1026-35-179   **Keith S Promislow*** (`kpromisl@math.msu.edu`), 212A Wells Hall, Department of Mathematics, East Lansing, MI 48824, and **Mohar Guha** (`guhamoha@math.msu.edu`), 212A Wells Hall, Dept. of Mathematics, East Lansing, MI 48824. *Stability of fronts in non-smooth excitable media in a noisy environment.*

We use the renormalization group method to address the evolution of a hydration front in a reactive membrane. The front seperates ignited and extinguished states of a PEM fuel cell membrane. The governing equations consist of a non-local reaction diffusion system which depends discontinuously on membrane hydration levels. We show that even in a noisy environment the leading order front dynamics can be described by an explicit ODE. (Received February 26, 2007)