**Bioinspired Super-wettability System and Beyond**

**Quantum-confined superfluid: energy conversion, chemical reaction and biological information transfer**

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Superfluid was originally discovered in 4He below 2.17 K, which allows liquid to flow without loss of kinetic energy. A new concept of "quantum-confined superfluid (QSF)" has been proposed for ultrafast ions and molecules transmission in biological ion channels, which are in a quantum way of single molecular or ionic chain with a certain number of molecules or ions.[1-2] The biomimetic systems also exhibit QSF phenomena, such as ultrafast ions transport in artificial ion channels (106 ions per second), and liquid super-spreading on the super-amphiphilic silicon wafer surface.[3-4] The introduction of QSF concept in the fields of chemistry and biology may create significant impact.[5] As for chemistry, the QSF effect provides new ideas for accurate synthesis in organic, inorganic, polymer, etc.[6] The implementation of the idea of QSF will also promote the development of QSF biochemistry, biophysics, bioinformatics, biomedical science, and even quantum ionics.[7-8]

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