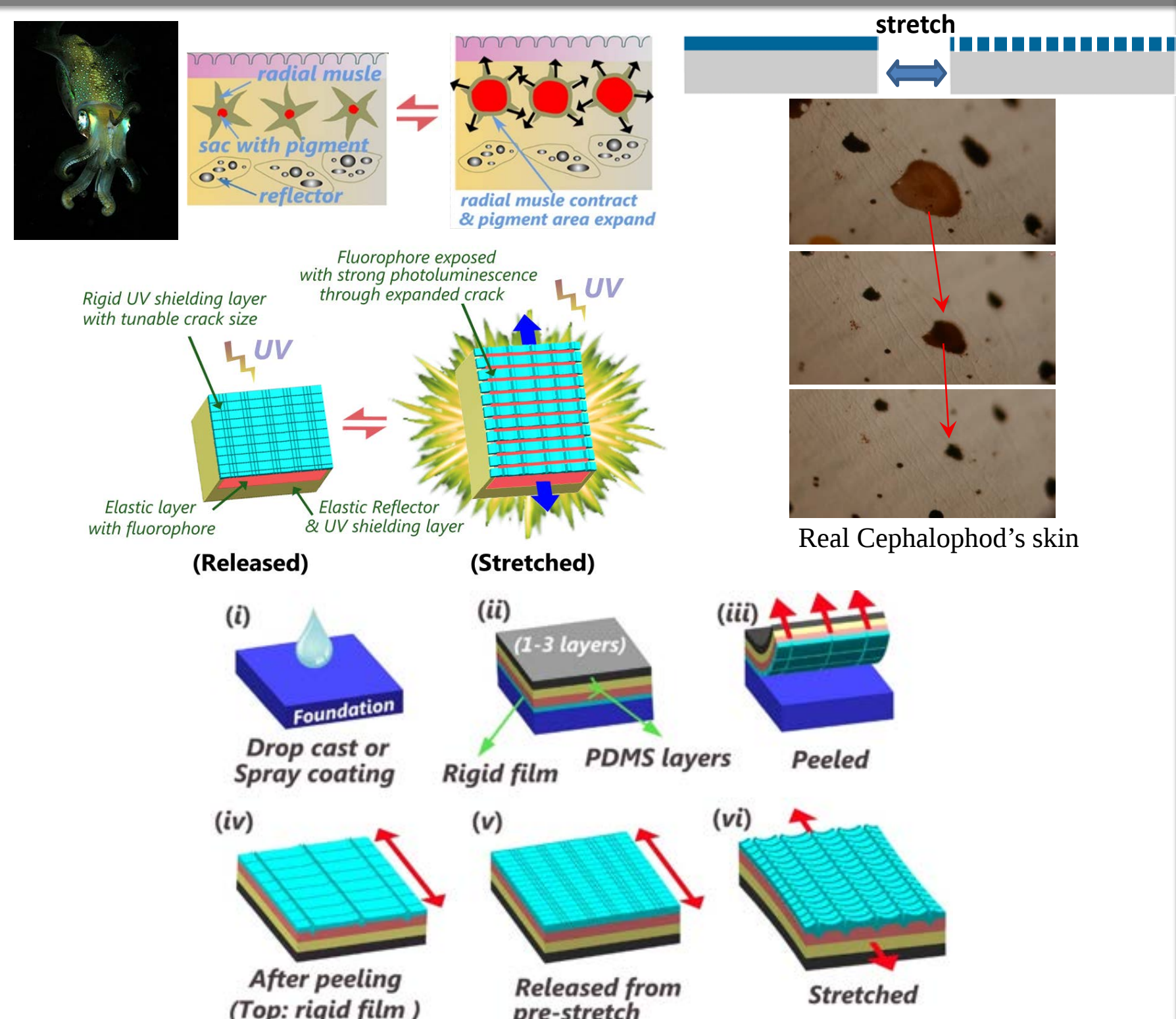


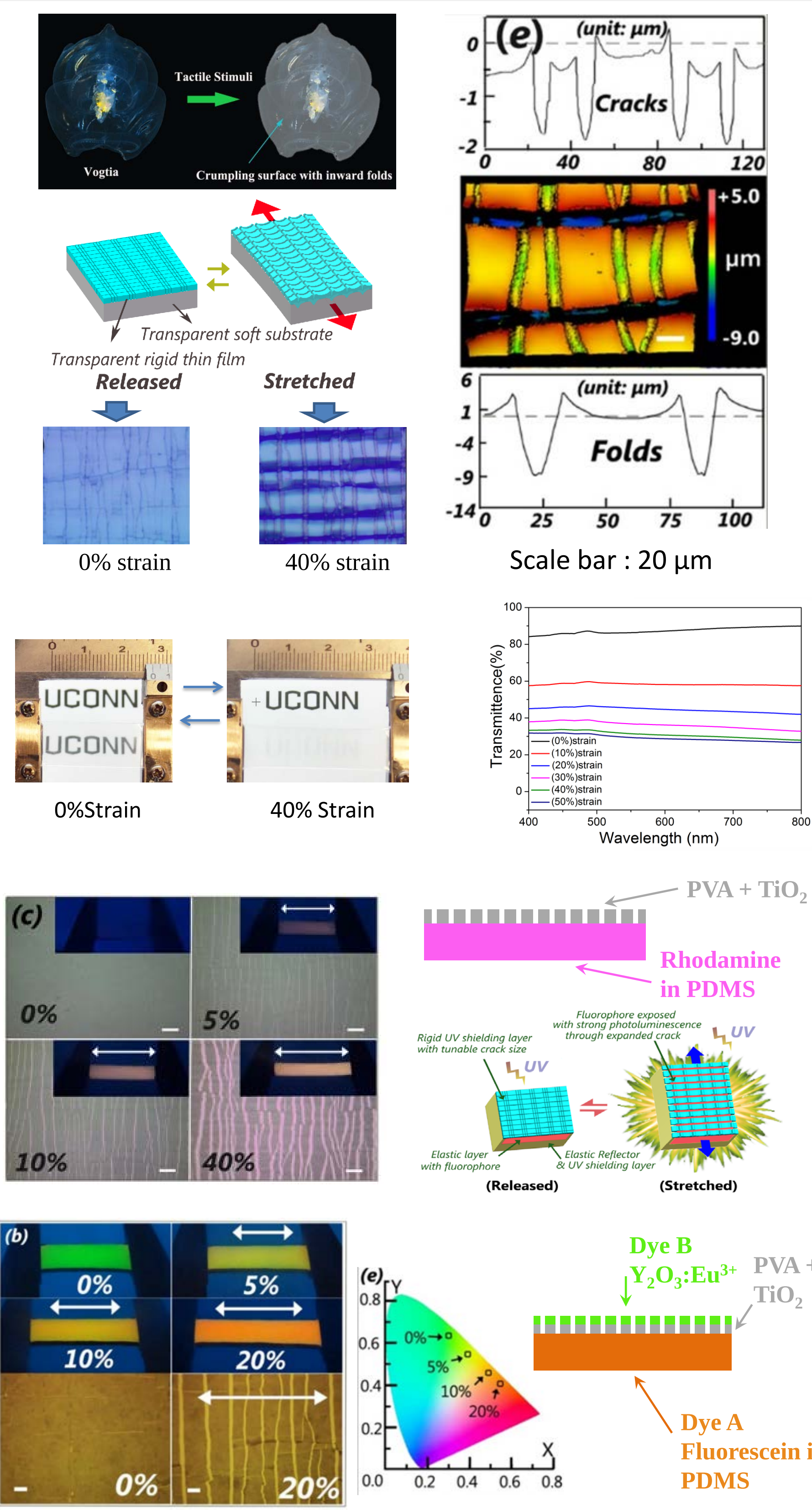
Introduction

- In nature, some marine organisms, such as *Cephalopods*, have evolved to possess camouflage traits by dynamically and reversibly altering their transparency, fluorescence, and coloration via muscle-controlled surface structures and morphologies.
- To mimic this display tactics, we designed similar deformation-controlled surface engineering via strain-dependent cracks and folds
- Based on a similar bilayer structure, a series of moisture responsive wrinkle dynamics inspired by human skin featuring different reversibility and stabilities were also designed and fabricated, which resulted in the invention of responsive materials triggered by moisture, whose response can be either reversible or irreversible.
- These multifunctional materials are promising for applications in smart windows, optical switches, encryption, anti-counterfeit tabs, water indicators, etc.

