

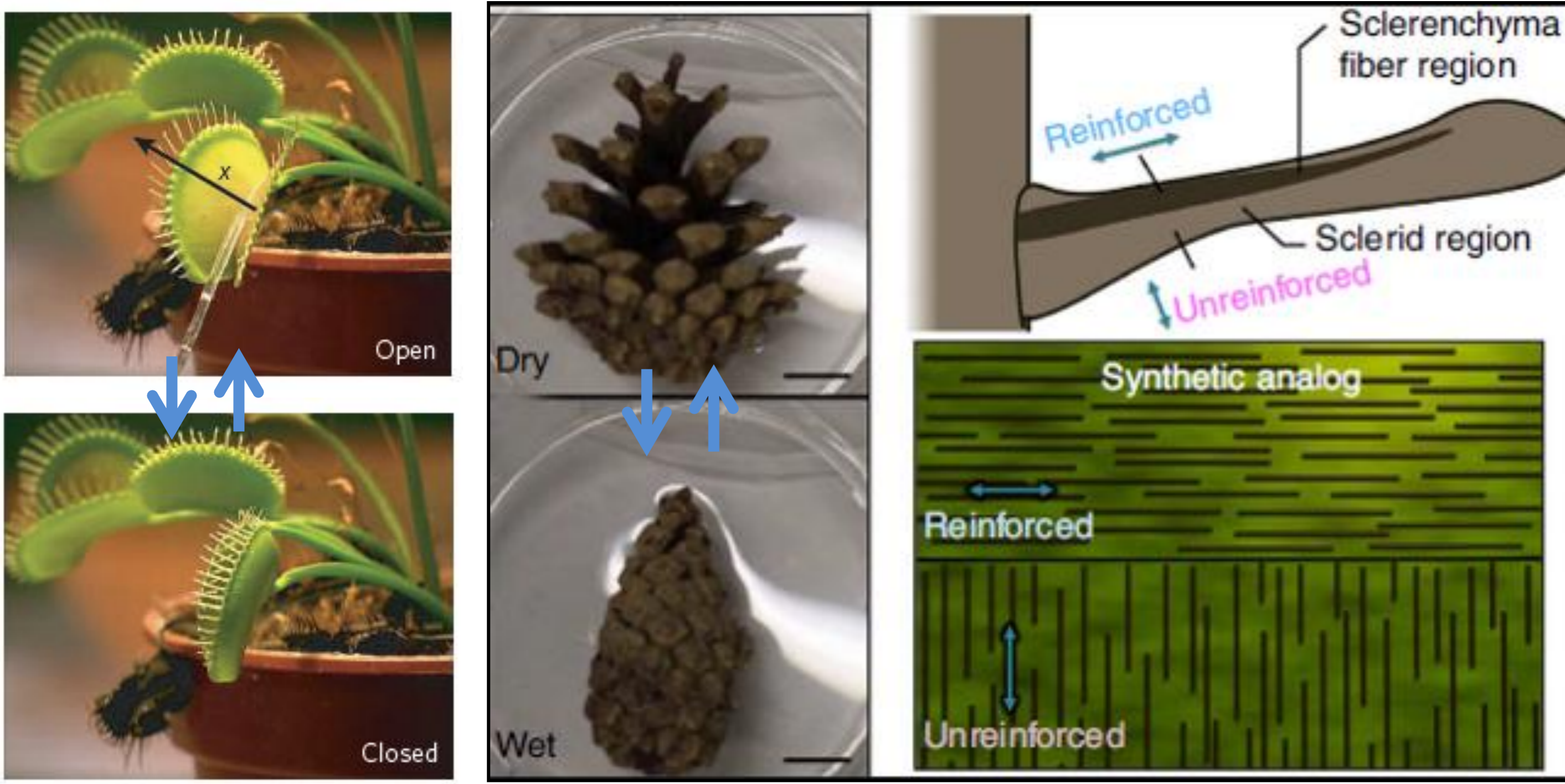
Bioinspired Composite Hydrogels with Layered Fibrous Structures and Programmed Planar-to-Helical Shape Transformations

