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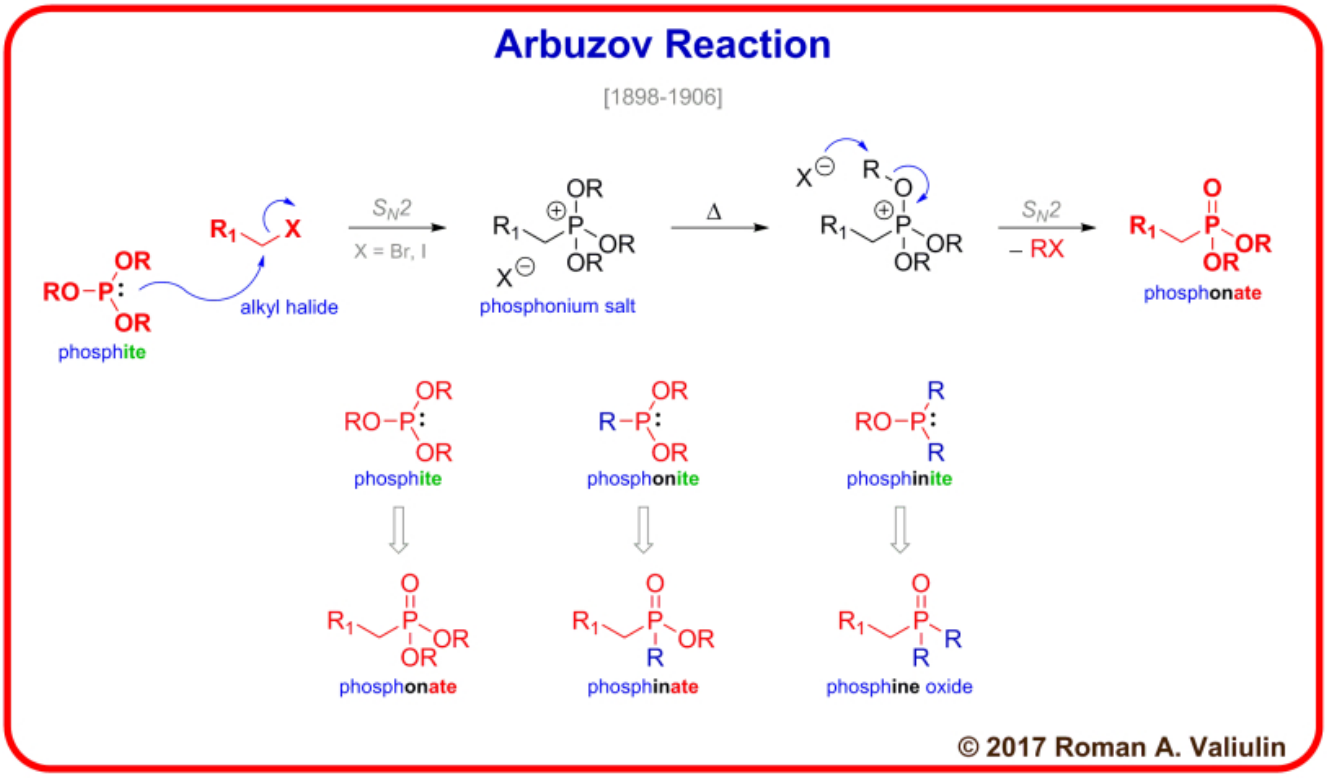

