## From Cylinder Packings to Auxetic Periodic Tensegrity Structures

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I will present a chiral, triply-periodic tensegrity structure, which displays local reentrant geometry at its vertices. Our tensegrity structure is based on the P4\_1 32 symmetry  $\beta$ -Mn rod packing from structural chemistry, and contains all symmetries of the rod packing itself. The tensegrity structure is auxetic, as demonstrated by the modelling of a quasi-static extension and compression deformation. This simple three-dimensional analogue to the two-dimensional reentrant honeycomb is an interesting design target for soft metamaterials.