1145-49-173   **Hayriye Guckir Cakir*** (`guckirha@msu.edu`) and **Keith Promislow**. *The constrained minimization of the Functionalized Cahn-Hilliard Free Energy.*

We show that the Functionalized Cahn-Hilliard free energy with zero functionalization terms subject to a mass constraint on a bounded domain in $\mathbb{R}$ has global minimizers over a variety of admissible sets. We construct an exhaustive set of multipulse critical points and prove that they are all local minima with the choice of global minima depending upon the value of the mass constraint. (Received August 15, 2018)