

Quantum Breathers in Coupled Josephson Junctions

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Abstract – Anharmonicity present in the potentials of two capacitively coupled Josephson junctions allows for quantum excitations that localize energy on one junction during a time that sensitively depends on the excitation energy, and can be tuned through the bias current injected into the junctions. Manipulation techniques that nowadays are used for quantum information processing with Josephson junctions can be used to resolve the flow of energy between the junctions in time.

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