

Video S1: Structural reconfiguration of a pair $\{1/2, 1/2\}$ disclinations on increasing θ . The video is slowed down in the moment of contact to better show the exchange. $R = 2h = 25 \xi_b$. Note that the scaling along vertical and horizontal directions are different. Line defects are indicated by colored regions where $\beta^2 \geq 0.8$.

Video S2: Structural reconfiguration of a pair $\{-1/2, -1/2\}$ disclinations on increasing θ . The video is slowed down in the moment of contact to better show the exchange. $R = 2h = 25 \xi_b$. Note that the scaling along vertical and horizontal directions are different. Line defects are indicated by colored regions where $\beta^2 \geq 0.8$.

Video S3: Structural reconfiguration of a disclination pair $\{1/2, -1/2\}$ on increasing $\theta, h < h_c$. $R = 2h = 25 \xi_b$. For presentation purpose the scaling along vertical and horizontal directions is different. Line defects are indicated by colored regions where $\beta^2 \geq 0.8$.

Video S4: A slowed down video of the structural reconfiguration shown in video S3 with the slowed down focus on the exchange. $R = 2h = 25 \xi_b$. For presentation purpose the scaling along vertical and horizontal directions is different. Line defects are indicated by colored regions where $\beta^2 \geq 0.8$.

Video S5: Structural reconfiguration of a disclination pair $\{1/2, -1/2\}$ on increasing $\theta, h > h_c$. $R = 2h = 25 \xi_b$. For presentation purpose the scaling along vertical and horizontal directions is different. Line defects are indicated by colored regions where $\beta^2 \geq 0.8$.

Video S6: A slowed down video of the structural reconfiguration shown in video S5 with the slowed down focus on the exchange. $R = 2h = 25 \xi_b$. For presentation purpose the scaling along vertical and horizontal directions is different. Line defects are indicated by colored regions where $\beta^2 \geq 0.8$.