

论文

REMARKS ON DIFFUSIVITY VERSUS ABSORPTION THROUGH THE BOUNDARY

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摘要 In this paper we solve an open problem of [1], and prove that in the critical case $m = 2\alpha - 1 > 1$, the solution of problem (D) exists globally. Moreover, $\forall u_0 \in C^{2+\gamma}(\overline{\Omega})$ with $u_0(x) > 0$ on $\overline{\Omega}$, there exist positive constants C and K which depend only on $\|u_0\|_{L^\infty}$ such that $u(x, t) \leq C \exp(m^{k-1}k\alpha t)$.

关键词 [Diffusivity, nonlinear boundary condition](#)

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Abstract In this paper we solve an open problem of [1], and prove that in the critical case $m = 2\alpha - 1 > 1$, the solution of problem (D) exists globally. Moreover, $\forall u_0 \in C^{2+\gamma}(\overline{\Omega})$ with $u_0(x) > 0$ on $\overline{\Omega}$, there exist positive constants C and K which depend only on $\|u_0\|_{L^\infty}$ such that $u(x, t) \leq C \exp(m^{k-1}k\alpha t)$.

Key words [Diffusivity](#) [nonlinear boundary condition](#) [global existence](#) [upper-lower solutions](#)

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