



LA VISION

WE COUNT ON PHOTONS

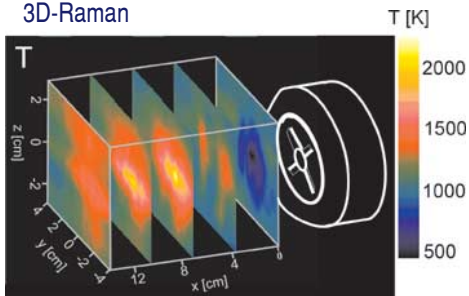
FlameMaster

designed for
the development of
more efficient
and cleaner
combustion systems

Combustion is the major source of energy production and at the same time the principle source of air pollution.

LaVision's **FlameMaster** system family is designed to help the scientific and engineering community to find new concepts for the realization of more efficient and cleaner combustion devices. In-situ and on-line flame visualization is provided as well as quantitative information about species concentration and flame temperature.

3D-Raman



Temperature distribution of a spray flame

applications

investigation of combustion phenomena in flames, furnaces
turbine burners, high pressure combustion systems
propulsion systems, chemical reactors, flame CVD processes
ignition phenomena, incinerators, shock tubes

information

excited species distribution like OH^* , CH^* , C_2^*
flame temperature, flame location & stability
flamefront location & propagation, on-set of ignition

total gas density, temperature fields

gas composition, temperature

soot volume fraction

fuel/air mixing, visualization of exhaust gas recirculation

OH formation, NO production, O_2 consumption, 2-line thermometry
flame radicals such as CH, CN, NH, CO, C_2 , NO_2 , SO_2

upgrades

SprayMaster for spray characterization

FlowMaster for velocity field measurements

special topics

- ▶ exhaust gas recirculation for flame cooling
- ▶ characterization of glass forming flames
- ▶ CVD process control: flame hydrolysis for quartz production
- ▶ high pressure combustion
- ▶ on-line O_2 monitor using tunable diode lasers for incinerator process control

LaVision is world leader in optical combustion diagnostics.

LA VISION GMBH

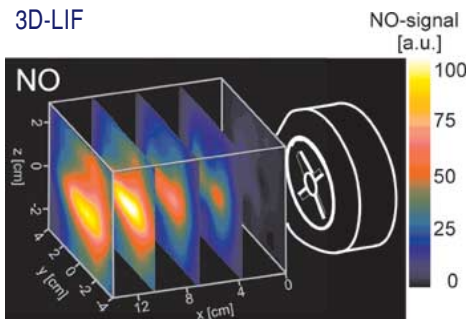
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competence in combustion
diagnostics

3D-LIF



Correlated NO-distribution of the spray flame