

Konopka, P.; Schröter, J.

Correlational thermodynamics of plasmas. III: Transport coefficients. (English)

Zbl 0782.76106

J. Non-Equilibrium Thermodyn. 18, No. 1, 59-101 (1993).

[For parts I, II see the foregoing entries.]

The extended correlational thermodynamics is applied to a treatment of thermal and particle diffusion for a plasma in constant electrical fields and in presence of constant driving forces. The related constitutive equations and the transport coefficients with their correlational corrections are discussed and compared with experimental data.

Reviewer: V.Čadež (Beograd)

MSC:

76X05 Ionized gas flow in electromagnetic fields; plasmic flow
82B40 Kinetic theory of gases in equilibrium statistical mechanics
82B30 Statistical thermodynamics

Keywords:

thermal and particle diffusion; constant electrical fields; driving forces; constitutive equations; correlational corrections

Full Text: [DOI](#)

References:

- [1] Konopka P., Part II: Electric Conductivity, J. Non-Equilib. Thermodyn. 17 pp 343– (1992) · Zbl 0782.76105 · doi:10.1515/jnet.1992.17.4.343
- [2] Konopka P., Part I: Kinetic Background and Equilibrium Properties, J. Non-Equilib. Thermodyn. 17 pp 245– (1992) · Zbl 0782.76104
- [3] DOI: 10.1103/PhysRev.89.977 · Zbl 0050.23505 · doi:10.1103/PhysRev.89.977
- [4] Bues I., Phys. 22 pp 345– (1967)
- [5] DOI: 10.1063/1.1761800 · doi:10.1063/1.1761800
- [6] DOI: 10.1063/1.1692966 · doi:10.1063/1.1692966

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.