

Abstract Submitted  
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**Energy Transfer from an Electron-Hole Plasma layer to a Quantum Well in Semiconductor Structures**<sup>1</sup> S.K. LYO, Sandia National Laboratories — We investigate the energy transfer mechanism and rates from an electron-hole plasma in a quasi-two-dimensional (2D) quantum well to an empty quantum well separated by a wide barrier. The rates are compared and contrasted with the 2D-2D transfer rates of classical excitons. The temperature dependence of the 2D-2D transfer rate of excitons is found to be strikingly different from that of electron-hole plasmas in general. The dependences of the rates on the carrier density, the center-to-center distance between the quantum wells, and the temperature are studied.

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