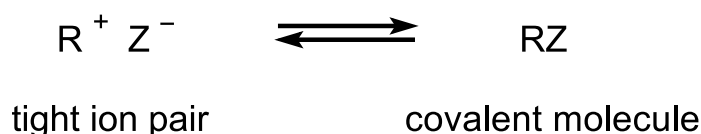


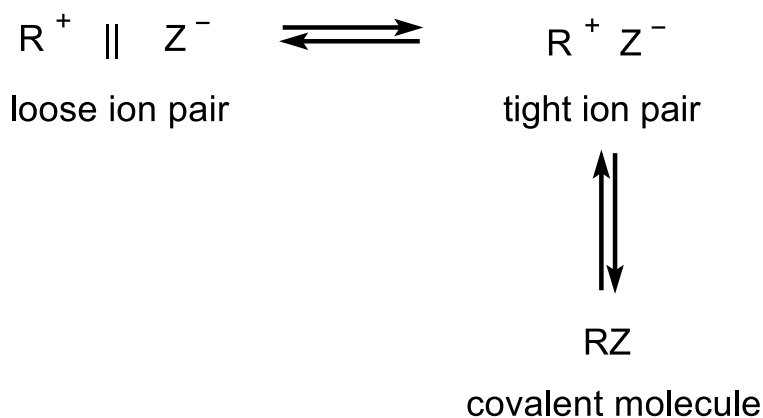
ion pair return

Also contains definitions of: external ion-pair return, hidden return, internal 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 geminate 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:



Source:

PAC, 1994, 66, 1077 (*Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)*) on page 1127