



Nr.	Reaction	Type
<b>Elastic scattering</b>		<b>Energy loss</b>
(1)	$e^- + O_2 \rightarrow O_2 + e^-$	
(2)	$O^- + O_2 \rightarrow O_2 + O^-$	
(3)	$O_2^- + O_2 \rightarrow O_2 + O_2^-$	
<b>Electron energy loss scattering</b>		<b>Energy loss</b>
(4)	$e^- + O_2 \rightarrow O_2^\nu + e^-$	Vibrational excitation ( $\nu = 1, \dots, 4$ )
(5)	$e^- + O_2 \rightarrow O_2(Ryd) + e^-$	Rydberg excitation
(6)	$e^- + O_2 \rightarrow O(1D) + O(3P) + e^-$	Dissociative excitation at 8.6 eV
(7)	$e^- + O_2 \rightarrow O_2(a^1\Delta_g, b^1\Sigma_g)$	Meta-stable excitation
<b>Electron and ion reactions</b>		<b>Creation and loss</b>
(8)	$e^- + O_2^+ \rightarrow 2O$	Dissociative recombination
(9)	$O^- + O_2^+ \rightarrow O_2 + O$	Neutralization
(10)	$e^- + O_2 \rightarrow O + O^-$	Dissociative attachment
(11)	$O^- + O_2 \rightarrow O + O_2 + e$	Direct detachment
(12)	$e^- + O_2 \rightarrow 2e^- + O_2^+$	Impact ionisation
(13)	$e^- + O^- \rightarrow O + 2e^-$	Impact detachment