

DFD13-2013-000384

Abstract for an Invited Paper  
for the DFD13 Meeting of  
the American Physical Society

### **Mixing in combustion<sup>1</sup>**

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Mixing of reactants represents an important element in both non-premixed and premixed turbulent combustion. In non-premixed combustion, molecular mixing is a necessary first step that brings reactants together. In premixed combustion with local flame extinction and reignition, turbulent mixing of hot products with as-yet unburnt fluid is important to combustion behavior. The discussion on mixing will cover the role of entrainment, effects of Reynolds number and the mixing transition, effects of Schmidt number and gas- vs. liquid-phase reacting flows, heat release, Damkoehler-number (finite kinetic-rate) effects, and Mach-number effects.

<sup>1</sup>Support by the Air Force Office of Scientific Research