

Assistant Professor Zeng Songshan

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Academic Qualification:

Ph.D. in Materials Science, University of Connecticut, 2018

M.E. in Materials Physics and Chemistry, Sun Yat-sen University, 2012

B.S. in Materials Physics, Sun Yat-sen University, 2009

Teaching Area

Materials Science

Research Area

Smart materials, Biomimetic materials, Stretchable/flexible photonics/electronics, Structural color, Wrinkling instability.

Working Experience

Assistant Professor, MIMSE, Macau University of Science and Technology, Macau, China, 2022 - present

Postdoc, The Chinese University of Hongkong, Hongkong, China, 2021 - 2022

Postdoc, University of Connecticut, US, 2018 - 2020

Selected Journal Papers

Zeng, S.; Yang, Z.; Hou, Z.; Park, C.; Jones, M.; Ding, H.; Shen, K.; Smith, A.; Wang, B.; Jiang, H.; Sun, L. Dynamic multi-functional devices enabled by ultrathin metal nanocoatings with optical/photothermal and morphological versatility. *PNAS* 2022, 119 (4), e2118991119.

Zeng, S.; Zhang, D.; Huang, W.; Wang, Z.; Freire, S.; Yu, X.; Smith, A.; Huang, E.; Nguon, H.; Sun, L. Bio-inspired Sensitive and Reversible Mechanochromisms via Strain-dependent Cracks and Folds. *Nature Communications* 2016, 7:11802. DOI: 10.1038/ncomms11802

Zeng, S.; Li, R.; Freire, S.; Garbellotto, V.; Huang, E.; Smith, A.; Hu, C.; Tait, W.; Bian, Z.; Zheng, G.; Zhang, D.; Sun, L. Moisture-Responsive Wrinkling Surfaces with Tunable Dynamics. *Advanced Materials* 2017, 29, 1700828.

Zeng, S.; Shen, K.; Liu, Y.; Chooi, A.; Smith, A.; Zhai, S.; Chen, Z.; Sun, L. Dynamic Thermal Radiation Modulators via Mechanically Tunable Surface Emissivity. *Materials Today* 2021, 45, 44-53

Zeng, S.; Li, R.; Tait, W.; Zhang, M.; Zhu, M.; Chov, N.; Xu, G.; Zhang, D.; Sun, L. Spontaneous Formation of Wrinkle-driven Tubular Structure as a Versatile Platform for Adaptive 3D Stretchable Electronics. *Materials Horizons* 2020, 7, 2368-2377.

Zeng, S.; Sun, H.; Park, C.; Zhang, M.; Zhu, M.; Chov, N.; Li, E.; Smith, A.; Xu, G.; Li, S.; Hou, Z.; Li, Y.; Wang, B.; Zhang, D.; Sun, L. Multi-stimuli responsive chromism with tailorable mechanochromic sensitivity for versatile interactive sensing under ambient conditions. *Materials Horizons* 2020, 7, 164-172.

Zeng, S.; Liu, Y.; Li, S.; Shen, K.; Hou, Z.; Chooi, A.; Smith, Andrew.; Chen, Z.; Sun, L. Smart laser-writable micropatterns with multi-scale photo/moisture reconstructible structure. *Advanced Functional Materials* 2020, 31, 2009481

Zeng, S.; Shen, K.; Li, S.; Li, R.; Hou, Z.; Zhang, X.; Tait, W.; Kajiwara, T.; Takahara, A.; Smith, A.; Jones, M.; Zhang, D.; Sun, L. Tailoring multi-stimuli responsive micropatterns activated by various mechanical modes. *Advanced Functional Materials* 2021, 31, 2100612.

Mao, Z.; **Zeng, S. #;** Shen, K.; Chooi, A.; Simth, A.; Jones, M.; Zhou, Y.; Liu, X.; Sun, L. Dynamic Mechanochromic Optics with Tunable Strain Sensitivity for Strain Responsive Digit Display. *Advanced Optical Materials* 2020, 8, 2001472

Selected Conference Papers