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*Existence and nonlinear stability of stationary states for the semi-relativistic Schroedinger-Poisson system*

We study the stationary states of the semi-relativistic Schroedinger-Poisson system in the repulsive (plasma physics) Coulomb case. In particular, we establish the existence and the nonlinear stability of a wide class of stationary states by means of the energy-Casimir method. Moreover, we establish global well-posedness results for the semi-relativistic Schroedinger-Poisson system in appropriate functional spaces.