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Deformation and fracture behavior of a natural shell ceramic: Coupled effects of shell shape and microstructure

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Abstract

Common seashells possess their most adaptive functions benefiting from the macro-geometry and unique microstructures. The *Cymbiola nobilis* shell exhibits a logarithmic spiral-like shape and it is hierarchically constructed by the fiber-like crossed-lamellar structure. Three-point bending tests are conducted on three groups of samples taken from different locations (G1 with two macro-layers, G2 with three macro-layers, and G3 containing three macro-layers but with an

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