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The shapes of two-component crystalline shell¹ GRAZIANO VERNIZZI, RASTKO SKNEPNEK, MONICA OLVERA DE LA CRUZ, Northwestern University — We consider an elastic shell with two coexisting components having different bending rigidities and elastic constants. We explore the low-energy configuration of the shell when the relative fraction of the two components and their elastic constants vary. We analyze different domain patterns associated with the shape of the shell. We also study the effect of a line tension term between the two components. We show how the relation between the morphology of the shell and the domain patterns lead to a rich variety of structures. In particular we discuss the role of the buckling instability in this model with heterogeneous components.

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