

Radial solutions of scaling invariant nonlinear elliptic equations with mixed reaction terms

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Abstract

We study global properties of positive radial solutions of $-\Delta u = \lambda u + M|\nabla u|^{2p+1}$ in \mathbb{R}^N where $p > 1$ and M is a real number. We prove the existence or the non-existence of ground states and of solutions with singularity at ∞ according to the values of M and p .