The Basic Abe and Terada Modules

These two very simple modules are both folded from 1:sqrt3 or bronze rectangles and can be used to make polyhedra whose faces are equilateral triangles.

As far as I know the basic Terada module was designed by Norishige Terada sometime in the 1980s. The earliest publication of this module I know of was in Il Libro Del Rompicapo in Italy in around 1986.

In around 1993 I discovered that it was possible to make a simplified module that could be used to create many of the same forms. When I showed this to Tomoko Fuse she told me it was called the Abe module. I presume that this means it was first designed by Hisashi Abe in Japan, probably also in the 1980s. I have never seen diagrams for the Abe module in print.

A method of creating bronze rectangles from DIN or US letter paper can be found in the Utilities section of this site.

Folding the Abe module

You will need a bronze rectangle. If you are using irogami begin with your paper arranged white side up.

1. Fold in half diagonally, then unfold.
2. Fold the upper half of the left edge and the lower part of the right edge onto the crease made in step 1.

3. The basic Abe module is finished. The module can be configured by the addition of further creases and used to make a large variety of forms whose faces are equilateral triangles.

Folding the Terada module

You will need a bronze rectangle. If you are using irogami begin with your paper arranged white side up.

4. Fold in half edge to edge, then unfold, in both directions.

5. The paper is now divided into four quarter size bronze rectangles. Fold the top left and bottom right of these rectangles in half diagonally.
6. Fold the sloping upper left and bottom right edges onto the horizontal centre crease.

7. The basic Terada module is finished. The module can be configured by the addition of further creases and used to make a large variety of forms whose faces are equilateral triangles.