

第五次作业

1. 证明: $[\hat{L}_y, \hat{L}_z] = i\hbar\hat{L}_x$
2. $\hat{L}_+ = \hat{L}_x + i\hat{L}_y, \hat{L}_- = \hat{L}_x - i\hat{L}_y$, 证明: $[\hat{L}_+, \hat{L}_-] = 2\hbar\hat{L}_z$, $[\hat{L}_z, \hat{L}_\pm] = \pm\hbar\hat{L}_\pm$
3. 对于类氢原子(核电荷 Ze)的 $l=n-1$ ($n_r=0$) 轨道, 计算: (1) 最概然半径.