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· 简 讯 ·

双光子原理运转的钇激光器

美国加州圣何塞的IBM Almaden研究中心Silver Smith 等人研制出了发射绿光(549.6 nm)的钇激光器,该激光器用两台红外染料激光器泵浦,用以模拟激光二极管阵列。两级泵浦机理源于以一台(工作于792.1nm)染料激光器激励钇的中间能级,然后在这一能级上的能量经过无辐射跃迁衰减到第二中间能级。紧接着从第二台染料激光器(839.8nm)发射的光子把钇原子推上更高能级,从而在第二次无辐射跃迁之后发射绿色激光。在非最佳化试验装置中,由每台染料激光器耦合出几百毫瓦连续功率可产生约1mW绿光输出。

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