

Figure 1 is a plot of the relative rate coefficient k_r (in units of $10^{-10} \text{ cm}^3 \text{ molecule}^{-1} \text{ s}^{-1}$) versus translational energy E (in eV) for the reaction of OH with ethane. The plot shows eight curves for different total angular momentum quantum numbers $J = 0, 1, 2, 3, 4, 5, 6, 7$. The curves generally show a minimum at low energies followed by a sharp increase and then a plateau at higher energies. The $J=0$ curve (solid red) has the lowest minimum, while the $J=7$ curve (dash-dot orange) has the highest minimum. The curves converge to a value of approximately 1.0 at high energies.