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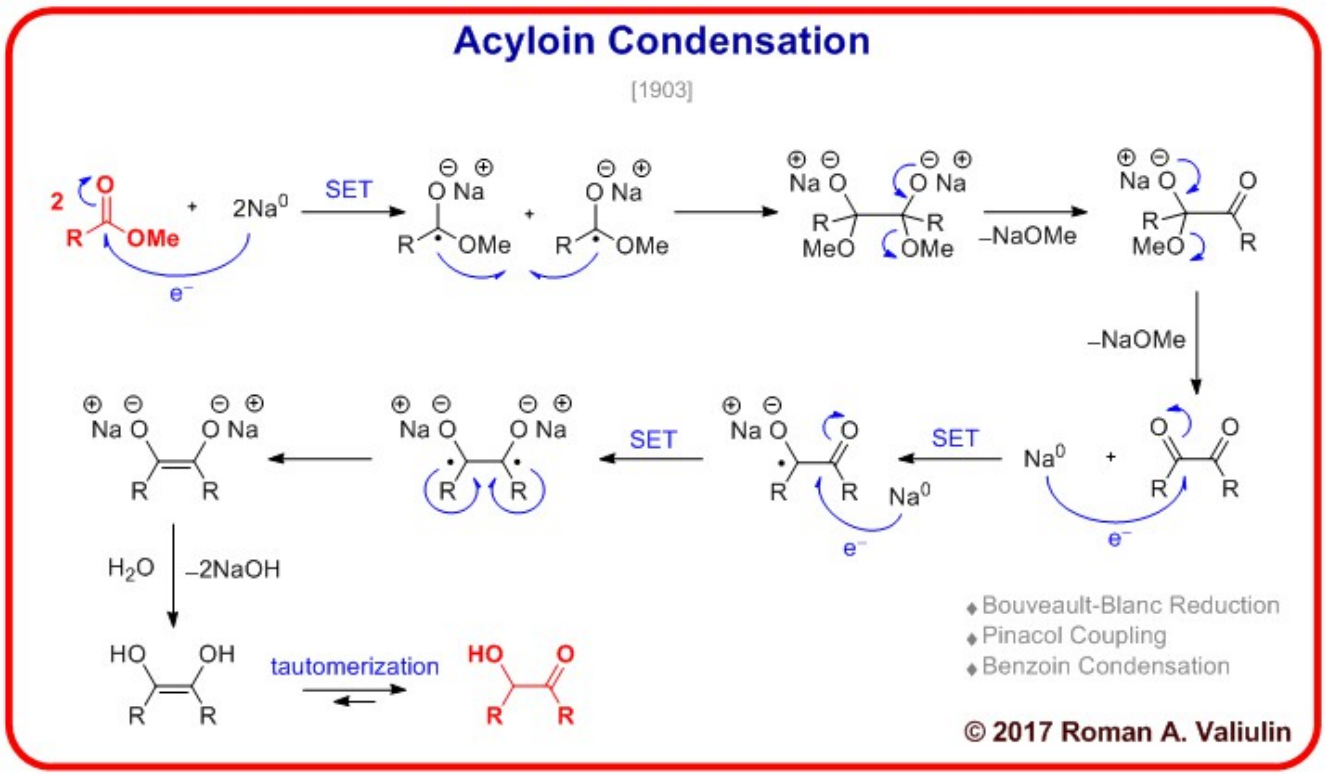

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