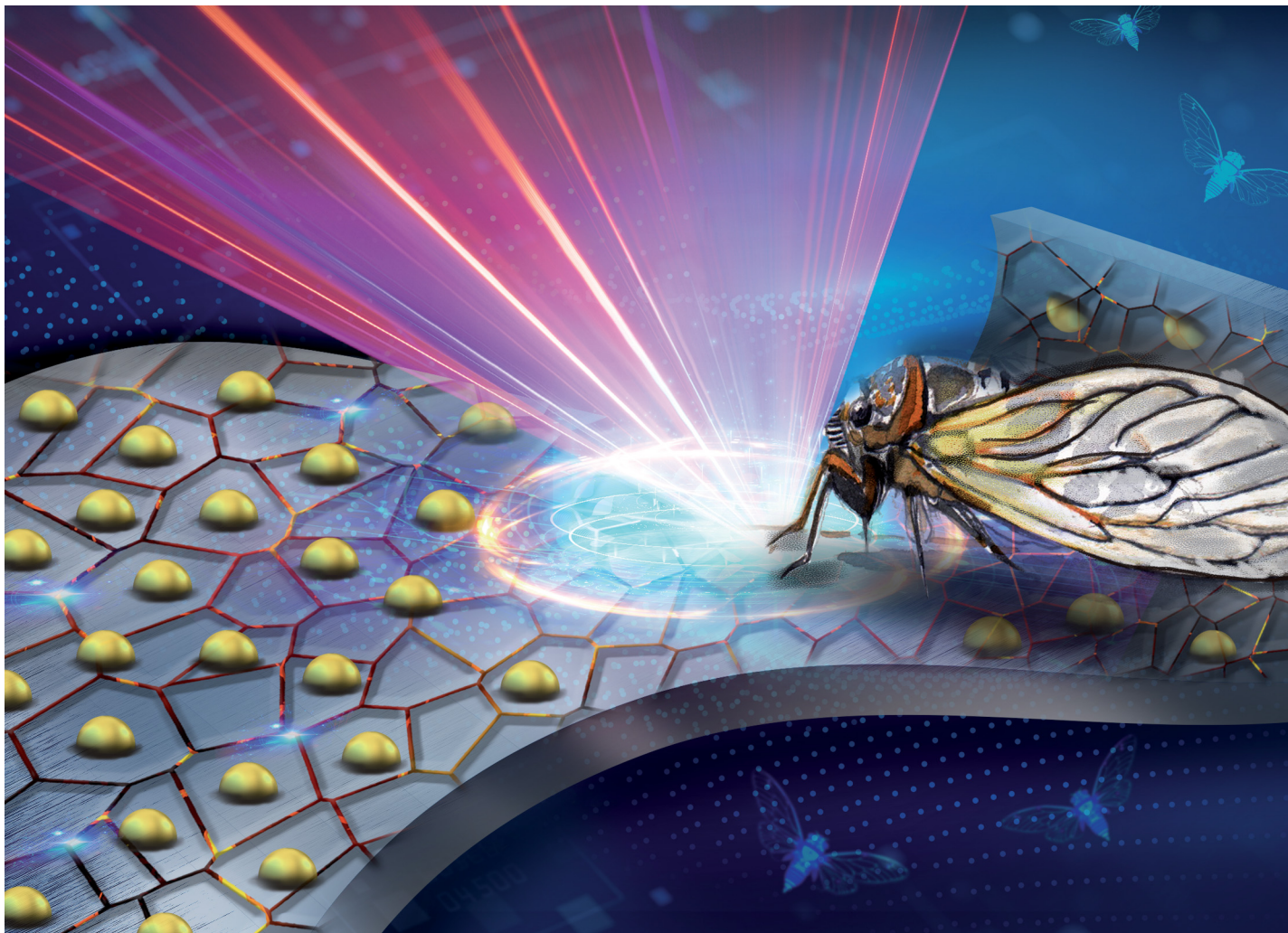


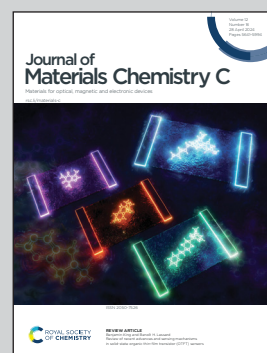


Showcasing collaborative research from Advanced Nanophotonics Technology Laboratory, National Taipei University of Technology, Taiwan, and Center for Organic Photonics and Electronics Research (OPERA), Kyushu University, Japan.

Realizing a flexible and wavelength-tunable random laser inspired by cicada wings

Nanostructures inspired by cicada wings have been utilized to enhance the efficiency of various optoelectronic devices. In this study, we present a flexible random laser (RL) employing a dye-covered silk fibroin replica film (DC-SFRF), which was created *via* soft lithography of a cicada's wing and applied onto a PET substrate. By applying mechanical stress to modify the distribution of nanopapillate structures on the film's surface, we observed a significant blue-shift in the emission spectrum of the DC-SFRF RL, along with a reduction in speckle contrast.

As featured in:



See Ja-Hon Lin, Chihaya Adachi *et al.*, *J. Mater. Chem. C*, 2024, **12**, 5701.