

# Current-Voltage Characteristics of Quantum Hydrodynamic Model for Semiconductors

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**Abstract:** A numerical study of the stationary isothermal quantum hydrodynamic model for semiconductors is presented. The stationary model consists of nonlinear third-order elliptic equations. The convergence of a Newton iteration is studied. Numerical simulations of a  $n^+ - n - n^+$  diode are presented.

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