The best of both worlds: Combining classical and quantum systems to meet supercomputing demands
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Quantum entanglement is one of the most fundamental and intriguing phenomena in nature. Recent research on entanglement has proven to be a valuable resource for quantum communication and information processing. Now, scientists from Japan have discovered a stable quantum entangled state of two protons on a silicon surface, opening doors to an organic union of classical and quantum computing platforms and potentially strengthening the future of quantum technology.

One of the most interesting phenomena in quantum mechanics is "quantum entanglement." This phenomenon describes how certain particles are inextricably linked, such that their states can only be described with reference to each other.

This study shows how quantum entanglement displays a huge energy difference between its states unlike those of molecular hydrogen, promising ultra-fast processing in the order of 10^6 qubits and atom teleportation (H1?H4). Credit: Takahiro Matsumoto from NCU, Japan