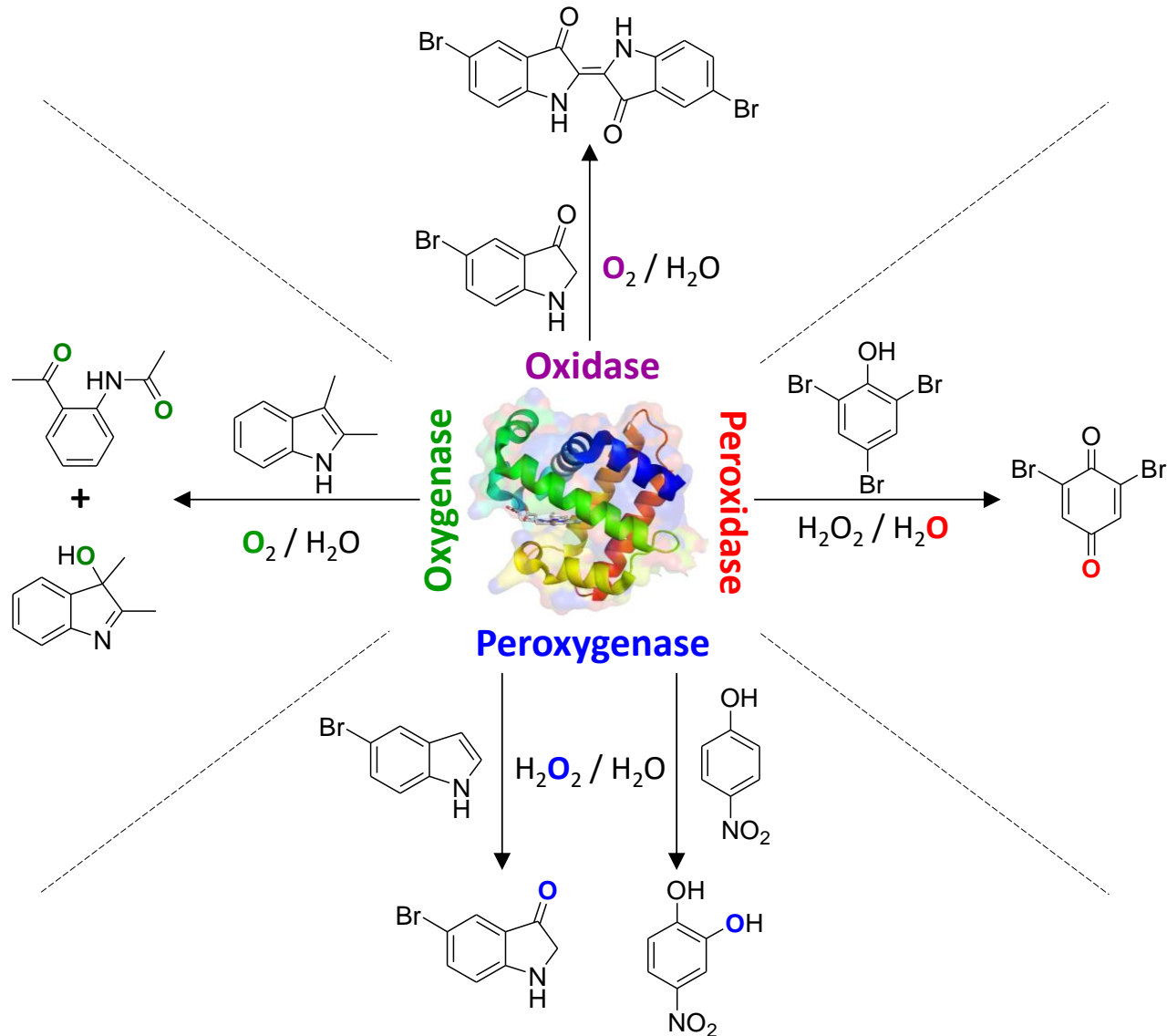
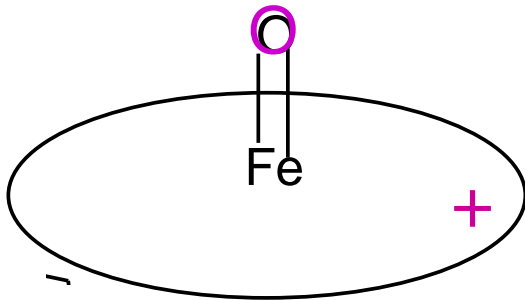