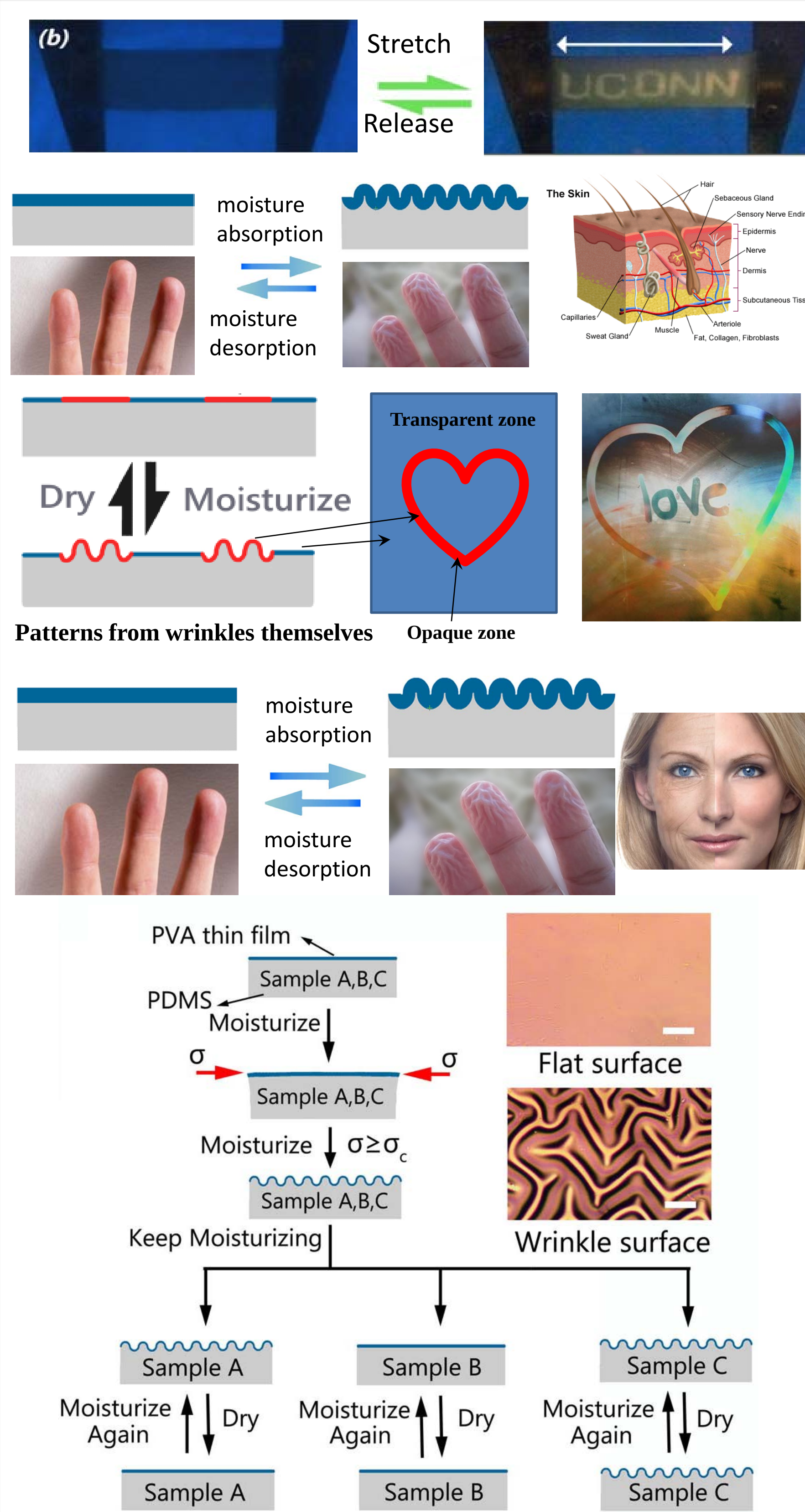
Results



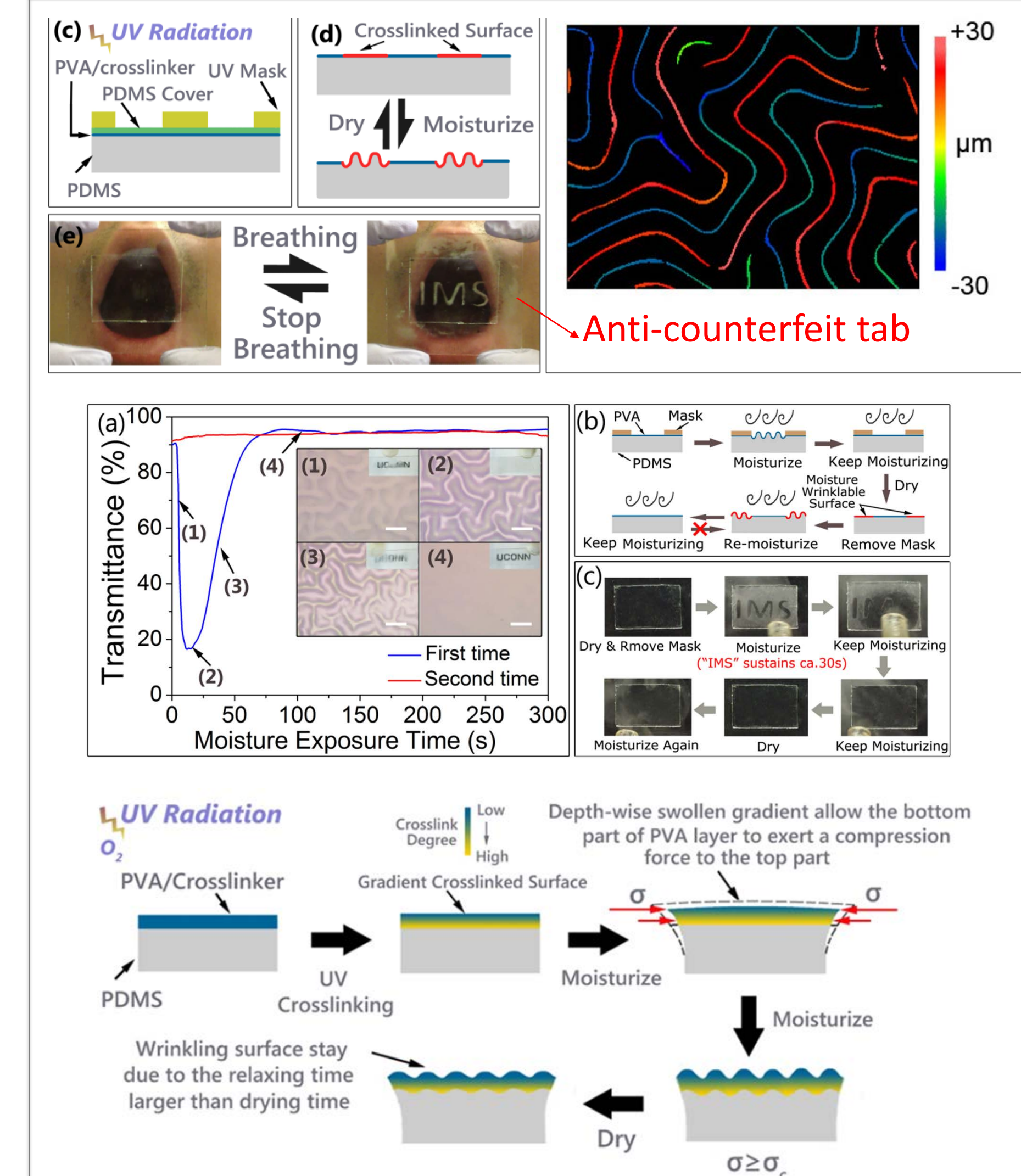
Results (Continued)



Results (Continued)



Conclusions



References & Acknowledgements

- GE Graduate Fellowship
 - GAANN Fellowship
 - Kuraray Co. Ltd
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- Videos Available at:
- <https://www.youtube.com/watch?v=pl0NBjzWJbU&list=PLfWUGZq0nNdljPRh9j96gxdyByT6aiwy>
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