Comments and Suggestions for Authors
（Responses from Authors）

Comments: This paper proposes an interesting approach to deployment. The bi-stability of cylindrical shells is exploited for deployment. There are a few serious issues that need to be addressed before any further consideration.

Responses: Thank you for your constructive and positive comments, and we are grateful for an opportunity to respond you. We have listed comments from the reviewers and gave a point by point responses to explain the details of the revisions to the manuscript. All revisions to the manuscript have be marked up using the "Track Changes" function in MS Word, and the responses to reviewers have be marked in red.

Comments 1: The contact points between the facets and the shells are not clear. The contact points should be clearly shown at the two stable stages and one intermediate stage.

Responses 1: Thank you for your constructive and positive comments. We will add the contact points.

Comments 2: The curves in fig 7 do not really agree.

Responses 2: Thank you for your constructive and positive comments.

The error between the simulation and the experiment in Figure 7 is due to human error that is difficult to avoid during the preparation of the experimental sample. We will try our best to reduce this error in future research.

Comments 3: While the authors claim that the bistable shells are made of CFRP composites, from some of the figures of physical experiments these appear to be made of metal. please clarify.

Responses 3: Thank you for your constructive and positive comments. The response to your question as follows:

Because we used the Instron tensile testing machine during the experimental test, the indenter and support part of the testing machine are made of aluminum. The object

being measured is still solar panels with carbon fiber bistable shells.

Comments 4: More works on origami and folding should be cited (such as: Applied Materials Today, 20 100715) for giving a broader perspective of the field.

Responses 4: Thank you for your constructive and positive comments. We will add the reference:

[1] Wang HR, Zhao DY, Jin YF, Wang MJ, Mukhopadhyay T, You Z. Modulation of multi-directional auxeticity in hybrid origami metamaterials[J]. Applied Materials Today, 2020: 100715. (DOI: 10.1016/j.apmt.2020.100715)

Comments 5: One of the major lacunae of this work seems to be the fact that the the two connected facets will not make a 90 degree angle at one of the stable stages. To complete the cube for many applications of deployable structures, it is necessary. The authors need to clarify/ address this issue.

Responses 5: Thank you for your constructive and positive comments.

In order to keep the solar panel at 90° in the folded state, we make the central angle of the carbon fiber cylindrical shell 90°. In order to realize the application of the structure described in this paper, more parts need to be added to make the whole mechanism more stable. The application of this structure in solar panels is not studied in this article. In future research we will propose an overall mechanism for a feasible solar panel with this structure, and larger size cylindrical shells and plates will be considered.