Peroxidase radical reactions

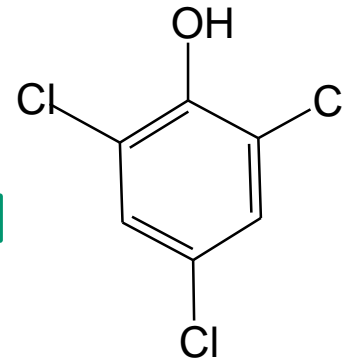


Peroxidase chemistry

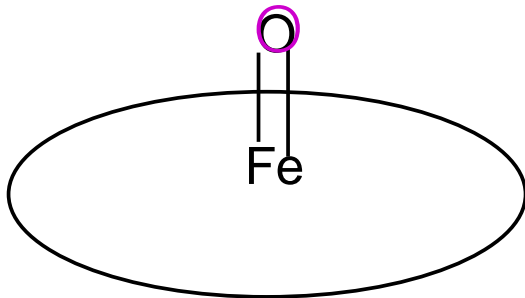
Compound I



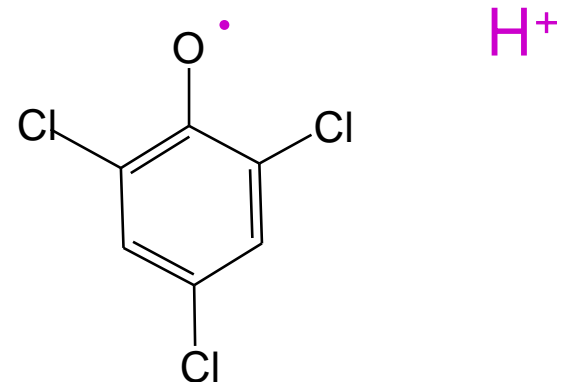
2,4,6-TCP



Compound II



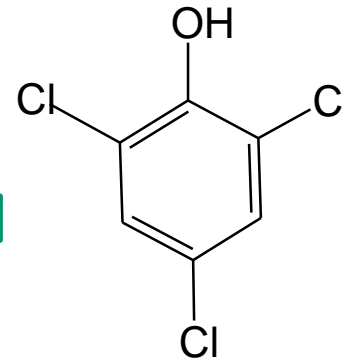
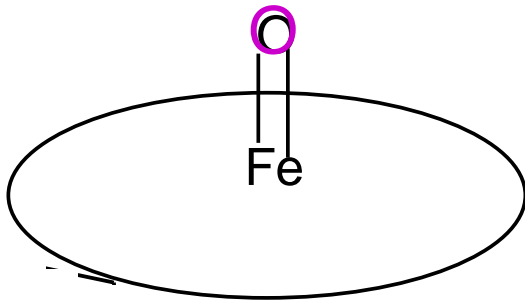
2,4,6-TCP radical



Peroxidase chemistry

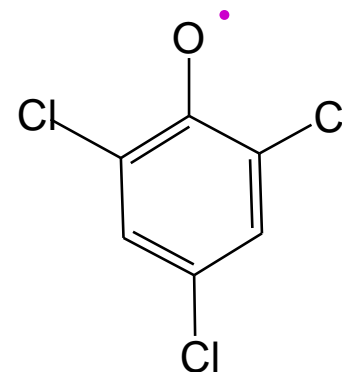
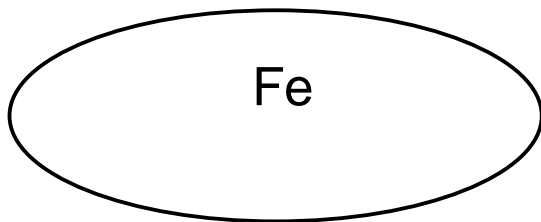
Compound II

