

1092-35-371

Jay L Hineman* (jay.hineman@gmail.com), Department of Mathematics, Fordham University, 441 E. Fordham Rd., Bronx, NY 10458, and **Changyou Wang**, Department of Mathematics, University of Kentucky, Lexington, KY 40506. *Well-Posedness of Nematic Liquid Crystal Flow in $L^3_{uloc}(\mathbb{R}^3)$.*

We discuss the local well-posedness of the Cauchy problem for a simplified version of hydrodynamic flow of nematic liquid crystals in \mathbb{R}^3 for any initial data (u_0, d_0) having small L^3_{uloc} -norm of $(u_0, \nabla d_0)$. Here $L^3_{uloc}(\mathbb{R}^3)$ is the space of uniformly locally L^3 -integrable functions. (Received August 13, 2013)