The Oloid and the Evertible Cube: 3D Design and Printing Supplemental Materials

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CAD Files Mentioned in the Paper

The following table shows a list of 3D printable models that can help make sense of Schatz's evertible cube and the oloid. They can be printed using PLA filaments unless directed otherwise. Support and rafts are necessary in a few cases. Readers can refer to the URLs for more images as well as printing and assembly information.

Table 1: *3D Printable STL Files and More Images*

Design Description	Hyperlinks	URL
Interlocking Circles	Interlocking Circles	https://www.thingiverse.com/thing:3991711
Oloid Casting Molds	Oloid Casting Molds	https://www.thingiverse.com/thing:3985155
The Oloid	The Oloid	https://www.thingiverse.com/thing:3972440
Schatz's Deltohedron	Schatz's Deltohedron	https://www.thingiverse.com/thing:5943392
All-in-One Models	All-in-One Models	https://www.thingiverse.com/thing:5974483
Models for Printing with Flexible Filaments	Printing with Flexible Filaments	https://www.thingiverse.com/thing:5083826
Hinged Evertible Cube	Hinged Evertible Cube	https://www.thingiverse.com/thing:5089176

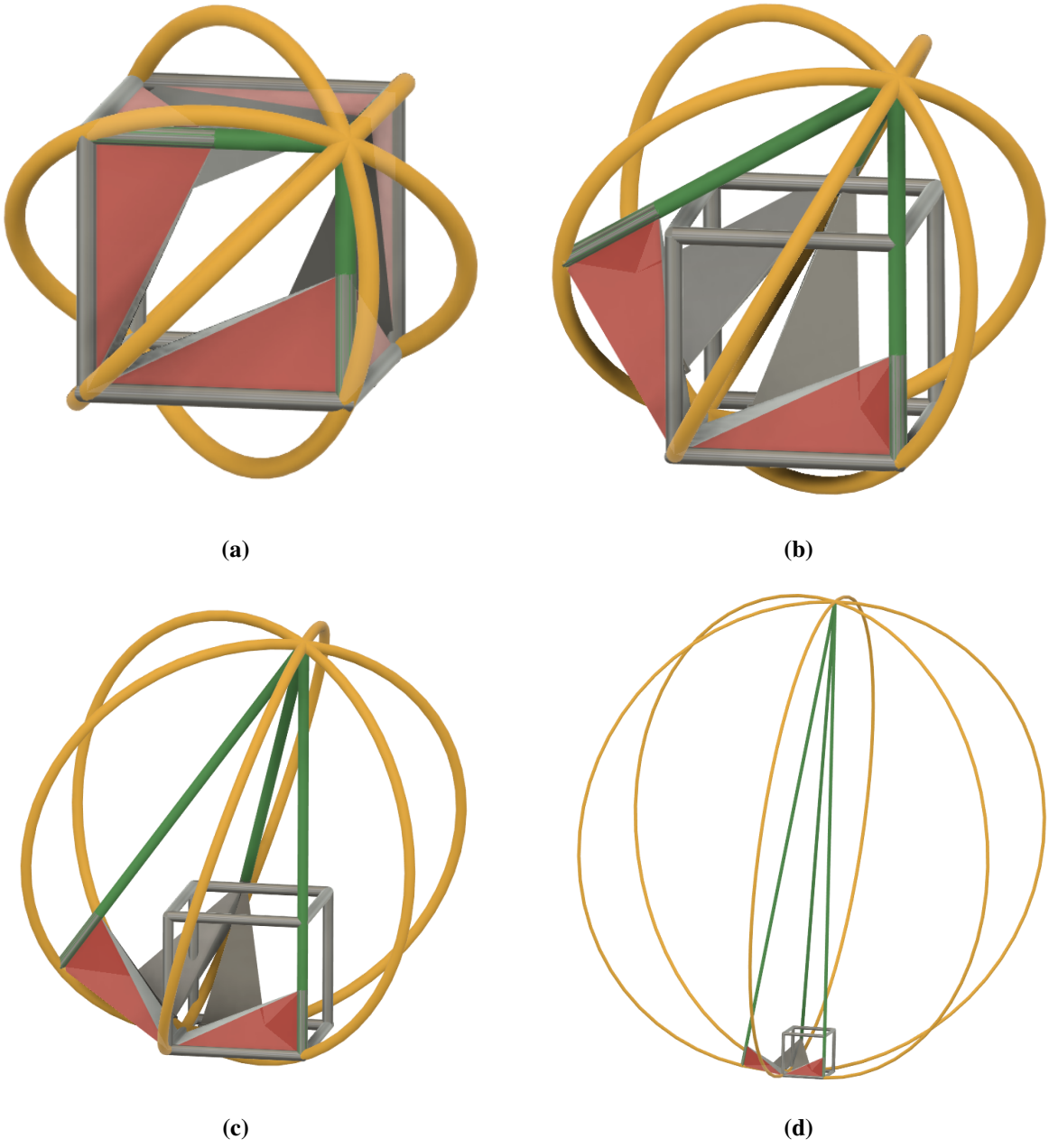
High Resolution Images

The Expansion and Contraction of the Circumsphere

Figure 1 shows the expansion and the contraction of the deltohedron and its circumsphere during the eversion process.

