

QUASILINEAR SCHRÖDINGER EQUATIONS WITH CRITICAL GROWTH AND A COERCIVE POTENTIAL

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The existence of solution for a class of quasilinear elliptic equations in \mathbb{R}^N with critical growth is established via variational method. Applying a change of variable, the quasilinear equations are reduced to semilinear equations, whose respective associated functionals are well defined in an appropriate subspace X of the Sobolev space $H^1(\mathbb{R}^N)$ and satisfy the geometric hypotheses of the Mountain Pass Theorem. An argument by contradiction allows us to verify that the problem possesses a nontrivial solution without employing Orlicz spaces type.

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