

Nanoelectromechanics of Superconducting Weak Links

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in collaboration with

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Mechanical flexural vibrations of a suspended nanowire, driven by an electronic superconducting current flowing through the nanowire, will be discussed. We will show that both superconducting pumping of nanovibrations [1] and a dc-voltage-induced cooling effect [2] can occur, depending on the strength of electronic backscattering in the nanowire.

1. G. Sonne et al., Phys. Rev. B **78**, 14450, (2008).
2. G. Sonne et al., Phys. Rev. Lett. **104**, 226802 (2010).

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