

# NUMERICAL INVESTIGATION ON THE EFFECT OF PARAMETERS ABOUT GAS ON OZONE GENERATION AS WELL AS SENSITIVITY AND RATE OF PRODUCTION OF IMPORTANT SPECIES

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Ozone is widely used because of its environmental friendly and strong oxidant. The demand for ozone and high-efficiency ozone generator increases rapidly. Much attention has been paid to ozone generation technology, and the effects of various parameters have also been investigated experimentally. Due to the limitation for highly sophisticated instruments and equipment, it is difficult to analyse experimentally the mechanism of influence of various parameters on ozone generation. Numerical simulation has been proved to be an effective method for power supply's parameters. In this work, the influence of gas parameter including inlet gas temperature, gas pressure and gas flow rate on ozone generation are investigated numerically in detail, as well as their mechanism. Meanwhile, the sensitivity and rate of production of important species  $O_3$ ,  $O$ ,  $O(1D)$  and  $O_2(b^1\Sigma)$  based on specific energy are investigated numerically, too.

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