

有机高分子添加物增大染料激光输出

与已有的报道不同,我们采用有机高分子添加剂增强染料激光输出,取得了明显的效果。

实验表明,这种添加剂并未显著改变染料溶液的吸收光谱和荧光光谱分布,其主要作用在于抑制辐射跃迁相竞争的无辐射过程。例如,在若丹明 6G 的水溶液中,加入分子量很大的聚乙二醇,其荧光强度可增强 3 倍;在用倍频 YAG:Nd 脉冲激光泵浦

时,该染料激光器的输出功率可增大 5 倍。

此外利用这种添加剂,还可以在很大范围内调节染料溶液的粘度,这对连续染料激光器显然是有意义的。

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