

Chemiluminescent Processes in Active Nitrogen-Oxygen
Atoms-Ketene Flames

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Addition of ketene to active nitrogen and active nitrogen-oxygen atoms mixtures produces a flame whose spectrum is composed mainly by CN, CH and C₂ bands.

The intensity distribution in both CN red and violet systems is very similar to that observed with ethylene under the same experimental conditions. A basic mechanism can be suggested involving a primary attack to the double bond in both molecules, followed by reactions of the methylene group.

The mechanism of flame production in the case of ketene seems to involve H atoms formed from HCO radicals produced in the primary step.

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