

Abstract Submitted
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Dependence of the quasiparticle recombination rate on the superconducting gap and T_C ¹ G.L. CARR, NSLS - Brookhaven National Lab, XI-AOXIANG XI, Department of Physics, Univ. of Florida, J. HWANG, Department of Physics, Pusan National Univ., H. TASHIRO, D.H. REITZE, D.B. TANNER, Department of Physics, Univ. of Florida — The relaxation of excess quasiparticles in a BCS superconductor is known to depend on quantities such as the quasiparticle & phonon density of states, and their coupling (Kaplan et al, *Phys. Rev. B* **14** 4854, 1976). Disorder or an applied field can disrupt superconductivity, as evidenced by a reduced T_C . We consider some simple modifications to the quasiparticle density of states consistent with a suppressed energy gap and T_C , leading to changes in the intrinsic and effective (measured) rates for excess quasiparticles to recombine into pairs. We review some results for disordered MoGe and discuss the magnetic-field dependence of the recombination process.

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