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Thermal transport in the two-dimensional disordered electron gas GEORG SCHWIETE, Dahlem Center for Complex Quantum Systems, Freie Universität Berlin, ALEXANDER FINKELSTEIN, Texas A&M University, College Station, Texas, and The Weizmann Institute of Science, Rehovot, Israel — We develop a theory of thermal transport in the two-dimensional disordered electron gas at low temperatures. Our approach is based on the calculation of the heat density correlation function. To this end we subject the Keldysh nonlinear sigma model in the presence of source fields to a renormalization group analysis. Special care is taken to additionally account for scattering processes with a very small frequency transfer.

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