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## **Superconductor-Insulator Transition Far from Equilibrium**

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Abstract:

We show that, at low temperatures ( $T < 0.2$  K), Copper-pairs undergoing localization transition become decoupled from the host-material phonons. This allows us to experimentally study an interacting, many-body, quantum system far from equilibrium. Our system exhibits complex dynamics alongside a new second-order phase transition.