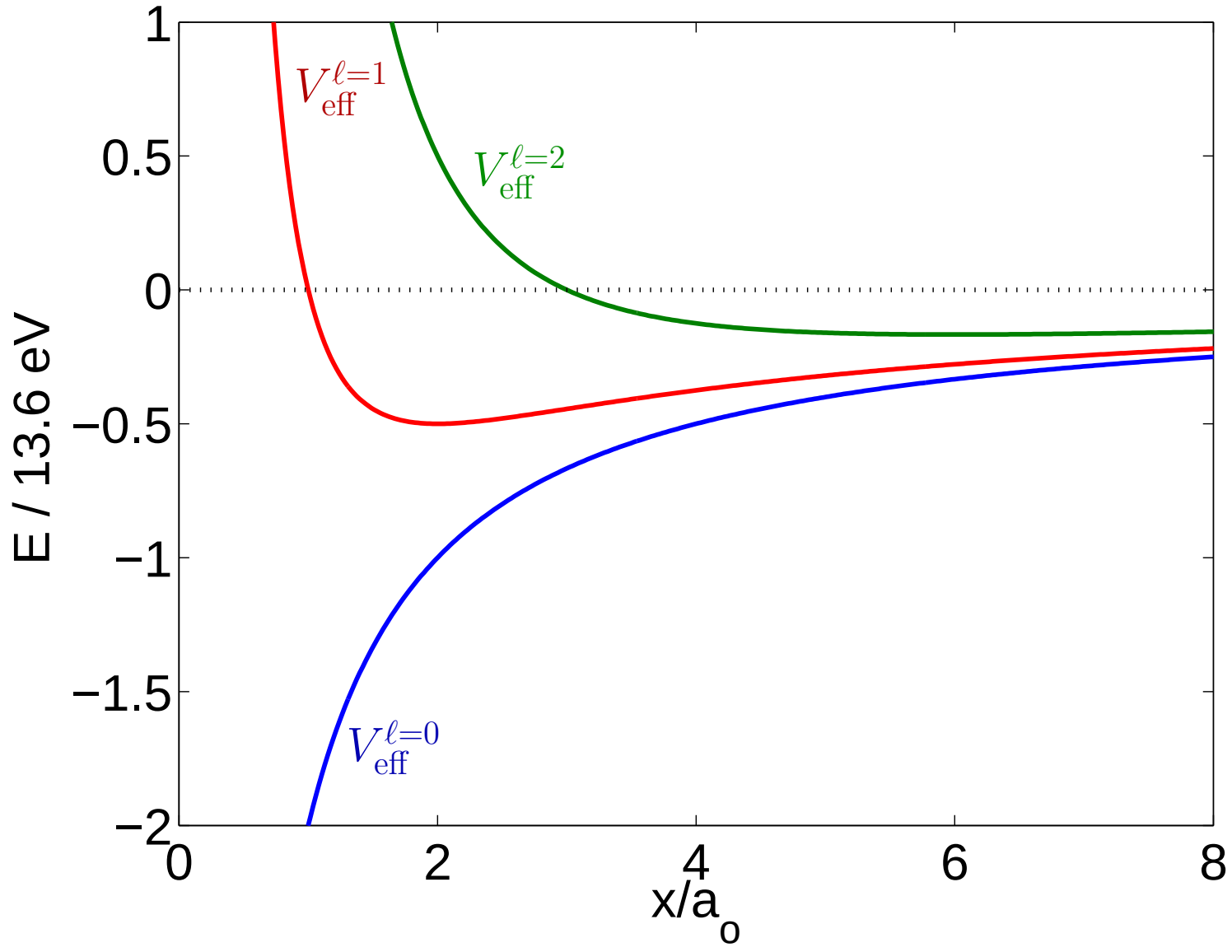
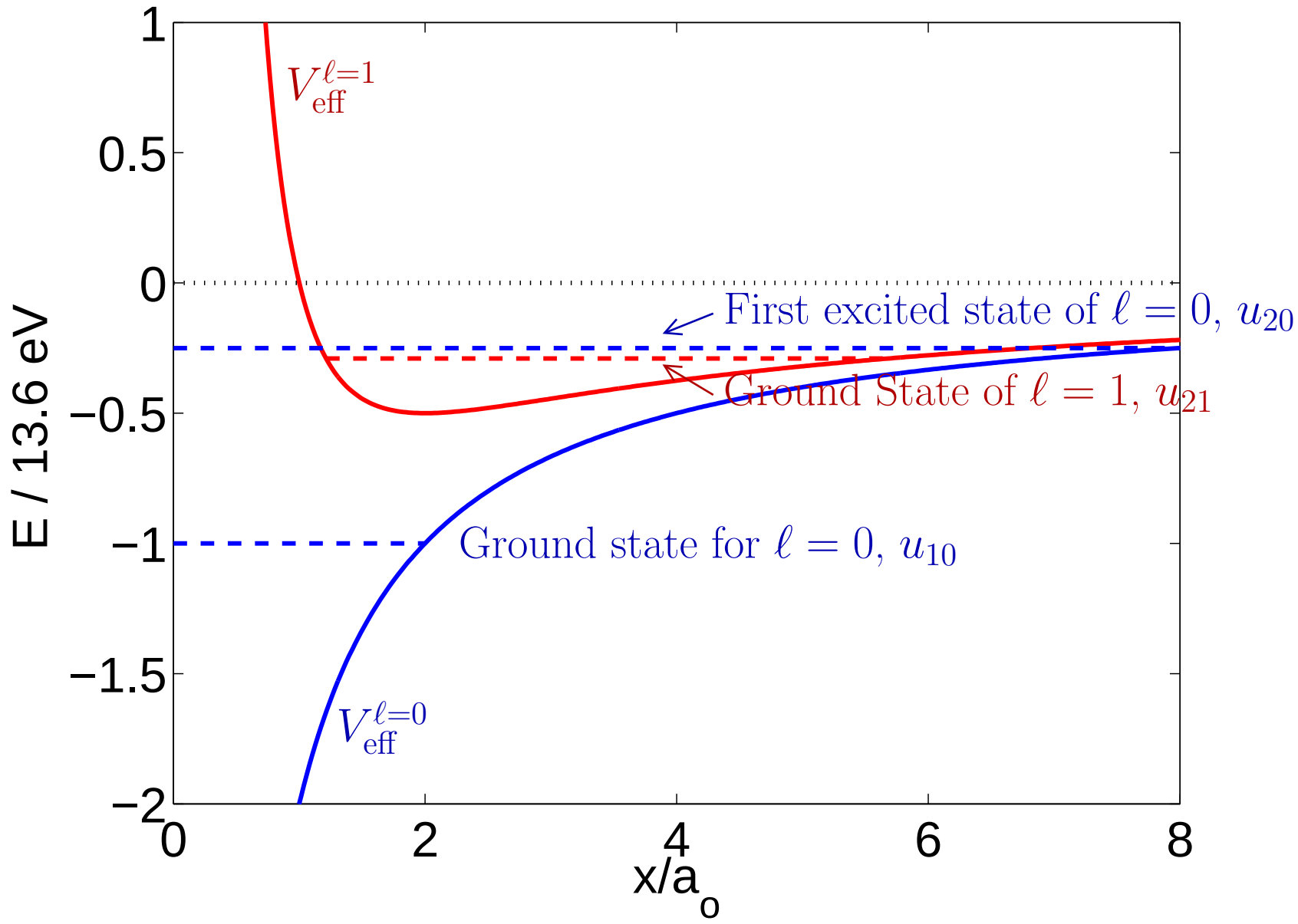
The effective potential for various l