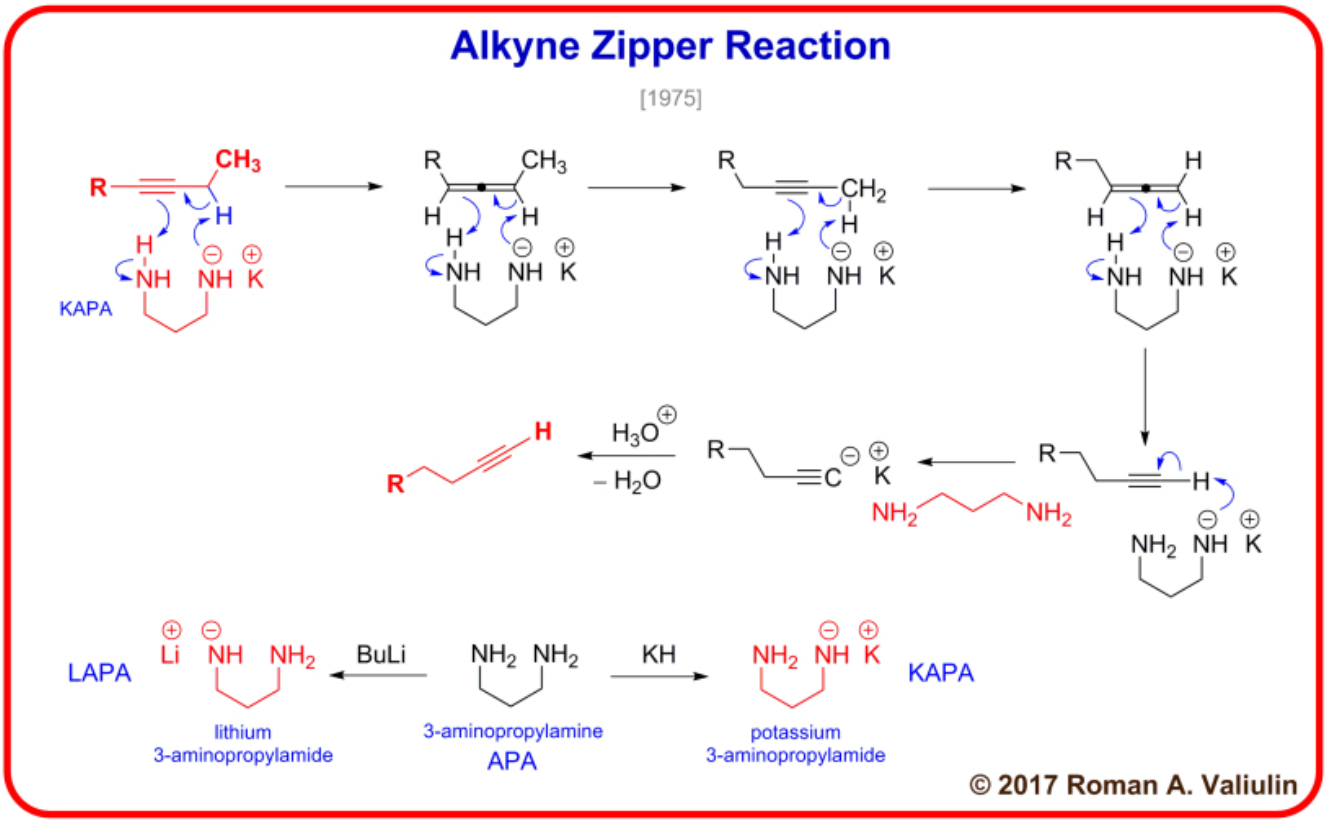

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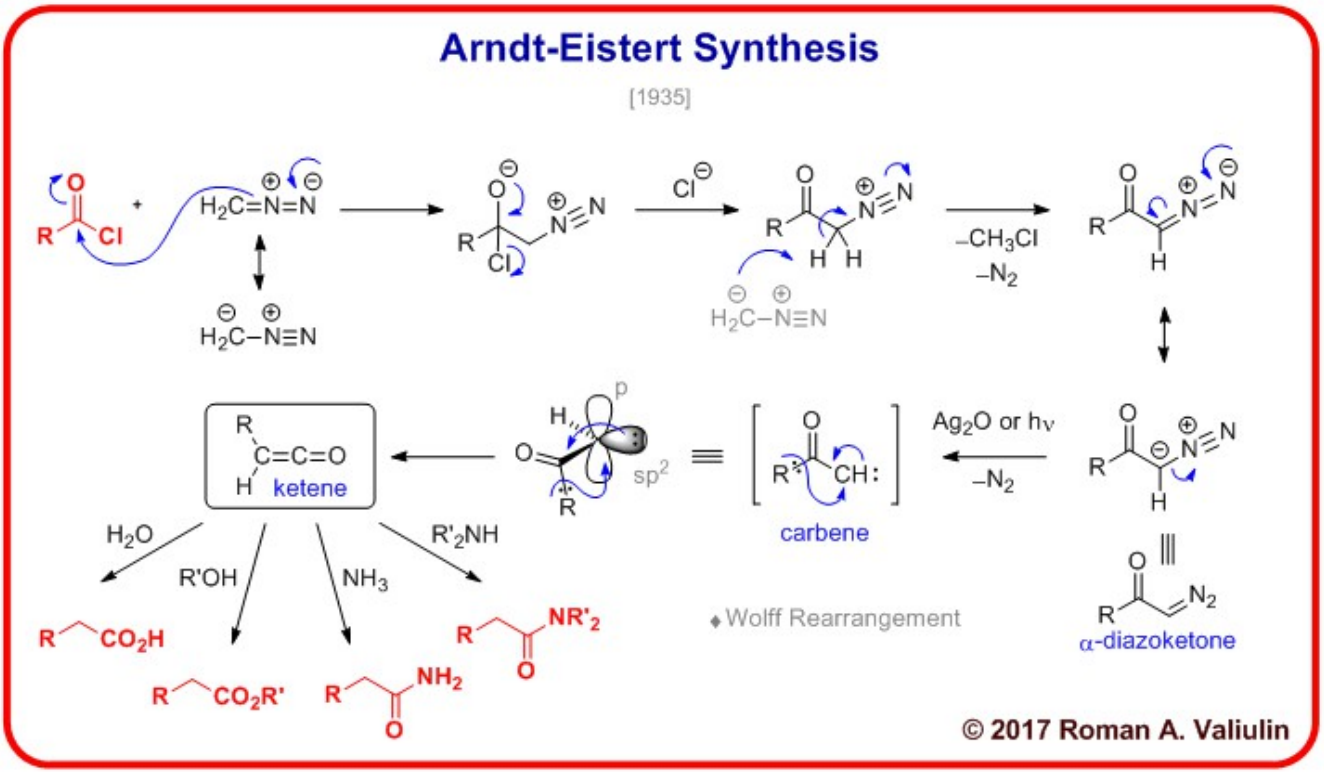

