## Supplementary Movies for "Confotronic Dynamics of Tubular Lattices"

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- 1. One ring of dimers forming a *partial confoplex*. The interplay between the elasticity of the lattice and the anharmonic bending potential of the dimers leads to symmetry-breaking of the shape for moderate values of the stretching rigidities of the lattice.
- 2. One ring of dimers forming a *full confoplex*. When the anharmonic bending energy of the dimers dominates over the elastic degrees of freedom of the lattice, all dimers adopt a curved conformation and form a full confoplex.
- 3. Cooperativity. Partial confoplexes repel each other. With cooperativity between neighboring dimers, the confoplexes group together and form a quasipolymer, the *confostack*. The whole tube breaks the axisymmetry and forms a superhelix in space. When increasing the cooperativity, the tube deflects into a C-like shape.
- 4. Diffusion of a clamped polymorphic tube: the wobbling mode. The quasi-polymer on the surface (the confostack) diffuses in a symmetric potential which stems from the internal degrees of freedom of the tube. The whole tube is slaved to its movement and rotates with it.