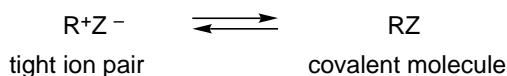


ion pair return

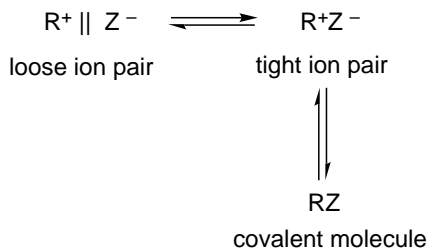
The recombination of a pair of ions R^+ and Z^- formed from ionization of RZ .

If the ions are paired as a *tight ion pair* and recombine without prior separation into a loose ion pair this is called ‘internal ion-pair return’:



It is a special case of ‘primary *geminatate recombination*’.

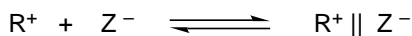
If the ions are paired as a loose ion pair and form the covalent chemical species *via* a tight ion pair, this is called ‘external ion-pair return’:



It is a special case of ‘secondary geminate recombination’.

When the covalent molecule RZ is reformed without direct evidence of prior partial racemization or without other direct evidence of prior formation of a tight ion pair, (e.g. without partial racemization if the group R is suitably chiral) the internal ion-pair return is sometimes called a ‘hidden return’.

External (unimolecular) ion-pair return is to be distinguished from ‘external (bimolecular) ion return’, the (reversible) process whereby dissociated ions are converted into loose ion pairs:



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