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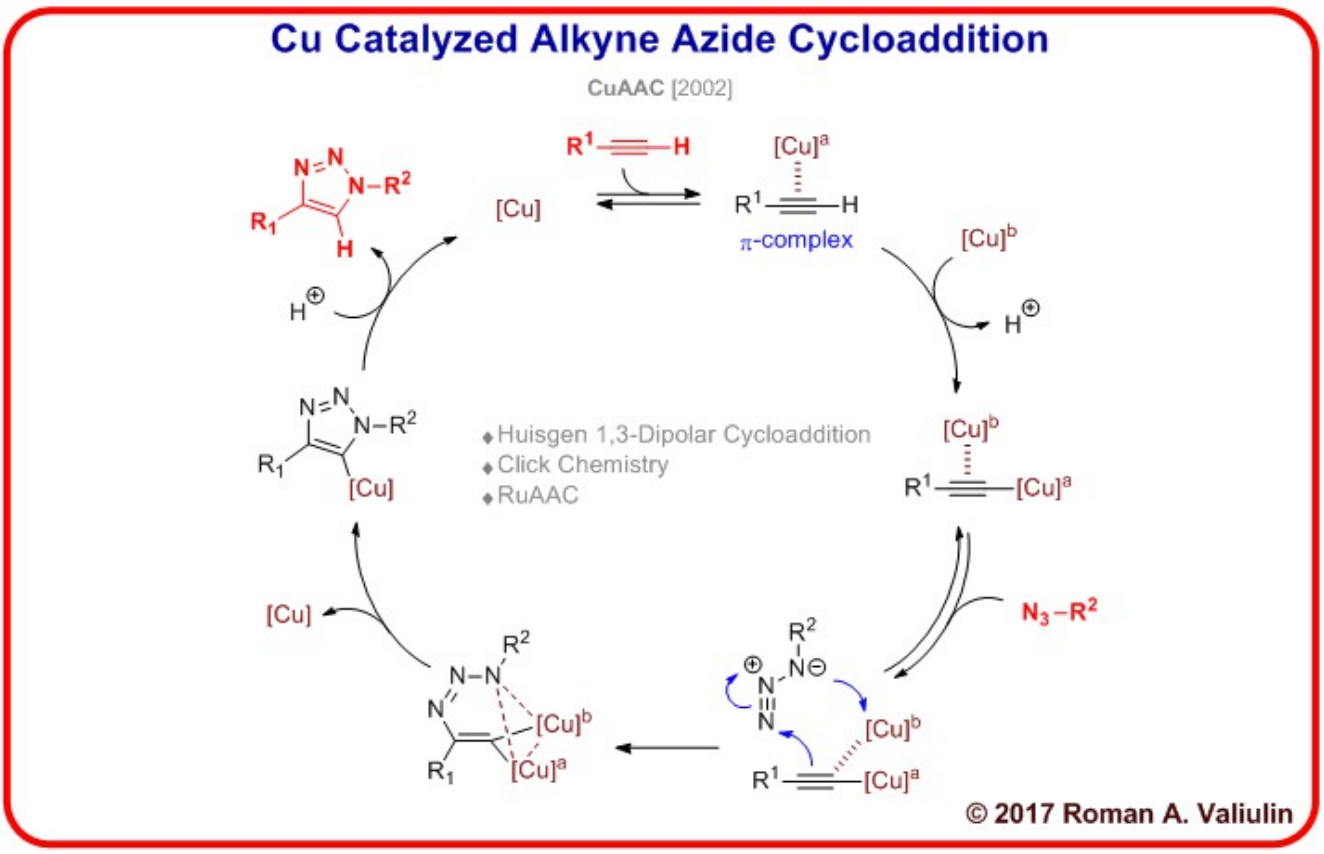

