

Weak localization in silver films

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At very low temperature, back scattering of electron causes the conductivity of material to go down from what Drude theory expects. This localization of electron is the consequence of quantum mechanical behavior of electron. It will be destroyed at room temperature or high magnetic field. The predicted theory was observed in silver thin film grown in the laboratory by evaporative deposition.

Reference: - American Journal of Physics, Nov. 2005