## **Description of Additional Supplementary Files**

**Supplementary Movie 1**: Buckling of Azobenzene

Supplementary Movie 2: Contraction of DUT-163 via Buckling

**Supplementary Movie 3**: *E-Z* isomerization of Azobenzene

**Supplementary Movie 4**: Contraction of DUT-163 via *E-Z* isomerization