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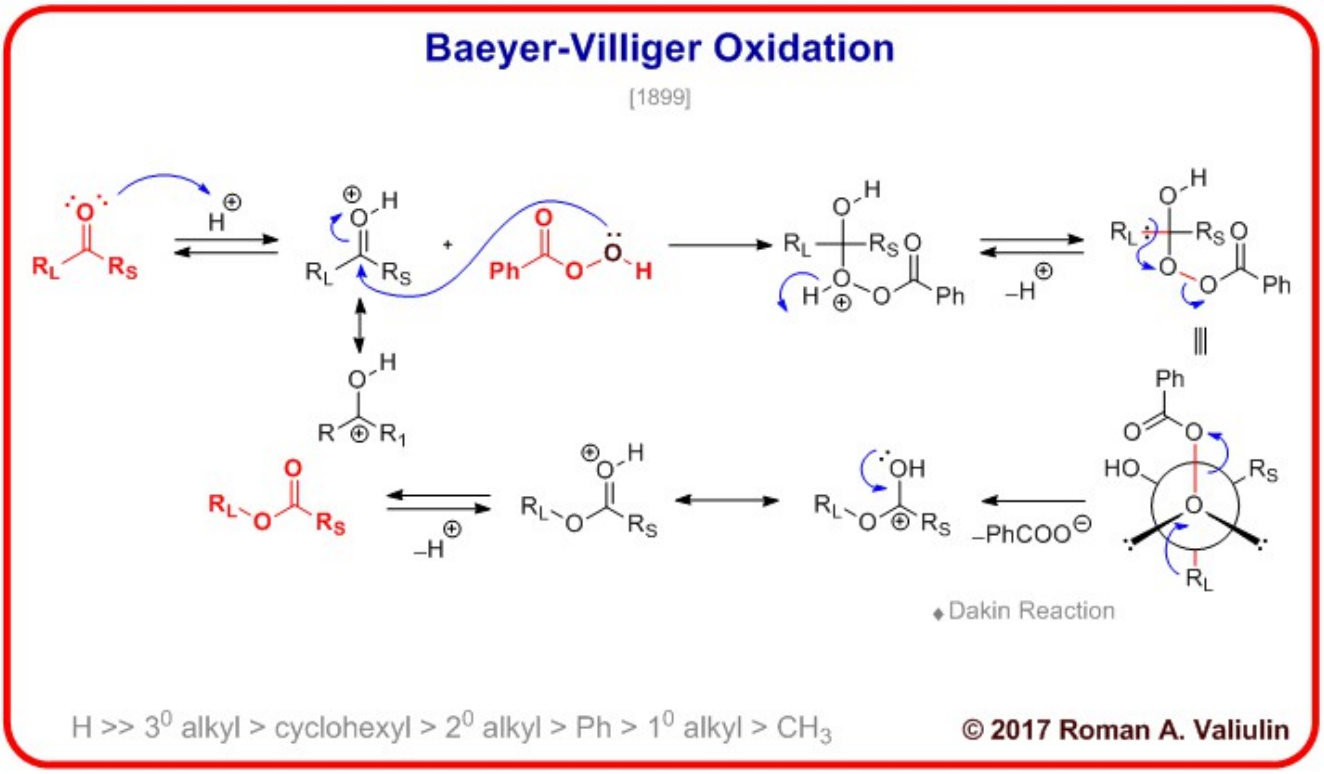

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