## **Description of Additional Supplementary Files**

File Name: Supplementary Movie 1

Description: Color change in colloidal dispersion of short cAuNRs

File Name: Supplementary Movie 2

Description: Color change in colloidal dispersion of long cAuNRs

File Name: Supplementary Movie 3

Description: Mechanochromic response of plasmonic films to stretching

File Name: Supplementary Movie 4

Description: Mechanochromic response of plasmonic films to linear bending

File Name: Supplementary Movie 5

Description: Mechanochromic response of plasmonic films to nonlinear twisting

File Name: Supplementary Movie 6

Description: Polarization-dependent coloration of plasmonic films

File Name: Supplementary Movie 7 Description: Mechanochromic devices