

EES Catalysis

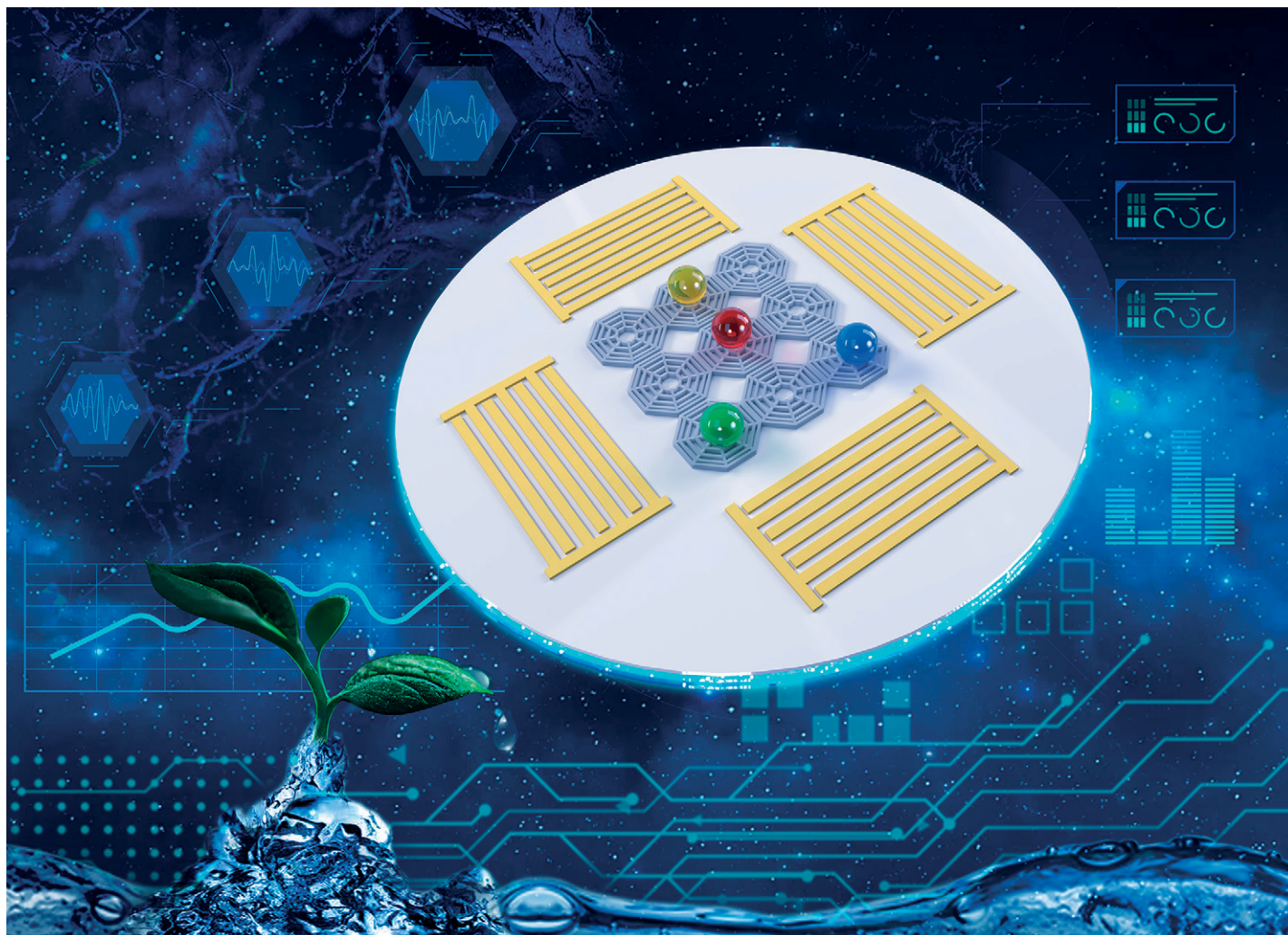
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Elemental answers**



Showcasing research from Professor Ying Yang's laboratory, College of Aerospace Engineering, State Key Laboratory of Mechanics and Control for Aerospace Structures, Nanjing University of Aeronautics and Astronautics, P.R. China

Surface acoustic wave digital microfluidics with surface wettability gradient

The intricate sequential reaction among multiple droplets poses a challenge for digital microfluidics (DMF). A propagation model of surface acoustic waves (SAWs) at the fluid-solid coupling interface is proposed. The selection of the driven object and sequential reactions among multiple droplets are achieved by constructing microstructures on the surface that satisfies different wetting models. This technology overcomes the limitation of SAW DMF, which could only manipulate single droplets on solid surface. It has potential applications in drug synthesis, bioengineering, and medical diagnostics, etc.

As featured in:



See Yaodong Zhang and Ying Yang,
Lab Chip, 2024, **24**, 3226.