2,4,6-TCP



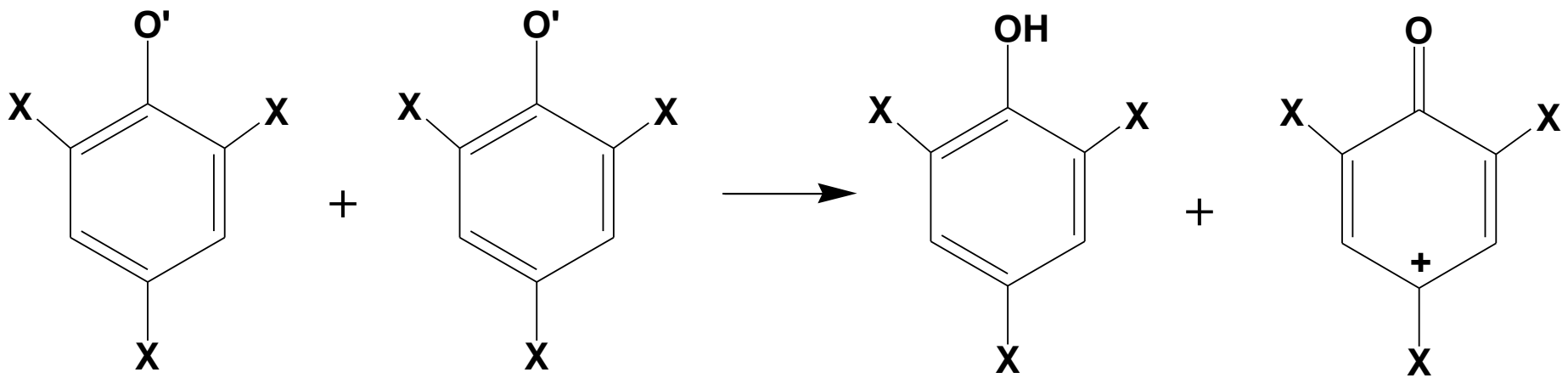
Resting state

2,4,6-TCP radical



The normal peroxidase mechanism involves radical disproportionation

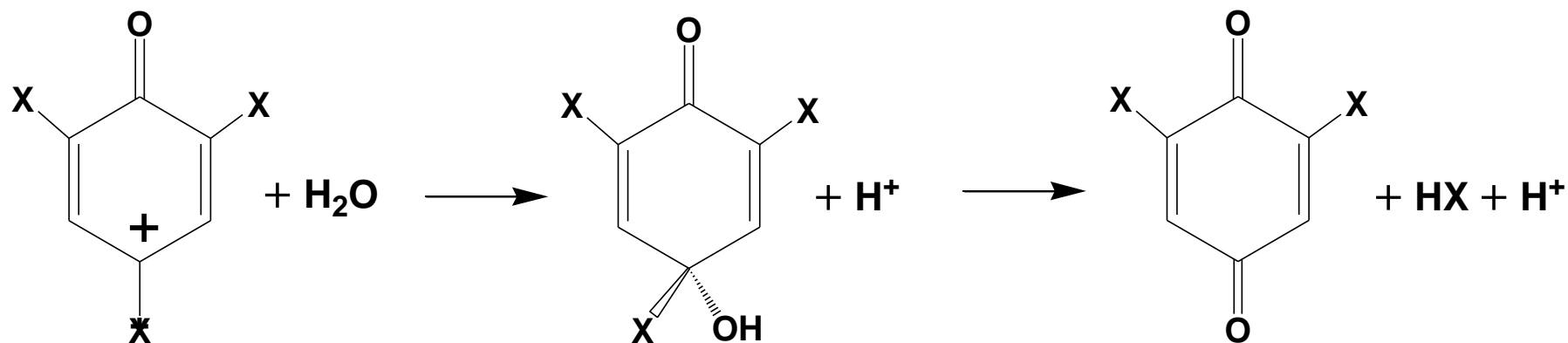
The usual peroxidase mechanism involves diffusion one-electron oxidized radicals into solution where they can disproportionate to make both substrate and a cation radical.



Disproportionation

Attack by water is the final step

This final step occurs readily in solution, but how would attack by water be possible for substrate bound in the internal site?



Attack by water

Formation of quinone