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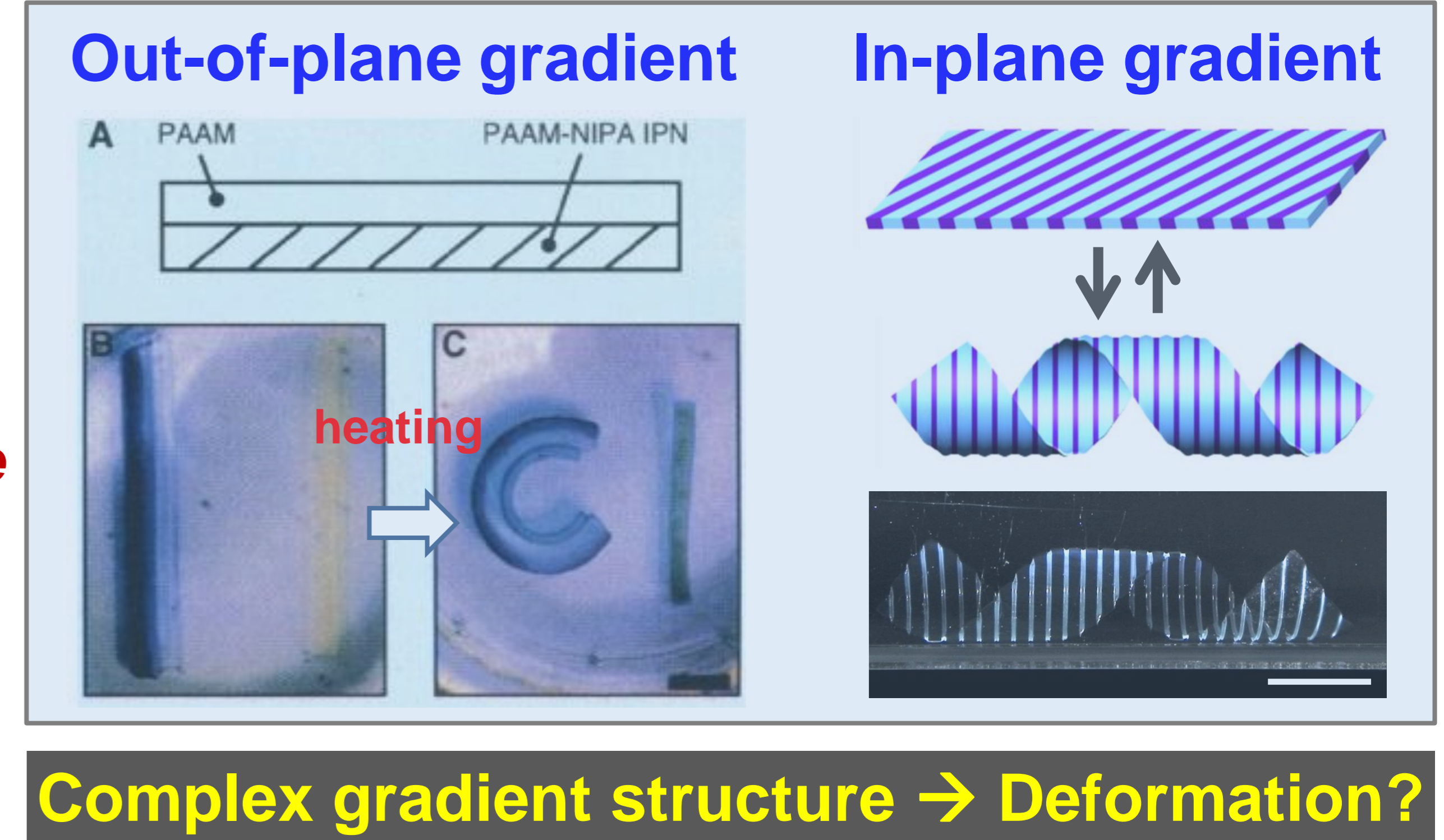
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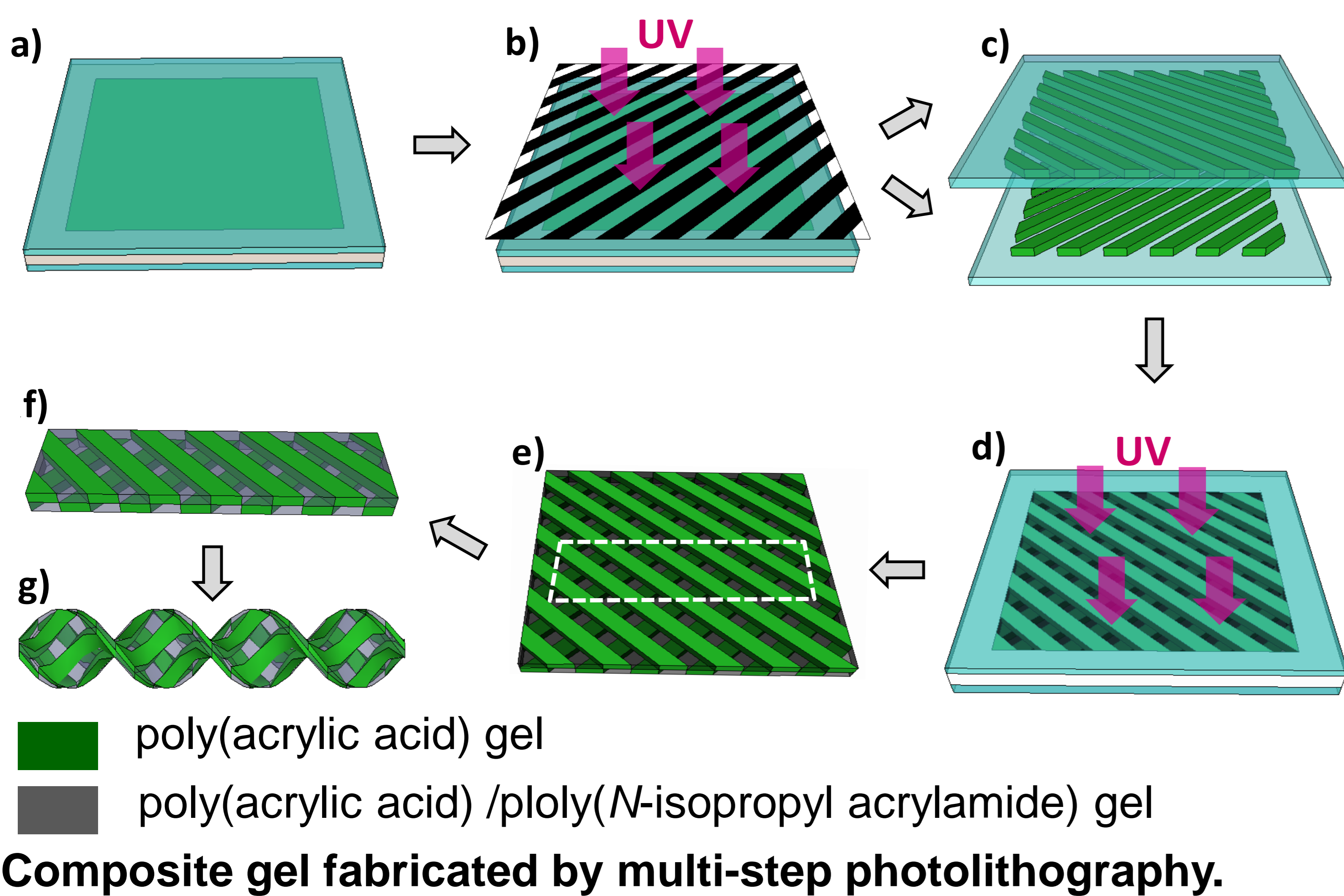
Introduction



