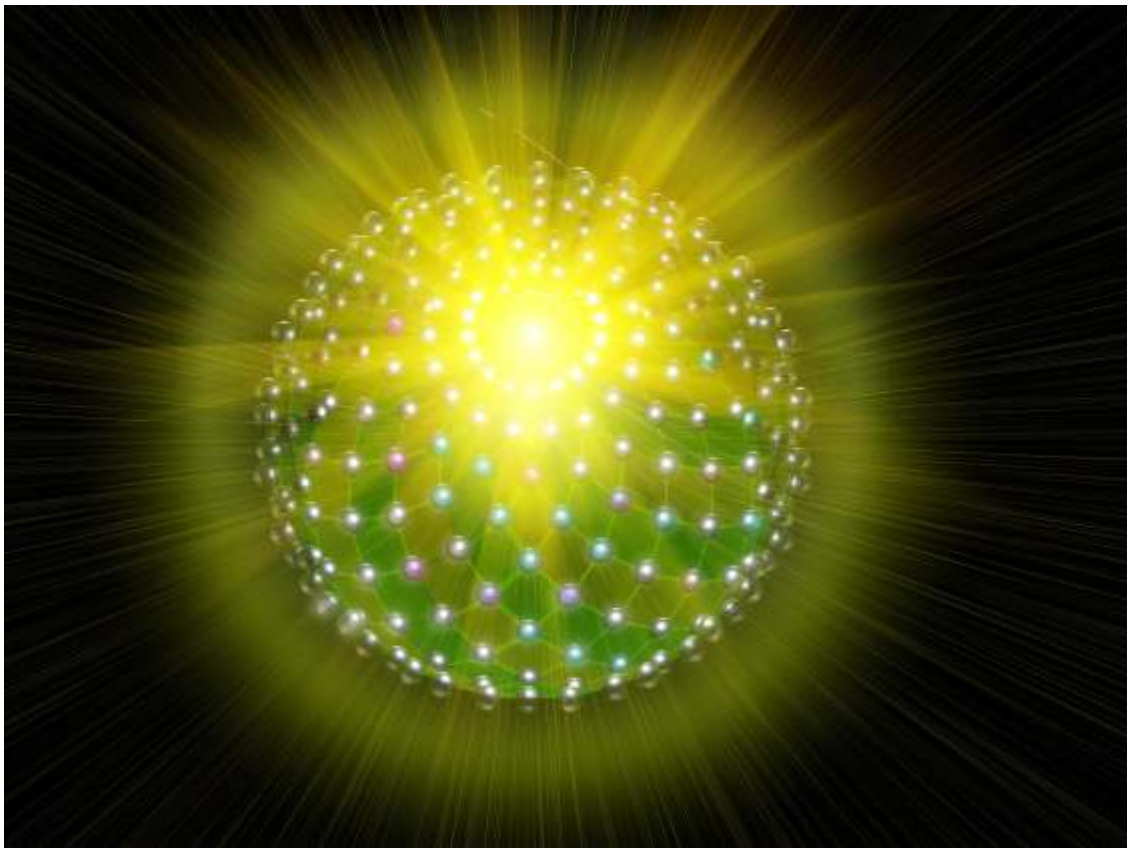
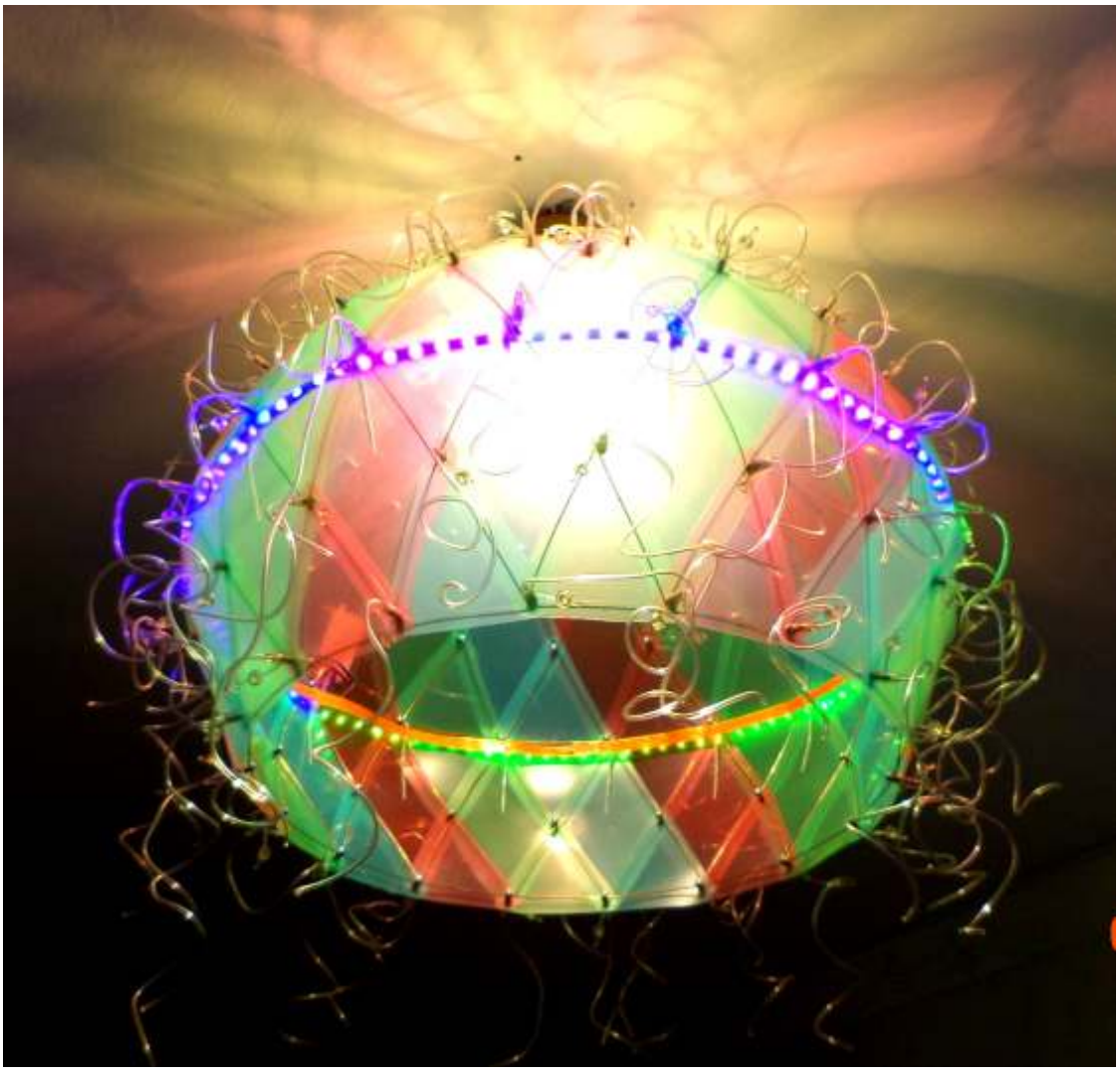
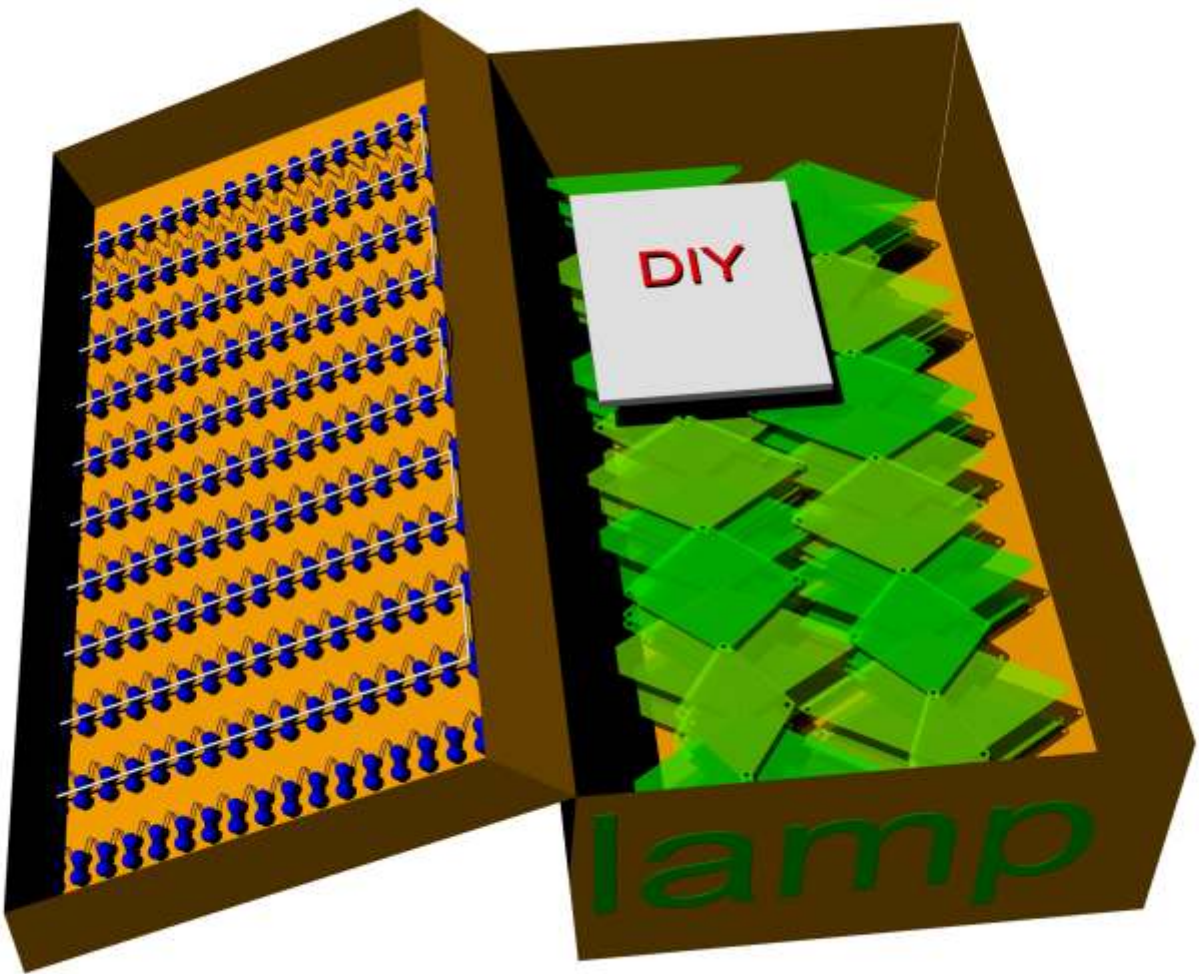
ZipDIY LEDsLAMP



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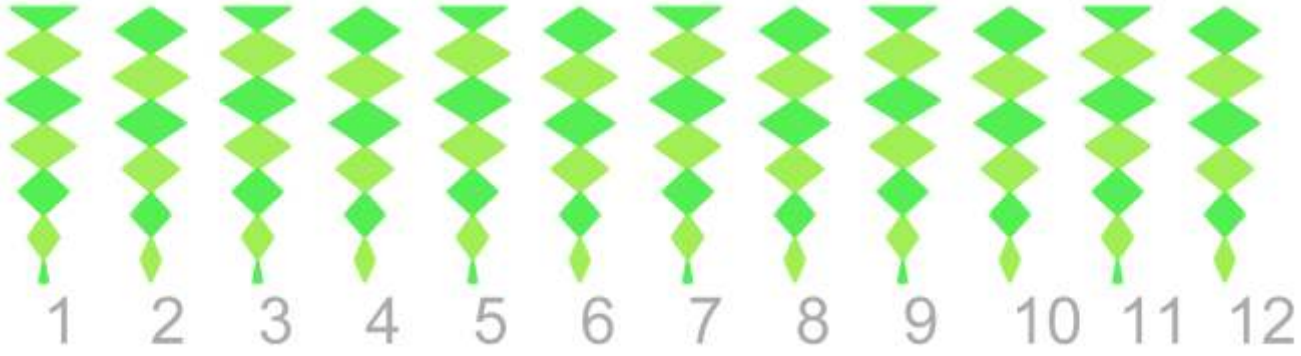
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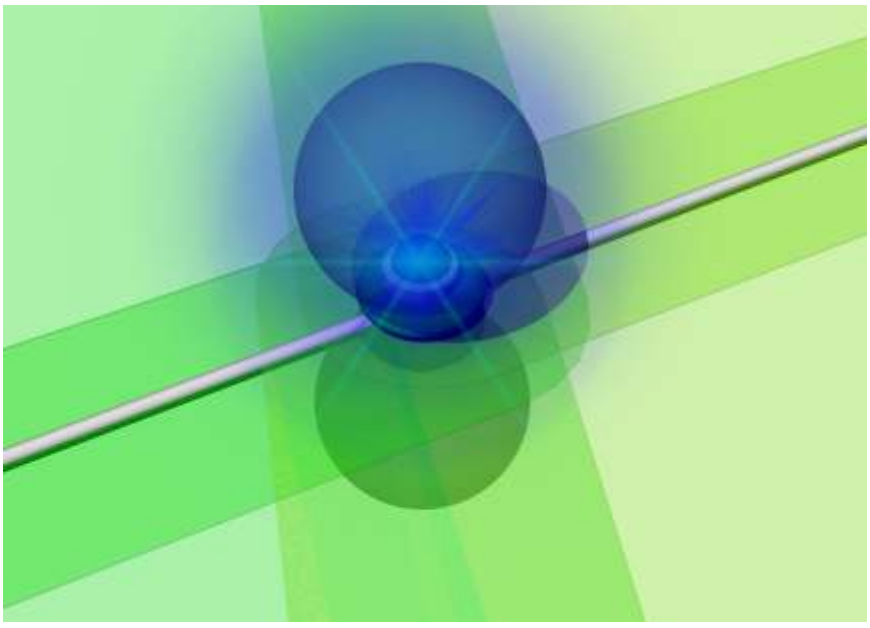

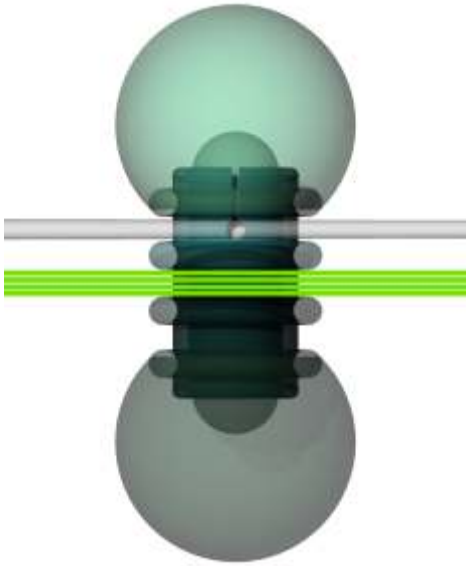

