

# GENERALIZED $N$ -LAPLACIAN EQUATIONS INVOLVING CRITICAL EXPONENTIAL GROWTH AND CONCAVE TERMS IN $\mathbb{R}^N$

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In this work we establish the existence and multiplicity of nonzero and nonnegative solutions for a class of quasilinear elliptic equations, known as Generalized  $N$ -Laplacian, whose nonlinearity is allowed to enjoy the critical exponential growth with respect to a version of the Trudinger-Moser inequality and it can also contain concave terms in  $\mathbb{R}^N$  ( $N \geq 2$ ). In order to obtain our results, we combine variational arguments in a suitable subspace of a Orlicz-Sobolev space with a version of the Trudinger-Moser inequality and Ekeland Variational Principle. In a particular case, we show that the solution is a positive ground state.

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