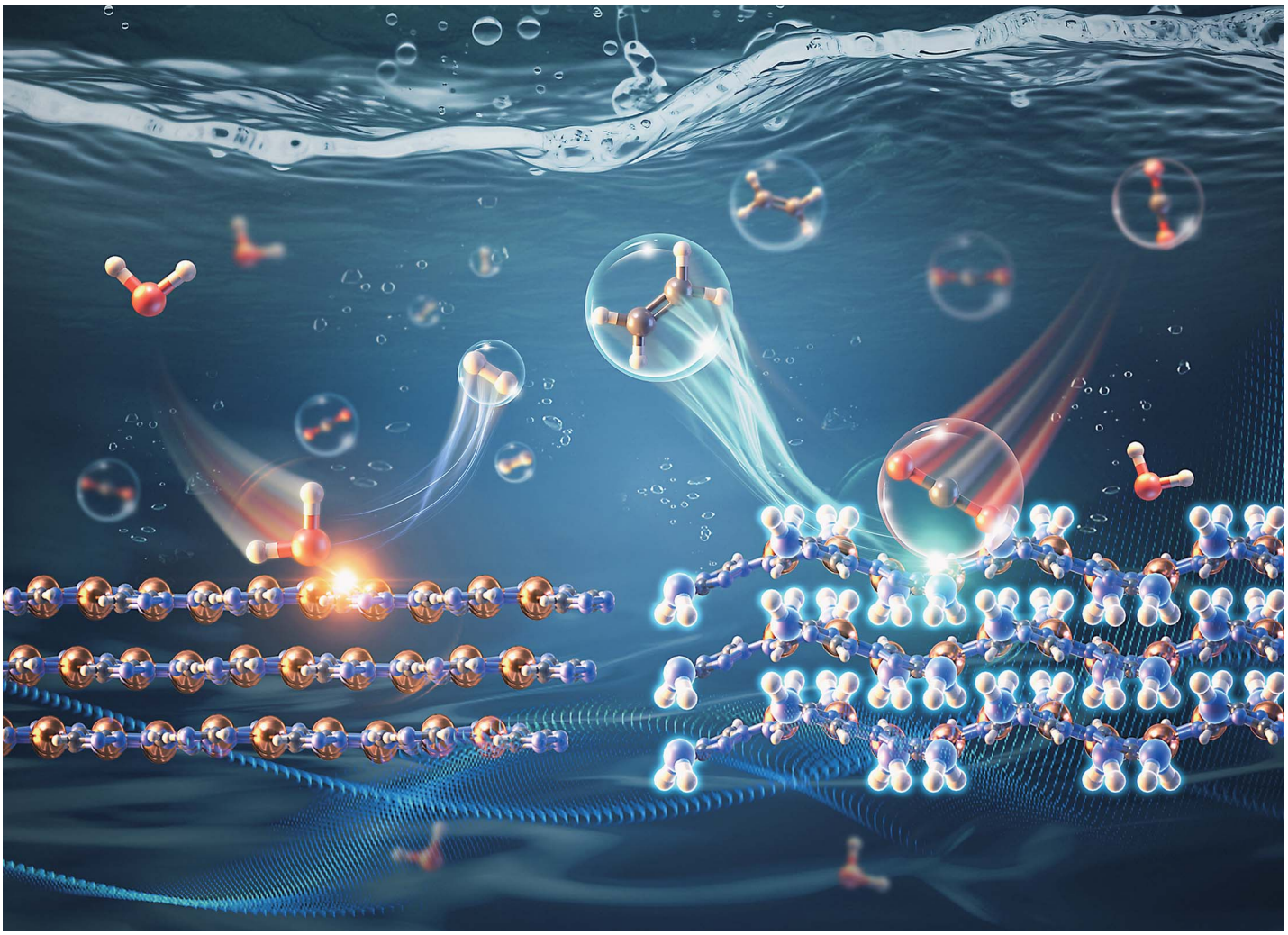

Highlight a study of inversing the electrocatalytic selectivity from HER to CO_2RR by Prof. Jie-Peng Zhang and Prof. Dong-Dong Zhou from Sun-Yat University.

Bending two-dimensional Cu(I)-based coordination networks to inverse electrocatalytic HER/CO_2RR selectivity

By introducing an amino group onto the triazolate ligand, the shape of the two-dimensional layer in Cu(I)-based coordination networks transforms from planar to wavy, which inverses the electrocatalytic selectivity from HER (selectivity ~80%) to CO_2RR (selectivity ~76%, C_2H_4 up to 52%). The wavy structure allows the amino groups to form attractive hydrogen-bonding interactions with the key reaction intermediates of C_2H_4 to boost the CO_2RR process, while steric hindrance with the key reaction intermediates of H_2 to inhibit the HER.

As featured in:

See Dong-Dong Zhou, Jie-Peng Zhang *et al.*, *J. Mater. Chem. A*, 2024, **12**, 16396.

ROYAL SOCIETY OF CHEMISTRY

rsc.li/materials-a

Registered charity number: 207890