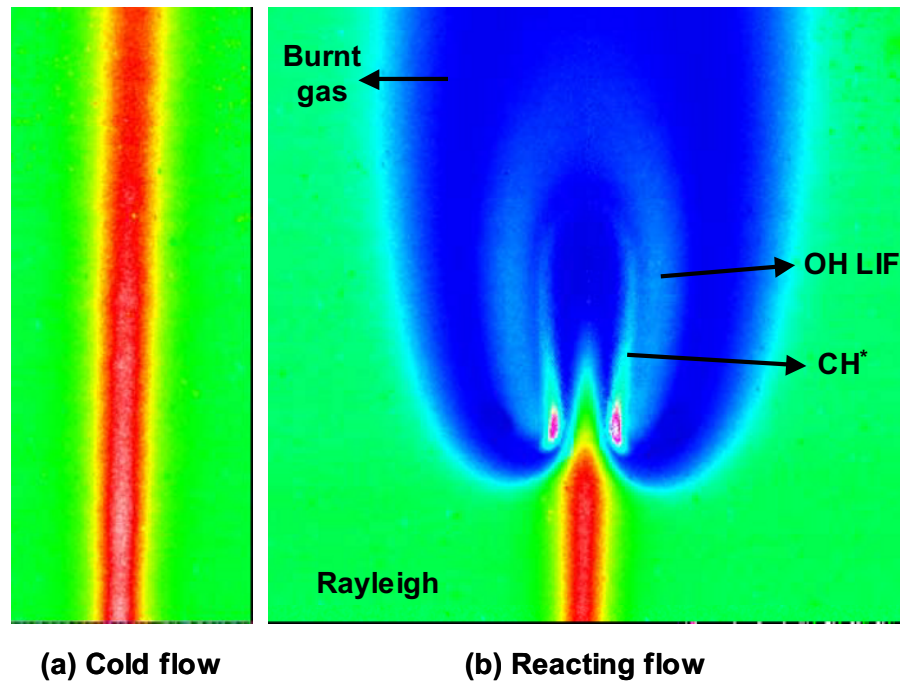


## Visualization of Lifted Laminar Jet Flame by Rayleigh Scattering, OH PLIF, and CH Chemiluminescence

Won, S. H.<sup>1)</sup> Lee, J. S.<sup>1)</sup> Jin S. H.<sup>1)</sup> and Chung, S. H.<sup>1)</sup>

<sup>1)</sup> School of Mechanical and Aerospace Engineering, Seoul National University, Seoul 151-742, Korea,  
E-mail:shchung@snu.ac.kr



A lifted flame in a laminar coflow jet has been visualized, where the jet and coflow velocities were 9.0 and 4.0 cm/s, respectively, for the jet nozzle diameter of 0.25 mm. To visualize the fuel concentration field for both cold (a) and reacting (b) flows, the Rayleigh scattering technique for propane fuel was adopted using an Nd:YAG laser sheet beam of 450 mJ at 532 nm. Two images of Abel-transformed chemiluminescence of CH radical through a narrow band pass filter (430 nm, 10 nm FWHM) and OH PLIF image from  $Q_1(6)$  line excitation are superposed on the Rayleigh image (b). The structure of the lifted flame having a tribrachial structure is demonstrated.