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**Initial-boundary value problems describing mobile carrier transport in semiconductor devices.** (English) [Zbl 0581.35069](#)

*Commentat. Math. Univ. Carol.* 26, 75-89 (1985).

The system of partial differential equations describing mobile carrier transport in semiconductor devices with constant or varying densities of ionized impurities is investigated. Under appropriate assumptions there are indicated proofs of the global existence, uniqueness and the exponential stability of solutions to corresponding systems.

**MSC:**

- [35Q99](#) Partial differential equations of mathematical physics and other areas of application Cited in 2 Documents
- [35D05](#) Existence of generalized solutions of PDE (MSC2000)
- [35B40](#) Asymptotic behavior of solutions to PDEs

**Keywords:**

[van Roosbroeck's equations](#); [carrier transport](#); [semiconductor](#); [global existence](#); [uniqueness](#); [exponential stability](#)

**Full Text:** [EuDML](#)