

**EXISTENCE AND UNIQUENESS OF
PERIODIC SOLUTIONS FOR A NONLINEAR
REACTION-DIFFUSION PROBLEM**

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Abstract

We consider a class of degenerate reaction-diffusion equations on a bounded domain with nonlinear flux on the boundary. These problems arise in the mathematical modelling of flow through porous media. We prove, under appropriate hypothesis, the existence and uniqueness of the nonnegative weak periodic solution. To establish our result, we use the Schauder fixed point theorem and some regularizing arguments.
