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**Dat T Cao\*** (dcao4@utk.edu), Department of Mathematics, University of Tennessee, Knoxville, TN 37996. *Potential theory for quasilinear elliptic equations.*

We give necessary and sufficient conditions for the existence of a certain class of solutions to the quasilinear equation  $-\Delta_p u = \sigma u^q$ ,  $u > 0$ , in  $\mathbb{R}^n$ , where  $\Delta_p u = \operatorname{div}(|\nabla u|^{p-2} \nabla u)$  is the  $p$ -Laplacian,  $\sigma$  is an arbitrary nonnegative locally integrable function (or measure), and  $0 < q < p - 1$ . Sharp global pointwise estimates of solutions in terms of Wolff potentials are also obtained. This is a joint work with Igor E. Verbitsky. (Received January 17, 2016)