

List of supplementary movies:

1. strong_neg.mpg – see also Fig. 3(a-c).
Transition pathway between a rotated and a diagonal state in the strong anchoring regime, as mediated by a $-1/2$ defect.
2. strong_pos.mpg – see also Fig. 3(d-f).
Transition pathway between a rotated and a diagonal state in the strong anchoring regime, as mediated by a $+1/2$ defect.
3. strong_posneg.mpg – see also Fig. 3(g-i).
Transition pathway between a rotated and a diagonal state in the strong anchoring regime, as mediated by a pair of $+1/2$ and $-1/2$ defects.
4. moderate_seq1.mpg – see also Fig. 6(a-c).
Transition pathway between a rotated and a diagonal state in the moderate anchoring regime, as mediated by “sequential” breaking of the surface anchoring along an edge.
5. moderate_seq2.mpg – see also Fig. 6(d-f).
Transition pathway between a rotated and a diagonal state in the moderate anchoring regime, as mediated by “sequential” breaking of the surface anchoring along an edge.
6. moderate_global.mpg – see also Fig. 7.
Transition pathway between a rotated and a diagonal state in the moderate anchoring regime, as mediated by “global” breaking of the surface anchoring along an edge.
7. weak.mpg – see also Fig. 8.
Transition pathway between two diagonal states in the weak anchoring regime.