1027-35-18   **Jisun Lim*** (`jisun@colorado.edu`), Department of Applied Mathematics, 526 UCB, University of Colorado at Boulder, Boulder, CO 80309-0526. *Stability of Solutions to a Reaction Diffusion System Based on Chemical Reaction Kinetics.*

In this paper, we deal with the stability to two mathematical models that describe chemical reaction kinetics. One is a set of deterministic ordinary differential equations induced by one reversible chemical reaction mechanism containing three chemical species. The other is a set of partial differential equations including diffusion into the same reaction. We prove the global stability of these models. The technique that is applied to is the Liapunov method. (Received December 31, 2006)