1100-37-129 **Hong Lu*** (ljwenling@163.com), 37 Xueyuan Rd. Haidian Strict, Beijing, Beijing 100191, Peoples Rep of China, and **Peter Bates**, **Shujuan Lv** and **Mingji Zhang**. *Dynamics of 3D fractional complex Ginzburg-Landau equation.*

In this work, we study the initial boundary value problem of the fractional complex Ginzburg-Landau equation in *three* spatial dimensions with the dissipative effect given by the *fractional* Laplacian. The priori estimates, which is crucial to study the well-posedness, is derived for the equation with fractional Laplacian and nonlinear terms in *three* spatial dimensions. Using Galerkin's method, the existence and uniqueness of the global smooth solution is established. Furthermore, the existence of the global attractor is proved, and the estimates of the upper bounds of Hausdorff and fractal dimensions for the global attractor are obtained. (Received February 05, 2014)