Assignment 2

Conor Redington

HO_2 formation reaction

$$R11 : H + O_2 + M \rightarrow HO_2 + M \text{ (Chain branching)}$$

HO_2 consumption reactions

$$R12 : HO_2 + H \rightarrow OH + OH \text{ (Chain propagating)}$$

$$R13 : HO_2 + H \rightarrow H_2O + O \text{ (Chain terminating)}$$

$$R14 : HO_2 + O \rightarrow O_2 + OH \text{ (Chain terminating)}$$

H_2O_2 formation reactions from HO_2

$$R15 : HO_2 + HO_2 + M \rightarrow H_2O_2 + O_2 + M \text{ (Chain terminating)}$$

$$R16 : HO_2 + H_2 \rightarrow H_2O_2 + H \text{ (Chain propagating)}$$

H_2O_2 consumption reactions

$$R17 : H_2O_2 + OH \rightarrow H_2O + HO_2 \text{ (Chain propagating)}$$

$$R18 : H_2O_2 + H \rightarrow H_2O + OH \text{ (Chain propogating)}$$

$$R19 : H_2O_2 + H \rightarrow HO_2 + H_2 \text{ (Chain propogating)}$$

$$R20 : H_2O_2 + M \rightarrow OH + OH + M \text{ (Chain branching)}$$