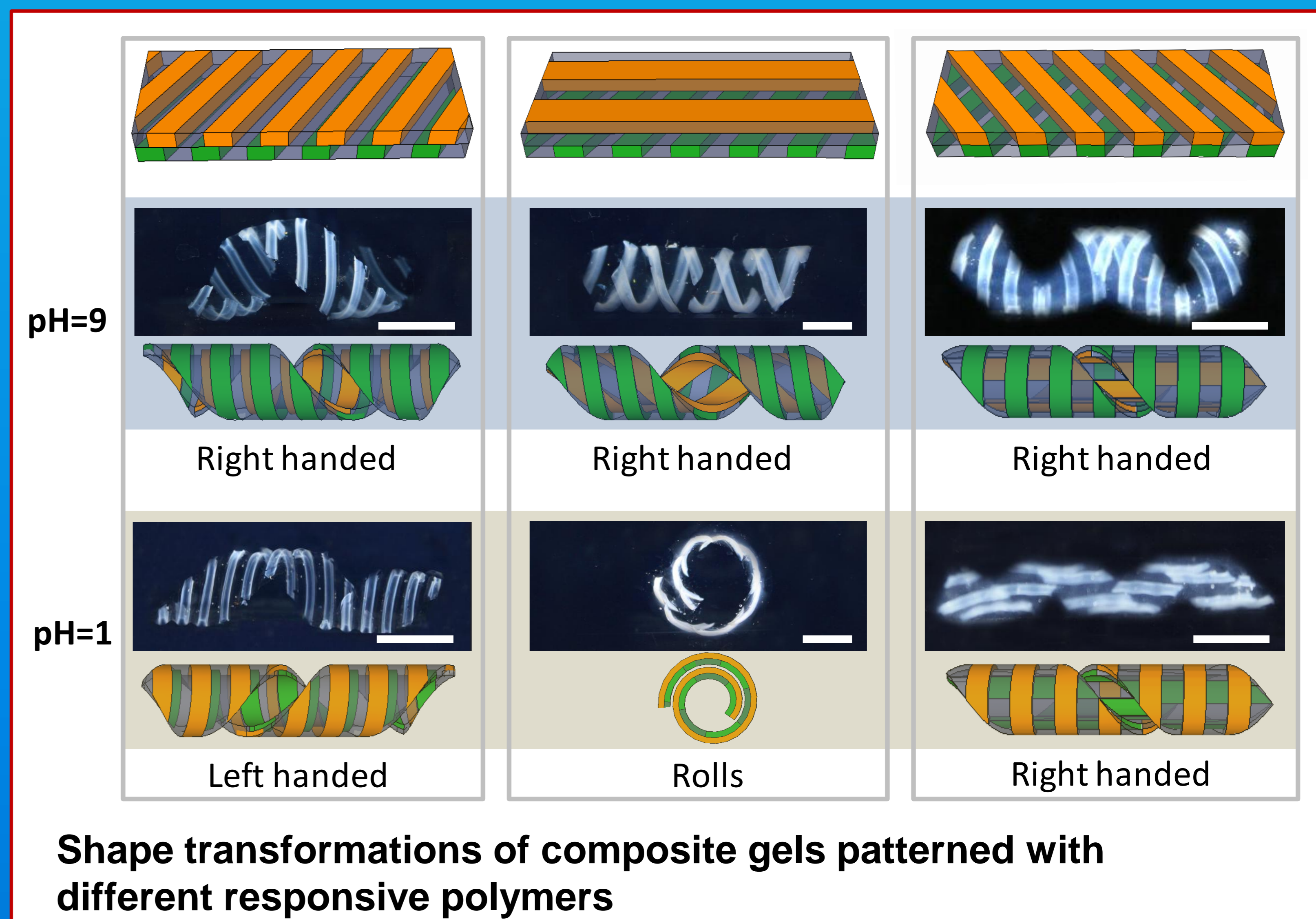
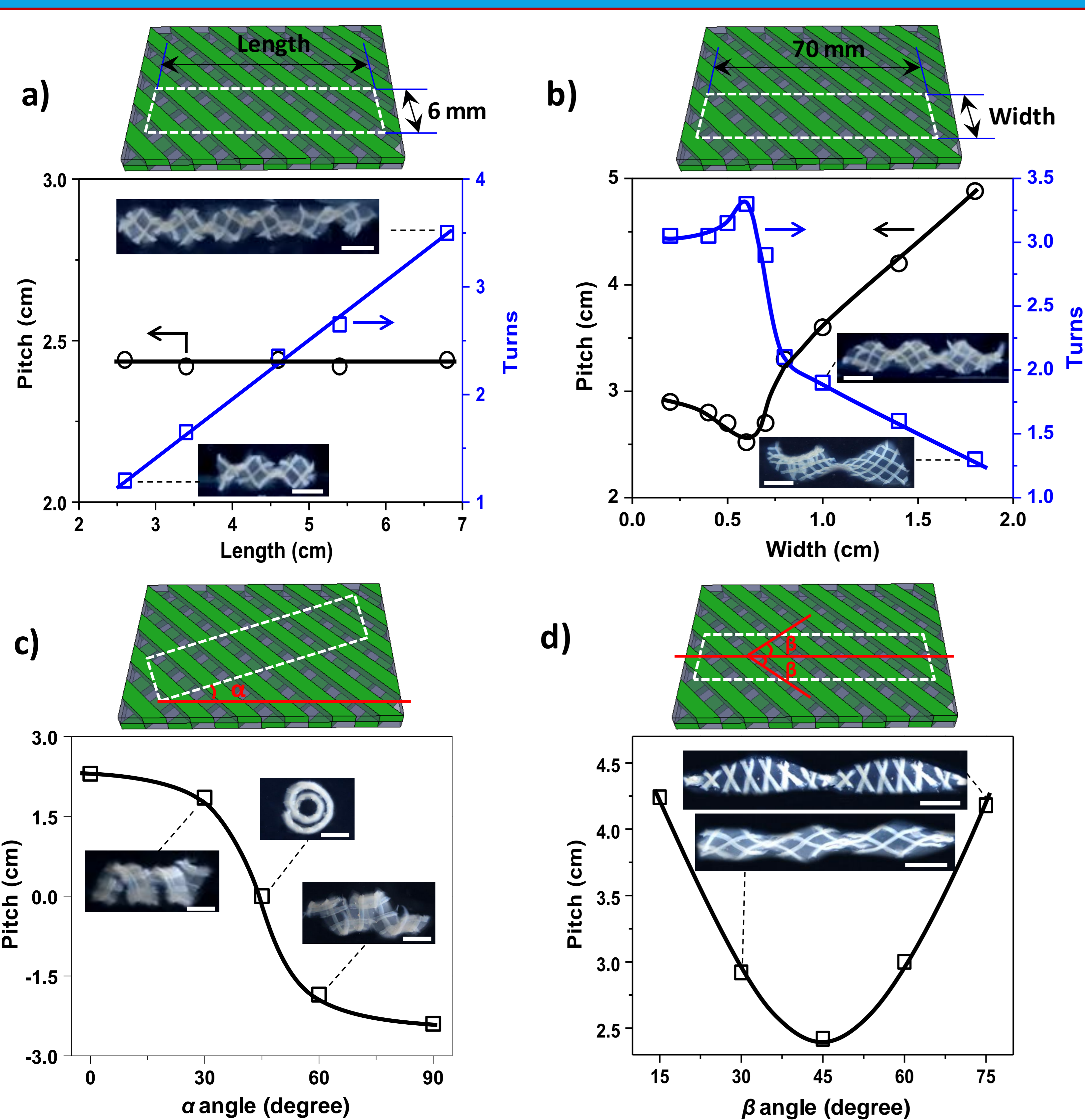
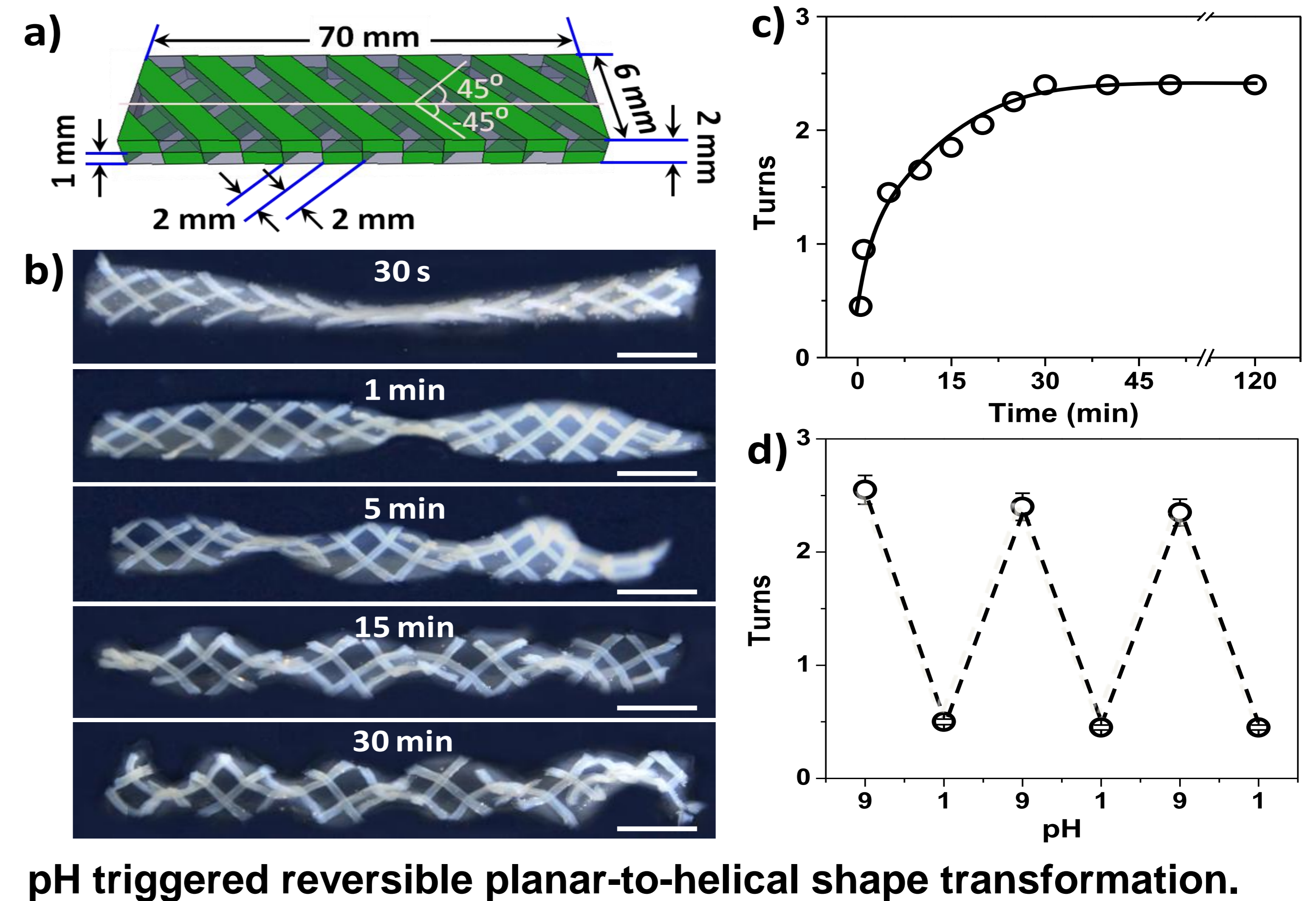
Biomimetic
 Structure + Response
 Deformation



Method



Results



Conclusions

- ◆ Composite gels with both in-plane and out-of-plane gradient structures were fabricated by multi-step photolithography.
- ◆ Twisting deformations and shape transformations have been realized by patterning the gel with parallel stripes in the upper and bottom layers.

References

- [1] S. Armon, E. Efrati, R. Kupferman, E. Sharon, *Science* 2011, 333: 1726.
- [2] R. M. Erb, J. S. Sander, R. Grisch, A. R. Studart, *Nat. Commun.* 2013, 4: 1712.

Acknowledgements: This research was supported by National Natural Science Foundation of China (No. 51403184).