Review of: "A New Family of Solids: The Infinite Kepler-Poinsot Polyhedra"

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Potential competing interests: No potential competing interests to declare.

Beautiful article. The classical concept of polyhedron has historically been generalized to include, on the one hand, intersecting faces, and on the other hand, infinitely repeating elements. In a previous paper the author combines these two generalizations and identifies a new family of what can now fairly be called regular polyhedra. The definition is natural and these new figures provide an important extension to our catalog and understanding of regular structures.

The new polyhedra are complex and it can be difficult to visualize them, which is particularly important in regards to their defining features, namely, the regularity and uniformity of their faces and vertex figures. The structure is essentially internal, in the sense of being covered from outside view by the faces. This article presents the `open face' representation with good graphical images. It helps immensely in viewing the structure, and with a bit of careful study of the text and images the conclusions become more evident and the reader can gain a somewhat intuitive understanding of these interesting new regular polyhedra.

One addition I would recommend: having images that are dynamically rotating (or, even better, rotatable via mouse) would greatly enhance the understanding. Perhaps it would be possible to provide a link to a video file, or a file in some manipulable graphic 3D image format.