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The creation of architected structures associated with interesting mechanical properties is an active research field with numerous underlying physics questions. Polymer foams are already widely spread in the industry, as they allow for production of materials comprising a large fraction of air and associated with interesting thermal, mechanical and acoustics properties. However, it is difficult to control and customize the exact geometry and topology of foams, as capillarity prescribes their structure with strict rules associated with the minimization of interfacial energies. We will discuss some potential strategies to act on foam architectures from a physics perspective, going from capillarity only to elasto-capillarity.