

PHASE DIAGRAM OF TWO-DIMENSIONAL COULOMBIC GAS

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S u m m a r y

The phase diagram of a 2D-Coulombic gas is investigated. The equation of state is modeled with the help of the van der Waals equation for the system of soft dipole pairs. The positions of a binodal and a spinodal are determined. Dielectric permittivity of such a system is studied with the help of the canonical formalism. The relative position of the insulator–conductor transition line on the phase diagram is discussed.