

```
← CO2 + * -> CO2*
                                   -CO2 + * <- CO2*
                                   → CO + * -> CO*
→ H2 + 2 * -> 2 H*
                                   → H2 + 2 * <- 2 H*</p>

→ CO2* + H* <- HCOO* + *</p>

→ CO2* + H* -> COOH* + *
                                   ★ CO2* + H* <- COOH* + *

★ CO2* + OH* -> COOH* + O*

★ CO2* + OH* <- COOH* + O*
</p>
* CO2* + H2O* -> COOH* + OH*
                                   --- CO2* + H2O* <- COOH* + OH*
--- CO2* + OH* -> HCOO* + O*
                                   --- CO2* + OH* <- HCOO* + O*
--- CO2* + H2O* -> HCOO* + OH*
                                   --- CO2* + H2O* <- HCOO* + OH*
--- COOH* + * -> CO* + OH*
                                   --- COOH* + * <- CO* + OH*
--- COOH* + * -> COH* + O*
                                   --- COOH* + * <- COH* + O*
--- HCOO* + * -> O* + HCO*
                                   --- HCOO* + * <- O* + HCO*
--- CO* + * -> C* + O*
                                   --- CO* + * <- C* + O*
--- HCO* + * -> CO* + H*
                                   --- HCO* + * <- CO* + H*
--- HCO* + * -> CH* + O*
                                   --- HCO* + * <- CH* + O*
--- COH* + * -> CO* + H*
                                   --- COH* + * <- CO* + H*
--- COH* + * -> C* + OH*
                                   --- COH* + * <- C* + OH*
--- C* + H* -> CH* + *
                                   --- C* + H* <- CH* + *
--- CH* + H* -> CH2* + *
                                   --- CH* + H* <- CH2* + *
                                   --- CH2* + H* <- CH3* + *
--- CH2* + H* -> CH3* + *
--- HCO* + H* -> CH2O* + *
                                   --- HCO* + H* <- CH2O* + *
--- HCO* + H* -> HCOH* + *
                                   --- HCO* + H* <- HCOH* + *
--- COH* + H* -> HCOH* + *
                                   --- COH* + H* <- HCOH* + *
--- HCOH* + * -> CH* + OH*
                                   --- HCOH* + * <- CH* + OH*
--- HCOH* + H* -> CH2OH* + *
                                   --- HCOH* + H* <- CH2OH* + *
--- CH2OH* + * -> CH2* + OH*
                                   --- CH2OH* + * <- CH2* + OH*
--- CH2OH* + H* -> CH3OH* + *
                                   --- CH2OH* + H* <- CH3OH* + *
--- CH2O* + H* -> CH2OH* + *
                                   --- CH2O* + H* <- CH2OH* + *
--- CH2O* + * -> CH2* + O*
                                   --- CH2O* + * <- CH2* + O*
--- CH2O* + H* -> CH3O* + *
                                   --- CH2O* + H* <- CH3O* + *
--- CH30* + * -> CH3* + O*
                                   --- CH3O* + * <- CH3* + O*
--- CH3O* + H* -> CH3OH* + *
                                   --- CH3O* + H* <- CH3OH* + *
--- CH3OH* + * -> CH3* + OH*
                                   --- CH3OH* + * <- CH3* + OH*
→ O* + H* -> OH* + *
                                   --- O* + H* <- OH* + *
--- OH* + H* -> H2O* + *
                                   --- OH* + H* <- H2O* + *
--- OH* + OH* -> O* + H2O*
                                   ● OH* + OH* <- O* + H2O*
                                   -- H2O + * <- H2O*
--- H2O + * -> H2O*
--- CH4 + 2 * -> CH3* + H*
                                   --- CH4 + 2 * <- CH3* + H*
--- CH3OH + * -> CH3OH*
                                   --- CH3OH + * <- CH3OH*
CH2O + * -> CH2O*
                                   CH2O + * <- CH2O*</p>
```