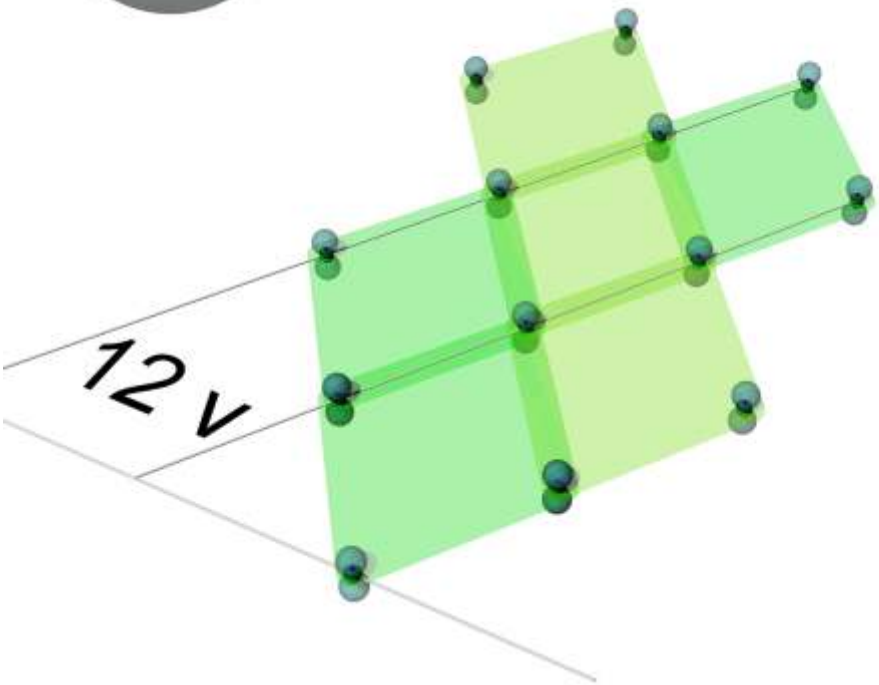
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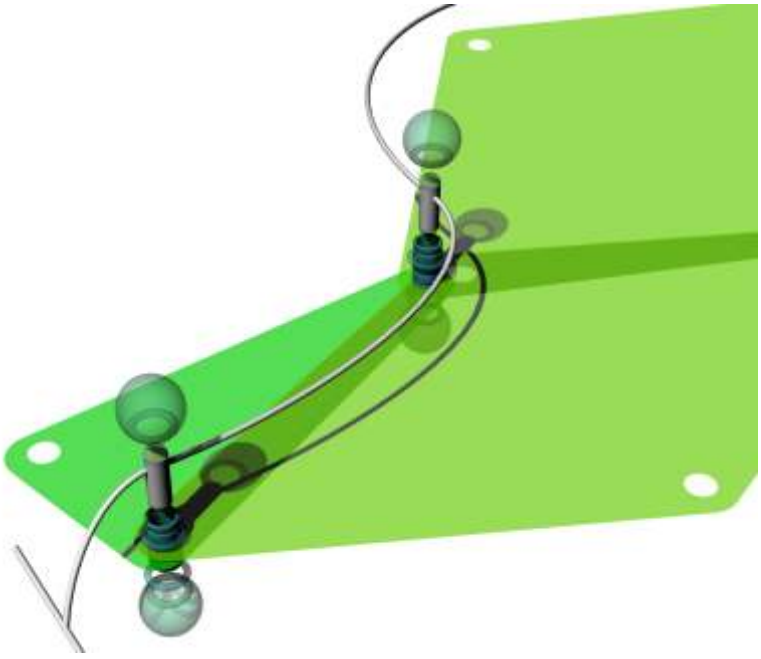

'ZipDIY' project is the research to realize complexity. I'm dealing with double curved geometry recently, which is famous for being very difficult to be fabricated.
Fabrication of partially double-curved surfaces out of flat sheet material through a 3d puzzle approach, which is concerned about the prototyping of double curved surface using only a laser cutter and flat sheet materials to realize double curved surface.
The method I present here is to utilize a laser cutter and flat sheet polycarbonate, to produce double curved models. The convenience in assembling the model and the flexibility of the input.
The computation starts with dividing the geometry into a diagrid pattern. The idea of the division is to approximate the double curved surface by locale planar (or developable) surface, the diagrid pattern is the best subdivision approach for the subsequence logic and assembly, having a high degree of accuracy by utilizing the property of the polycarbonate to bend into single curved surface. Because we can treat each quad as two triangles (and because triangles are always planar), we can abstract the curved surface of each quad into two triangles which is subsequently assembled by a continuous sheet of polycarbonate.
The design of the lamp consists of a flat sheet of polycarbonate , LED lights and plastic clips and elastic rings.

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