The $(n = 1, \ell = 0)$ and the $(n = 2, \ell = 0)$ and $(n = 2, \ell = 1)$ states



The $(n = 1, \ell = 0)$, the $(n = 2, \ell = 1)$ and the $(n = 3, \ell = 2)$ states

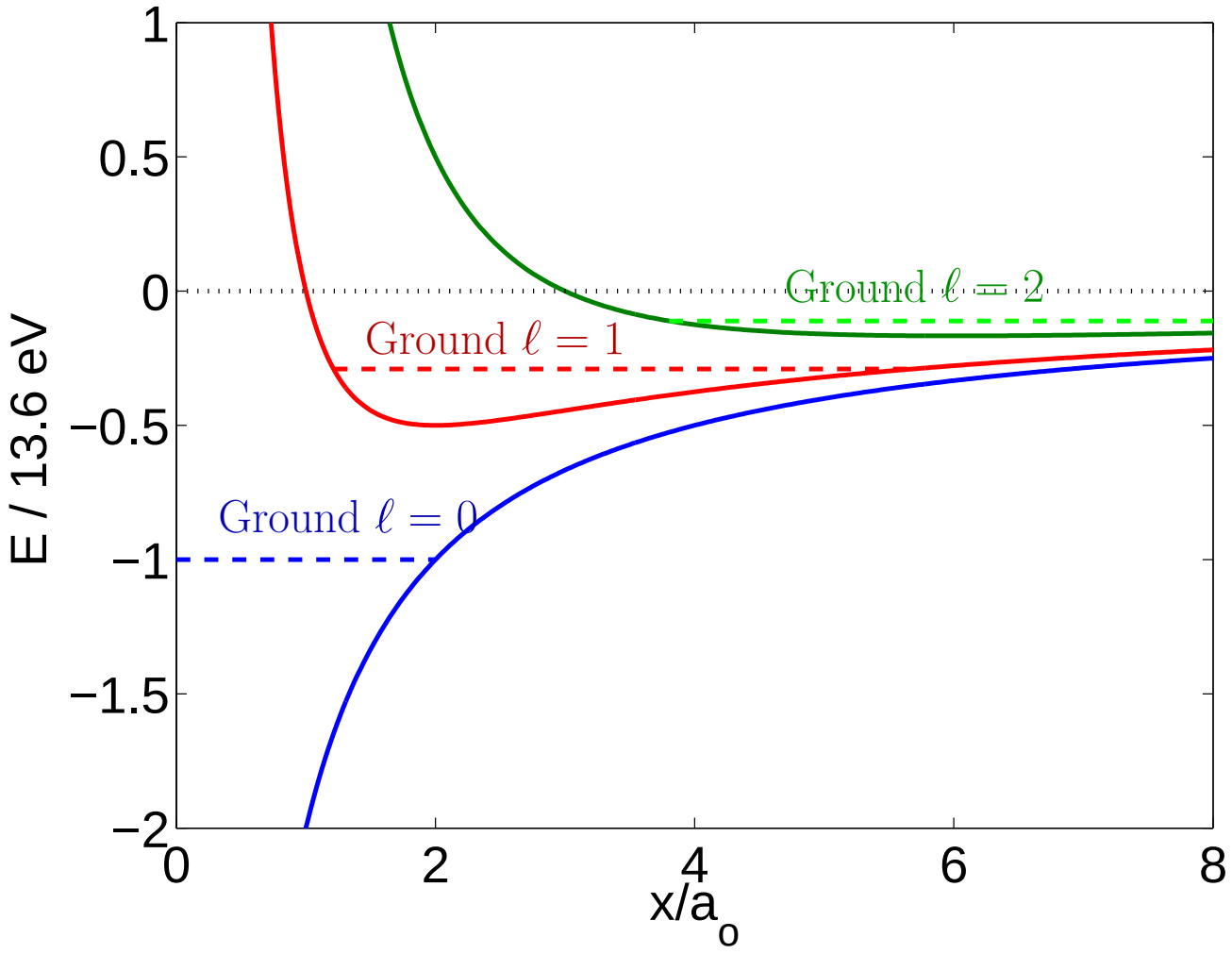
