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Indefinite Planar Problem with Exponential Critical Growth

We obtain existence of solution for the equation

$$-\Delta u + \frac{1}{2}(x \cdot \nabla u) = a(x)f(u), \quad x \in \mathbb{R}^2,$$

where a is a continuous sign-changing potential and the superlinear function f has an exponential critical growth.

Keywords: Exponential critical growth, Trudinger Moser inequality, variational methods, indefinite problems.

MSC: 35J60; 35B33.