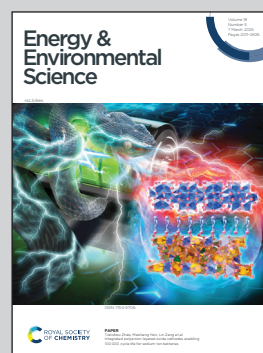


Showcasing research from Professor Shuang Yang, Yu Hou, and Haibao Jin's laboratories, School of Materials Science and Engineering, East China University of Science and Technology, Shanghai 200237, China.

Photomechanically accelerated degradation of perovskite solar cells

Understanding the origin of intrinsic instability for metal halide perovskites is indispensable for their advancement in opto-electronic applications. This paper investigates the impact of photomechanical effect on the stability of PSCs, and demonstrates a photomechanically accelerated degradation mechanism of perovskite thin films. This study shows that the physical separation of each perovskite grains using soft polymer can circumvent the photomechanical damage, and attain T97 of 1000 h under continuous one-sun illumination at 55 °C in solar cell devices.

As featured in:



See Haibao Jin, Yu Hou, Shuang Yang *et al.*, *Energy Environ. Sci.*, 2025, **18**, 2254.