In this talk, we first obtain new Li-Yau type gradient estimates for positive solutions of parabolic equations of the type

$$\left(\Delta_g - q(x) - \partial_t\right)u(x, t) = 0$$

on complete Riemannian manifolds with nonnegative Ricci curvature. As applications, Liouville type theorems for the Schrödinger equation

$$\left(\Delta_g - q(x)\right)u(x) = 0$$

are obtained under some weaker conditions, which generalizes those results in the literature. (Received September 09, 2013)