Ortho-Positronium (o-Ps), which self-annihilates into $3\gamma$ with a lifetime of 142ns, may be quenched through various interactions with other atoms or molecules. The long lifetime of o-Ps, compared with that of para-positronium (p-Ps), is attributed to the triplet spin state of the former. Thus o-Ps is quenched when the positron in the o-Ps somehow annihilates with an electron of the opposite spin into $2\gamma$.

The quenching of o-Ps may be classified into several cases:

(i) pick-off quenching [1]

(ii) spin conversion quenching through electron exchange with:
   - a molecule with non-singlet spins such as $O_2$ [2]
   - a radical on a solid surface [3]
   - a conduction electron on metal surface

(iii) spin conversion quenching through spin-orbit interaction with a heavy atom [4, 5]

(iv) chemical quenching [6]

In this report these processes are overviewed.

References