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**Peter A Markowich\*** (p.a.markowich@damtp.cam.ac.uk). *Reaction-Diffusion Equation, Entropies and Sobolev Inequalities.*

We derive convex Sobolev inequalities, based on certain reaction-diffusion equations and show how they can be used to prove (optimal) decay-to-equilibrium-rates of the solution. (Received January 28, 2008)