

# Existence and uniqueness of very singular solutions for a fast diffusion equation with gradient absorption

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Existence and uniqueness of radially symmetric self-similar very singular solutions are proved for the singular diffusion equation with gradient absorption  $\partial_t u - \Delta_p u + |\nabla u|^q = 0$ ,  $u \in (0, \infty) \times \mathbb{R}^N$ , where  $2N/(N+1) < q < \infty$

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