The inherent force of air pressure can be used as an integral element in the structural system of facades. Considering the enormous potential, methods are being developed to take advantage of these beneficial characteristics of pneumatic constructions, combined with high thermal and acoustic insulation potential. Basically, deflated constructions consist of pre-stressed membranes in combination with spacing materials. Transparent, lightweight and free-form constructions can be realised.

Deflated bridge, constructed and tested at various locations in Delft • 2008

For millions of years nature has created structures that near perfection in terms of energy consumption, environmental adjustment and survival. Through observation and the transformation of properties and principles from natural systems, Lidia Radanov develops sophisticated technological solutions for building envelopes. These transformations can result in new ways in which buildings can respond, adapt and interact to regulate their interior environment for the benefit of the user.

breathing skin inspired by nature

shading system inspired by plants