The Eversion of the Cube

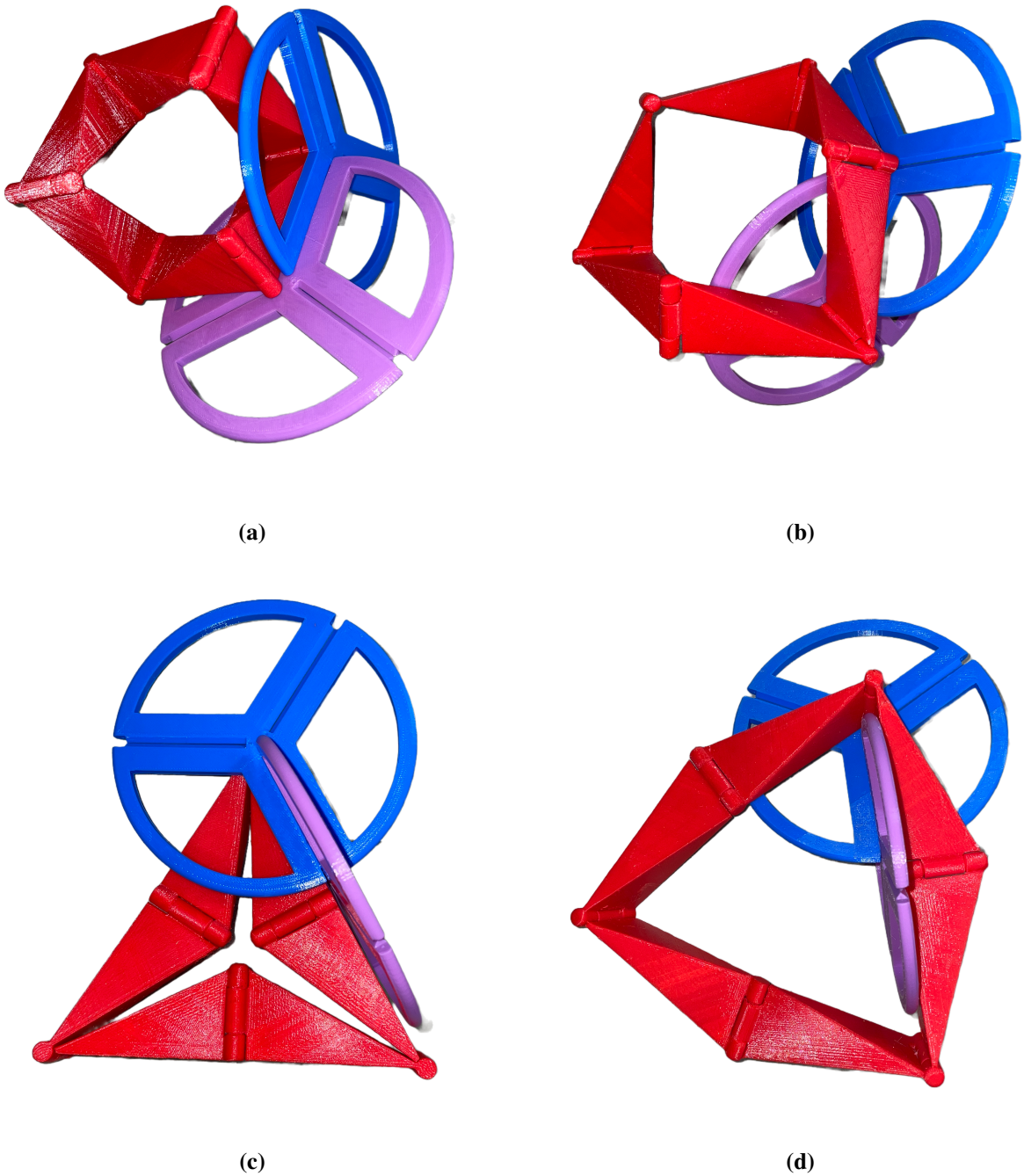
Figure 2 illustrates that, during eversion, the cube turns itself inside out – the outside thus becomes the inside. The equilateral triangle also goes through such a transformation.



(a) **(b)**

(c) **(d)**

Figure 1: *During the cube eversion, the circumsphere of the deltohedron expands and contracts.*



(a) **(b)**

(c) **(d)**

Figure 2: *During eversion, the cube turns itself inside out; so does the related triangle.*