

## **Additive Lattice Kirigami**

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Kirigami is the art and science of cutting and folding a flat sheet into interesting and useful conformations. The distinction between our kirigami and the kind of kirigami in children's popup books is twofold:

- (1) We rejoin cut edges after removing or inserting extra material from/in cuts.
- (2) We consider a lattice on the sheet for the sake of geometric simplicity and to encourage relevance to situations where the lattice actually exists such as the hexagonal mesh of a graphene sheet.

The first aspect introduces Gaussian curvature into the previously (intrinsically) flat sheet, while the second aspect allows us to use the language of lattice defects to describe lattice kirigami, as well as being relevant across length scales from graphene to beam-and-joint constructions of a geodesic dome.