A transparent film’s haze factor represents the degree of incident illumination transmitted through the film at an angle from the incident axis, $0^\circ < \theta < 90^\circ$. As depicted by Figure S1, optical haze is measured by dividing the total amount of incident illumination scattered forward by the total amount of light transmitted by the film, and then corrected for experimental error intrinsic in the setup.

$$Haze (\%) = \left( \frac{\frac{T_4}{T_2} - \frac{T_3}{T_1}}{1} \right) \times 100\%$$

**Figure S1** The experimental haze measurement setup, T1 Background checking, T2 total transmitted illumination, T3, Beam checking, T4 pure diffusive transmittance