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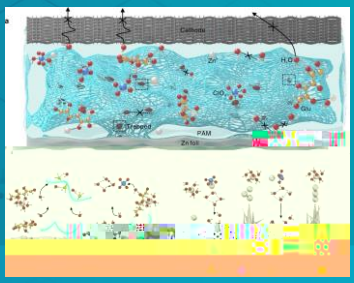
# Science Island Express

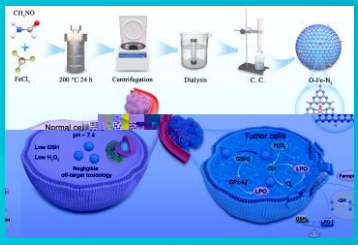
The *Science Island Express* delivers the most recent big things happening at HFIPS.

## MATERIAL



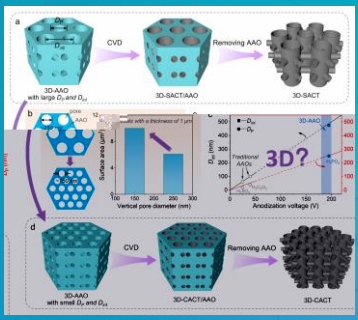
A hydrogel electrolyte formula is shown to bond with water molecules, while the zincophilic glucose preferentially regulate $Zn^{2+}$ solvation. The multifunctional hydrogel structure can effectively disrupt the intrinsic H-bond network and inhibit the interface side-reactions induced by active water.

## BIOLOGY



HFIPS researchers develop uniformly dispersed and favorable biosafety profile graphitic carbon nitride quantum dots immobilized with Fe-$N_4$ moieties modulated by axial O atom (denoted as O-Fe-$N_4$) for converting $H_2O_2$ into $^1O_2$ via Russell reaction, without introducing external energy.

## TECHNIQUE



A simple technique is achieved to finely adjust the vertical-pore diameter and inter-spacing in three-dimensional nanoporous anodic aluminum oxide (3D-AAO) template, and 3D compactly arranged carbon tube (3D-CACT) nanoarrays was created as electrodes for symmetrical EDLCs using nanoporous 3D-AAO template-assisted chemical vapor deposition of carbon.

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