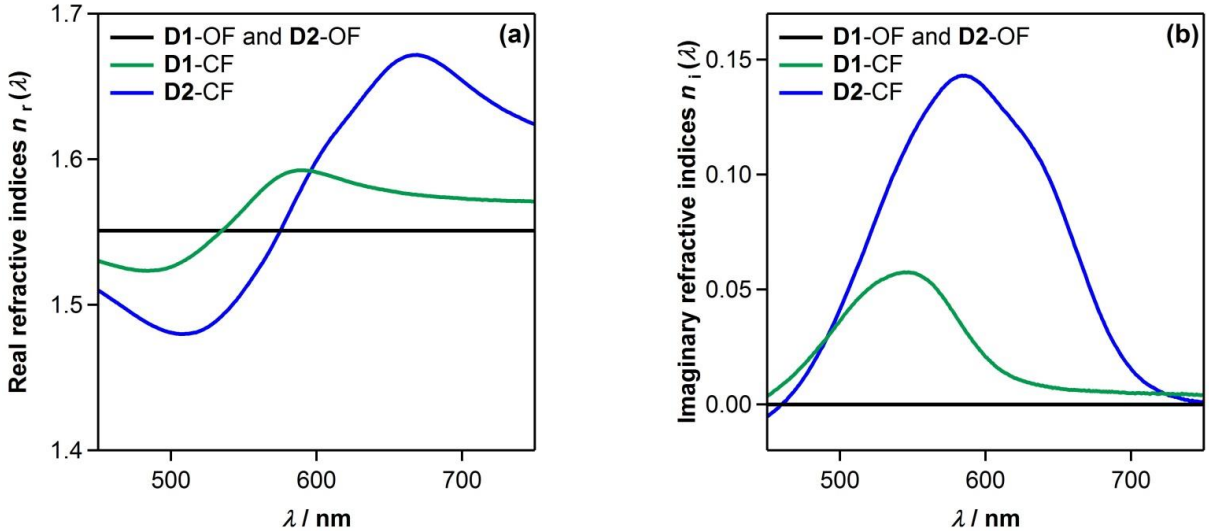

Figure S2. (a) Real and (b) imaginary refraction indices of the organic diarylethene materials **D1** and **D2** in their open (OF) and closed-forms (CF), calculated from experimental differential absorption spectra as described by Kramers and Kronig.[1]

References:

[1] R. D. L. Kronig and H. A. Kramers, *Zeitschr. Phys.*, **1928**, 48, 174-179; C. F. Bohren and D. R. Huffman, *Absorption and Scattering of light by Small Particles*, John Wiley and Sons, Inc., New-York, 1983.