Construction: use solar concentrator with Stirling engine to harvest solar energy and use bimetallic strips to track the sun. This construction uses only properties of materials and does not require any kind of electronics.

Bimetallic strips are an alloy of two metals with different coefficients of heat expansion.

When heat is applied to bimetallic strips, it bends.

We can weave bimetallic strips with the strips of regular metal.

And get the structure which is responsive to the sun heat.

During the night, the tower stands still. During the morning comes, but starts to heat one side of the tower. Bimetallic strips start bending and shrink, one side of the tower, forcing it to lean toward the sun.

During the day, the sun heat moves from one side of tower to another, and makes tower follow the sun.