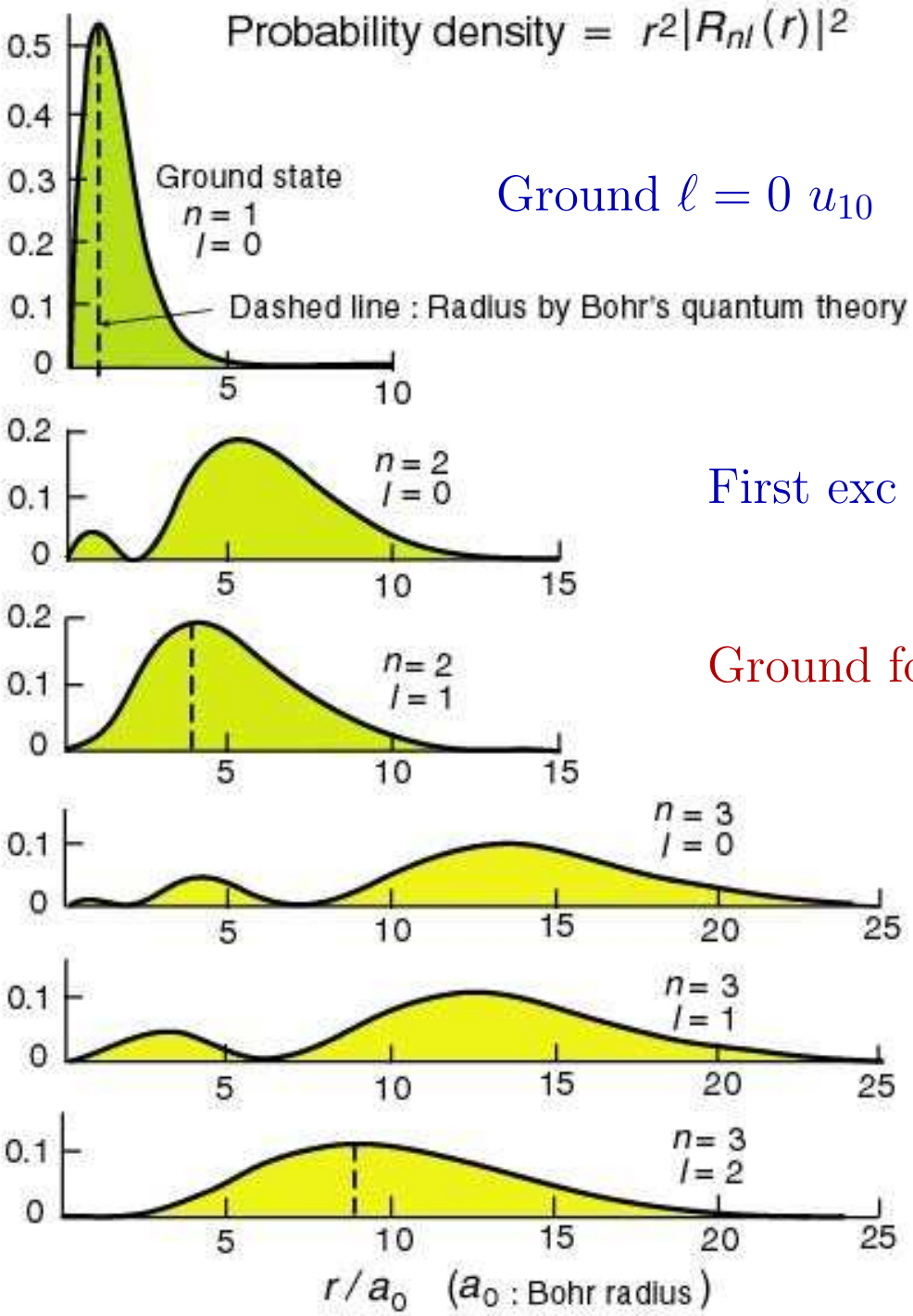


Fig. (C)



Ground $\ell = 0$ u_{10}

First exc for $\ell = 0$ u_{20}

Ground for $\ell = 1$ u_{21}

Second $\ell = 0$ u_{30}

First exc. for $\ell = 1$ u_{31}

Ground $\ell = 2$ u_{32}