RMG-Py Reaction Families

1+2_Cycloaddition

1,2-Birad_to_alkene

$$^{1}R^{\cdot} - ^{2}R^{\cdot} \longrightarrow ^{1}R = ^{2}F$$

1,2_Insertion_CO

1,2_Insertion_carbene

1,2_NH3_elimination

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1,2_shiftC

1,2_shiftS

$$^{1}C$$
 ^{2}S ^{3}R ^{3}R ^{1}C

1,3_Insertion_CO2

1,3_Insertion_ROR

$$^{3}R-^{4}O-R + ^{1}R=^{2}R = ^{3}R-^{1}R-^{2}R-^{4}O-R$$

1,3_Insertion_RSR

$$^{3}R$$
 $-^{4}S$ $-^{R}$ + ^{1}R $=^{2}R$ ^{3}R $-^{1}R$ $-^{2}R$ $-^{4}S$ $-^{R}$

1,3_NH3_elimination

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1,4_Cyclic_birad_scission

$$^{2}R$$
 ^{-1}R ^{3}R ^{2}R ^{-1}R ^{3}R ^{3}R

1,4_Linear_birad_scission

$$^{1}R$$
 ^{2}R ^{3}R ^{4}R ^{4}R ^{1}R ^{2}R ^{2}R ^{4}R

2+2_cycloaddition_CCO

$2 + 2_cycloaddition_CO$

2+2_cycloaddition_CS

2+2_cycloaddition_Cd

6_membered_central_C-C_shift

Baeyer-Villiger_step1_cat

${\tt Baeyer-Villiger_step2}$

$${}^{2}[C,H]$$
 ${}^{5}O$
 ${}^{6}O$
 ${}^{7}C$
 ${}^{7}C$
 ${}^{8}O$
 ${}^{1}C$
 ${}^{1}C$
 ${}^{2}[C,H]$
 ${}^{3}O$
 ${}^{4}H$
 ${}^{4}H$
 ${}^{8}O$

${\tt Baeyer-Villiger_step2_cat}$

$${}^{2}[C,H]$$
 ${}^{5}O$
 ${}^{6}O$
 ${}^{10}H$
 ${}^{9}O$
 ${}^{7}C$
 ${}^{7}C$
 8
 ${}^{10}C$
 ${}$

 ${\tt Bimolec_Hydroperoxide_Decomposition}$

$$R - {}^{1}O - {}^{2}O - H + R - O - {}^{4}O - {}^{3}H \longrightarrow R - {}^{1}O \cdot + H - {}^{2}O - {}^{3}H + R - O - {}^{4}O \cdot$$

Birad_R_Recombination

$${}^{1}R^{\cdot} + {}^{2}R : \longrightarrow {}^{1}R \longrightarrow {}^{2}R^{\cdot}$$

Birad_recombination

 ${\tt CO_Disproportionation}$

$$^{1}R + ^{2}O = ^{3}C - ^{4}H = ^{1}R - ^{4}H + ^{2}O = ^{3}C$$

Concerted_Intra_Diels_alder_monocyclic_1,2_shiftH

Cyclic_Ether_Formation

 ${\tt Cyclic_Thioether_Formation}$

Cyclopentadiene_scission

Diels_alder_addition

Disproportionation

$$^{1}R + ^{3}R - ^{2}R - ^{4}H \longrightarrow ^{1}R - ^{4}H + ^{3}R = ^{2}R$$

 ${\tt HO2_Elimination_from_PeroxyRadical}$

$$^{5}H$$
— ^{1}R — ^{2}R — ^{3}O — ^{4}O — ^{5}H + ^{1}R = ^{2}R

H_Abstraction

$$^{1}R$$
 ^{-2}H + ^{3}R $\stackrel{}{=}$ ^{1}R + ^{2}H ^{-3}R

Intra_2+2_cycloaddition_Cd

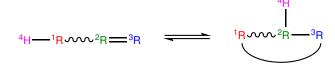
 $Intra_5_membered_conjugated_C=C_C=C_addition$

 ${\tt Intra_Diels_alder_monocyclic}$

$$1C = {}^{2}C - {}^{3}C = {}^{4}C - {}^{5}C = {}^{6}C$$

 ${\tt Intra_Disproportionation}$

Intra_RH_Add_Endocyclic



${\tt Intra_RH_Add_Exocyclic}$



Intra_R_Add_Endocyclic

$$^{1}\dot{R}$$
 ^{2}R ^{3}R ^{1}R ^{3}R

Intra_R_Add_ExoTetCyclic

Intra_R_Add_Exo_scission

Intra_R_Add_Exocyclic

Intra_Retro_Diels_alder_bicyclic

Intra_ene_reaction

Korcek_step1

Korcek_step1_cat

Korcek_step2

Peroxyl_Disproportionation

$$R - {}^{1}O - {}^{2}O \cdot + R - {}^{3}O - {}^{4}O \cdot \longrightarrow R - {}^{1}O \cdot + R - {}^{3}O \cdot + {}^{2}O - {}^{4}O \cdot$$

${\tt Peroxyl_Termination}$

$$^{4}H$$
 ^{-1}R ^{-2}O ^{-3}O $^{\cdot}$ + R ^{-5}O ^{-6}O $^{\cdot}$ ^{-1}R ^{-2}O + R ^{-5}O ^{-4}H + ^{3}O ^{-6}O

R_Addition_COm

R_Addition_CSm

$R_Addition_MultipleBond$

$$^{2}R$$
 = ^{1}R + ^{3}R = ^{2}R - ^{1}R - ^{3}R

R_Recombination

$${}^{1}R + {}^{2}R \longrightarrow {}^{1}R - {}^{2}R$$

${\tt Singlet_Carbene_Intra_Disproportionation}$

$$\bigcirc ^{1}C$$
 $\bigcirc ^{2}C$ $\bigcirc ^{3}H$ $\longrightarrow ^{3}H$ $\bigcirc ^{1}C$ $\bigcirc ^{2}C$

Singlet_Val6_to_triplet

$$^{1}(O/S) = ^{2}(O/S)$$
 $^{1}(O/S) - ^{2}(O/S)$

SubstitutionS

$$R - {}^{1}S - {}^{2}R + {}^{3}R^{i} = R - {}^{1}S - {}^{3}R + {}^{2}R^{i}$$

Substitution_O

$$R - {}^{1}O - {}^{2}R + {}^{3}R^{'} \longrightarrow R - {}^{1}O - {}^{3}R + {}^{2}R^{'}$$

Surface_Abstraction

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${\tt Surface_Adsorption_Bidentate}$

Image Not Available

Surface_Adsorption_Dissociative

Image Not Available

Surface_Adsorption_Double

Image Not Available

Surface_Adsorption_Single

Image Not Available

Surface_Adsorption_vdW

Image Not Available

Surface_Bidentate_Dissociation

Image Not Available

Surface_Dissociation

Image Not Available

Surface_Dissociation_vdW

Image Not Available

Surface_Recombination

Image Not Available

intra_H_migration

$$^{3}H$$
 $-^{2}R$ ^{1}R ^{2}R ^{3}H ^{3}H

intra_NO2_ONO_conversion

intra_OH_migration

 $\verb"intra_substitutionCS_cyclization"$

intra_substitutionCS_isomerization

 $intra_substitutionS_cyclization$

intra_substitutionS_isomerization

ketoenol

$$^{1}R = ^{2}R - ^{2}O - ^{4}R$$
 \longrightarrow $^{4}R - ^{1}R - ^{2}R = ^{2}O$

lone_electron_pair_bond