1100-35-90   **Igor E. Verbitsky*** (`verbitskyi@missouri.edu`), Department of Mathematics, University of Missouri, Columbia, MO 65211. *Finite energy and weak solutions of quasilinear elliptic equations.*

We study finite energy and weak solutions to the homogeneous quasilinear equation $-\triangle_p u - \sigma\, u^q = 0$, $u > 0$, on $\mathbf{R^n}$ in the case $0 < q < p - 1$, where $\triangle_p$ is the p-Laplacian and $\sigma \in L^1_{loc}$ is an arbitrary nonnegative function (or measure) on $\mathbf{R^n}$. Necessary and sufficient conditions for the existence, and bilateral pointwise estimates of solutions will be presented, along with a discussion of regularity and uniqueness questions. This is joint work with Cao Tien Dat. (Received January 31, 2014)