

Switching focus from the tiles to the edges, we see that these edges form 'forests' (*i.e.* collections of trees). These have been explored to a limited extent previously (Hyde & Ramsden, 1999; Hyde & Oguey, 2000; Hyde & Ramsden, 2000*b,c*; Hyde, Larsson *et al.*, 2003; Hyde, Ramsden *et al.*, 2003; Hyde &

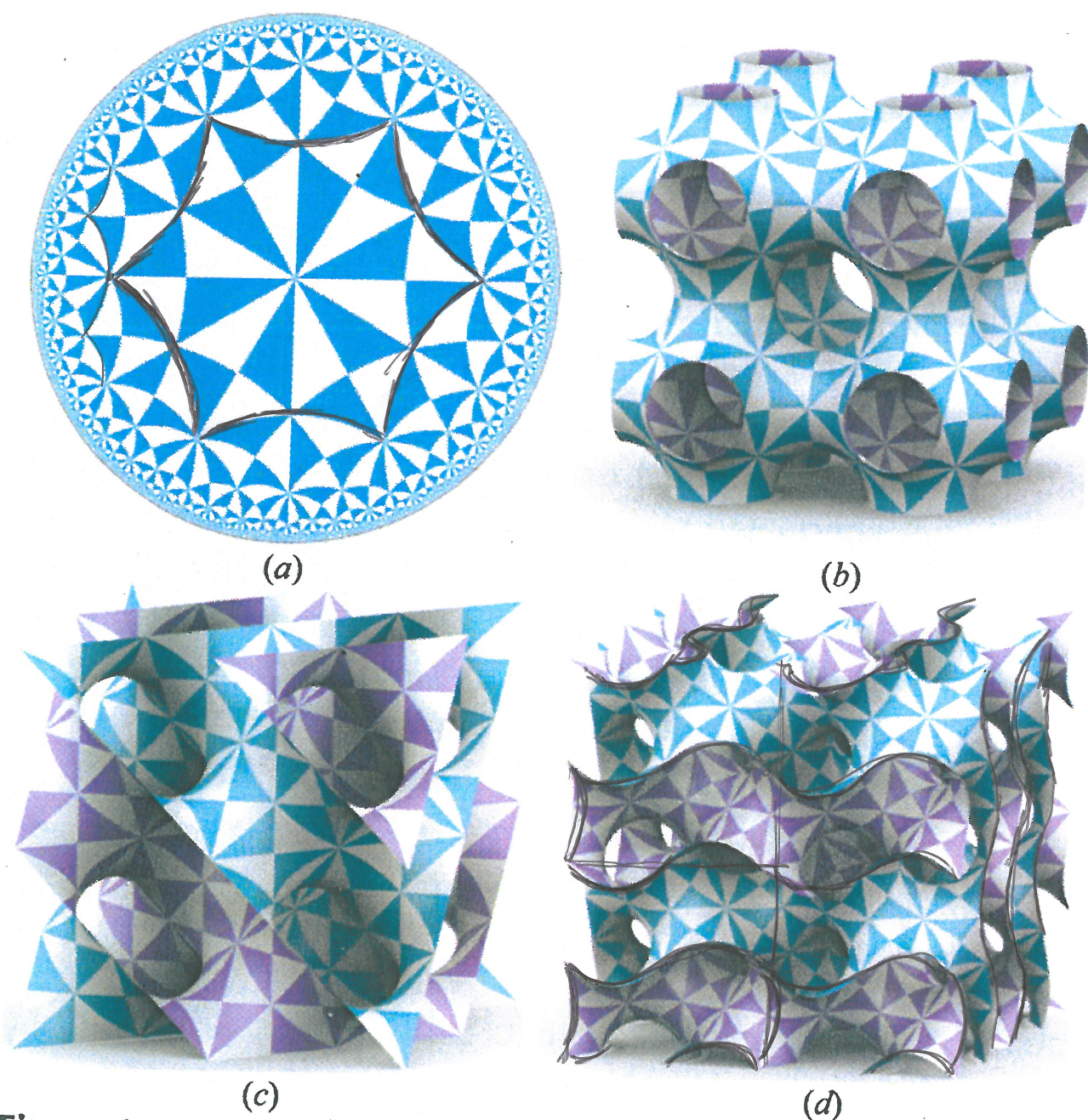


Figure 1

(a) $\star 246$ tiling on the Poincaré disc model of \mathbb{H}^2 . The cubic genus-3 TPMSs, (b) P surface, (c) D surface and (d) G surface. All are covered by the same triangular tiling, and an orientation preserving subgroup of $\star 246$. The blue and purple colours show the two distinct channels of the surfaces.