

Supporting Information: Symmetric tangled Platonic polyhedra

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Tangled polyhedra images

Image files encoding simpler 2fz polyhedral tangles, $\left[\frac{t}{2k+1}\right]_P^E$, (including tangled θ_3 -polyhedra) are collected at <https://tinyurl.com/cy8d6fsu>

The files is formatted as .ply data files, which give freely moveable 3d models via a number of accessible applications (e.g. Meshlab (all platforms), or Preview (Mac)).

Images are stored in separate folders, marked "Theta polyhedra", "Tetrahedra", "Octahedra", "Cubes", "Icosahedra" and "Dodecahedra".

Tangled polyhedra included are tabulated overleaf. The .ply files are named via the relevant helix fraction $\frac{t}{n}$; e.g. the .ply data for the tangled cubic polyhedron $\left[\frac{1}{5}\right]_P^{12}$ (where P is a cube) is the file named `cube-5track-t=2.ply` in the folder "Cubes" folder.

TABLE S 1. Tangled polyhedra whose structural data are included as .ply files. The curved edges have been smoothed to highlight helices wound on tubules of the underlying tubified polyhedral skeleton, P , except the pair of θ -polyhedra (marked by \dagger), whose edge geometries are those found numerically to form tightest embeddings, described in the paper.

<i>Folder (P)</i>	<i>Symmetry</i>	$\left[\frac{t}{n} \right]_P^E$	<i>Nmbr of components</i>
<i>Dodecahedra</i>	235	$\left[\frac{1}{3} \right]_P^{30}$	5
		$\left[\frac{1}{5} \right]_P^{30}$	1
		$\left[\frac{2}{5} \right]_P^{30}$	10
<i>Icosahedra</i>	235	$\left[\frac{1}{3} \right]_P^{30}$	1
		$\left[\frac{1}{5} \right]_P^{30}$	1
		$\left[\frac{2}{5} \right]_P^{30}$	6
<i>Cubes</i>	234	$\left[\frac{1}{3} \right]_P^{12}$	4
		$\left[\frac{1}{5} \right]_P^{12}$	4
		$\left[\frac{2}{5} \right]_P^{12}$	1
		$\left[\frac{1}{7} \right]_P^{12}$	1
<i>Octahedra</i>	234	$\left[\frac{1}{3} \right]_P^{12}$	3
		$\left[\frac{1}{5} \right]_P^{12}$	1
		$\left[\frac{2}{5} \right]_P^{12}$	1
<i>Tetrahedra</i>	233	$\left[\frac{1}{3} \right]_P^6$	1
		$\left[\frac{1}{5} \right]_P^6$	1
		$\left[\frac{2}{5} \right]_P^6$	1
<i>Theta polyhedra</i>	223	$\left[\frac{1}{3} \right]_P^3 \dagger$	1
		$\left[\frac{2}{3} \right]_P^3 \dagger$	1
		$\left[\frac{1}{5} \right]_P^3$	1
		$\left[\frac{1}{7} \right]_P^3$	1