**Static and dynamic flowers in strained graphene**

The coupling of geometrical and electronic properties is a promising venue to engineer conduction properties in graphene. In particular, different regimes can be achieved by manipulating confinement and strain fields, as shown in recent experiments on nanobubbles, drumheads oscillating membranes, and narrow strips deposited on patterned SiC substrates [1].

To investigate strain signatures on graphene systems, we focus on a simple model with a circularly symmetric out-of-plane deformation. Results from numerical tight-binding and Dirac-continuum models for a static deformation reveal intriguing flower-shaped structures in the local density of states with profound consequences for charge transport through the structure [2]. When these deformations are made to vibrate harmonically, they induce anisotropic gaps at energies set by the vibrational frequency and amplitudes determined by the parameters of the deformation. Because graphene flakes are relatively easier to deform, this dynamical-mechanical manipulation strategy appears as a promising venue to engineer electronic properties of graphene devices.