

Step	Reactions	
Initiation	$\text{NO}_2(\text{aq}) + \text{HSO}_3^-(\text{aq}) \rightarrow \text{NO}_2^-(\text{aq}) + \text{SO}_3^{\bullet-}(\text{aq}) + \text{H}^+(\text{aq})$	(R8)
Propagation	$\text{SO}_3^{\bullet-}(\text{aq}) + \text{O}_2(\text{aq}) \rightarrow \text{SO}_5^{\bullet-}(\text{aq})$	(R12)
	$\text{SO}_5^{\bullet-}(\text{aq}) + \text{HSO}_3^-(\text{aq}) \rightarrow \text{HSO}_5^-(\text{aq}) + \text{SO}_3^{\bullet-}(\text{aq})$	(R13)
	$\text{HSO}_5^-(\text{aq}) + \text{HSO}_3^-(\text{aq}) \rightarrow 2\text{SO}_4^{2-}(\text{aq}) + 2\text{H}^+(\text{aq})$	(R14)
	$\text{SO}_5^{\bullet-}(\text{aq}) + \text{HSO}_3^-(\text{aq}) \rightarrow \text{SO}_4^{2-}(\text{aq}) + \text{SO}_4^{\bullet-}(\text{aq}) + \text{H}^+(\text{aq})$	(R15)
	$\text{SO}_4^{\bullet-}(\text{aq}) + \text{HSO}_3^-(\text{aq}) \rightarrow \text{SO}_4^{2-}(\text{aq}) + \text{SO}_3^{\bullet-}(\text{aq}) + \text{H}^+(\text{aq})$	(R16)
Termination	$\text{SO}_3^{\bullet-}(\text{aq}) + \text{SO}_3^{\bullet-}(\text{aq}) \rightarrow \text{S}_2\text{O}_6^{2-}(\text{aq})$	(R9)
	$\text{SO}_3^{\bullet-}(\text{aq}) + \text{SO}_3^{\bullet-}(\text{aq}) \rightarrow \text{SO}_3^{2-}(\text{aq}) + \text{SO}_3$	(R10)
	$\text{SO}_3(\text{aq}) + \text{H}_2\text{O} \rightarrow \text{SO}_4^{2-}(\text{aq}) + 2\text{H}^+(\text{aq})$	(R11)
	$\text{SO}_4^{\bullet-}(\text{aq}) + \text{SO}_4^{\bullet-}(\text{aq}) \rightarrow \text{S}_2\text{O}_8^{2-}(\text{aq})$	(R17)
	$\text{SO}_5^{\bullet-}(\text{aq}) + \text{SO}_5^{\bullet-}(\text{aq}) \rightarrow \text{S}_2\text{O}_8^{2-}(\text{aq}) + \text{O}_2(\text{aq})$	(R18)