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Mathematics Road, Vancouver, BC V6T 1Z2, Canada. *Traveling wave solutions to the combustion
and the generalized Fisher-KPP models with fractional Laplacians.*

We show the nonexistence of traveling wave solutions in the combustion model with fractional Laplacian $(-\Delta)^s$ when $s \in (0, 1/2]$. Our method can be used to give a direct and simple proof of the nonexistence of traveling fronts for the usual Fisher-KPP nonlinearity. Also we prove the existence and nonexistence of traveling waves solutions for different ranges of the fractional power s for the generalized Fisher-KPP type model. (Received August 20, 2014)