

A blowup criterion for nonhomogeneous incompressible Navier-Stokes-Landau-Lifshitz system in 2-D

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Abstract

In this paper, we investigate nonhomogeneous incompressible Navier-Stokes-Landau-Lifshitz system in 2-D. This system consists of Navier-Stokes equations coupled with Landau-Lifshitz-Gilbert equation, an evolutionary equation for the magnetization vector. We establish a blowup criterion for the two-dimensional incompressible Navier-Stokes-Landau-Lifshitz system with finite positive initial density.

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