

Recent Developments in Radiationless Transitions — Personal Account

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Abstract

We shall first briefly review the historical development of radiationless transitions. We will discuss the similarity between the theories of radiationless transitions and those of photo-induced electron transfer and electronic excitation energy transfer.

In view of the rapid progress in ab initio calculations, the first principle numerical calculation of the rates of radiationless transition has become possible. We shall present some numerical results of molecules, like C_2H_4 , CH_3COCH_3 etc. For the radiationless transitions of small molecules, Duschinsky effect is very important. This effect has been examined and will be reported.