Asymptotic behavior of solutions to the drift-diffusion equation with critical dissipation

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Abstract

The initial value problem for the drift-diffusion equation arising from the model of semiconductor devices is studied. The dissipation on the equation is given by the half Laplacian. Well-posedness, global in time existence and decay of solutions are known. The purpose in this poster is to show the asymptotic profile of the solution as the time variable tends to infinity.

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