

Normalized solutions of (p, q) -equations with mass supercritical growth

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I report on some results included in a recent paper with Li Cai (J. Differential Equations, 2024). I discuss the qualitative properties of solutions with prescribed norm for a class of elliptic equations driven by the (p, q) -Laplace operator and with lack of compactness. The reaction term is assumed to be continuous and satisfying weak mass supercritical mass conditions. I shall discuss the existence of ground states, as well as the basic behavior of the ground state energy. The approach is based on the direct minimization of the energy functional on the linear combination of Nehari and Pohozaev constraints intersected with a closed ball of suitable radius.