A universal analytical solution to the cw fast-flow chemical laser

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The model and the method put forward by the authors are continued and developed. Starting from the simultaneous solutions of the kinetic equation and the equation of radiation exchange, new concept gain coefficient relating to the thermal motion of particles is introduced and the perturbation solution of the distribution function is used, and the kinetic model and its results are given of the analysis of the supersonic chemical laser when the optical frequency is not identical with the center frequency of the line shape, and they are compared with the common rate models and their results.

连续波快速流化学激光的一般分析模型

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本文继续并发展作者们提出的模型和方法，从运动论方程和辐射交换方程的 联 立 解 出发，引进与粒子热运动有关的增益系数的新概念、利用分布函数的摄动解，给出光频与型线中心频率不一致时超声速化学激光分析的运动论模型及结果，并与常用的速率模型及结果作比较。