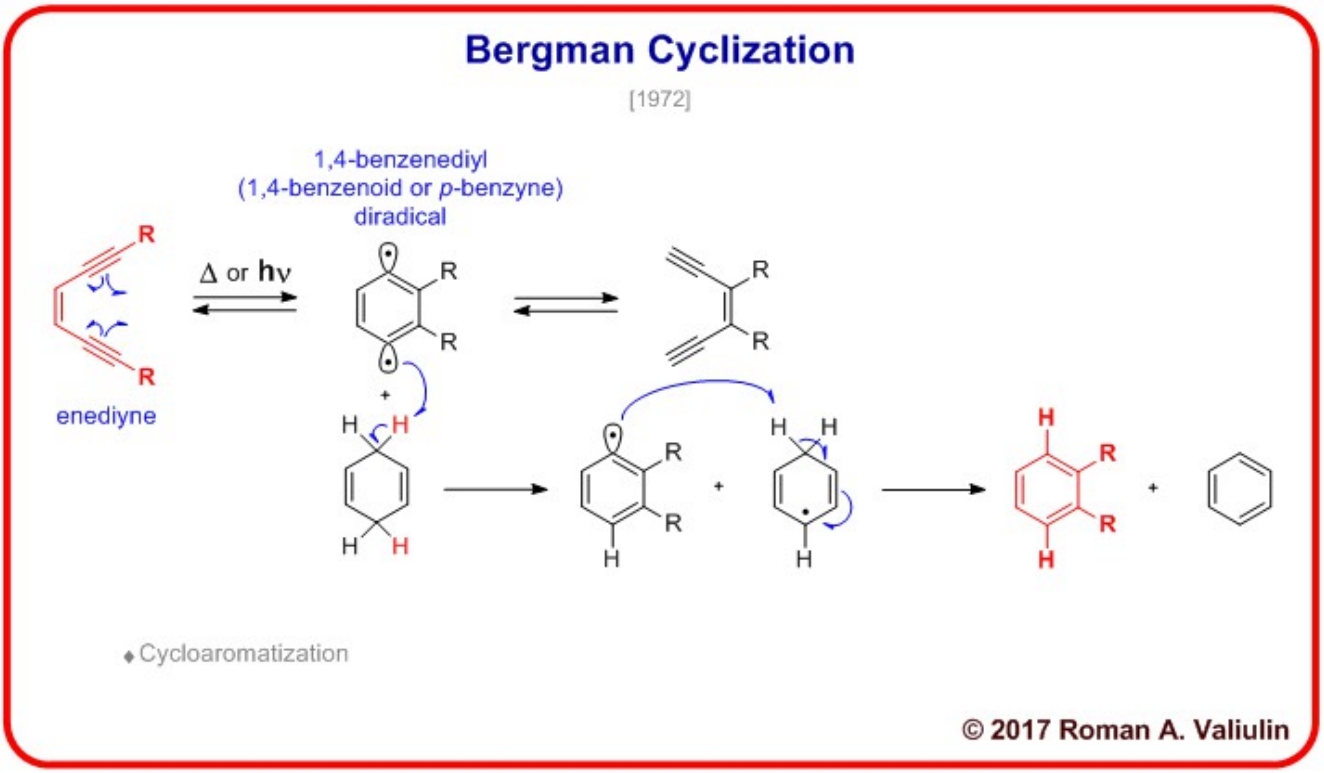

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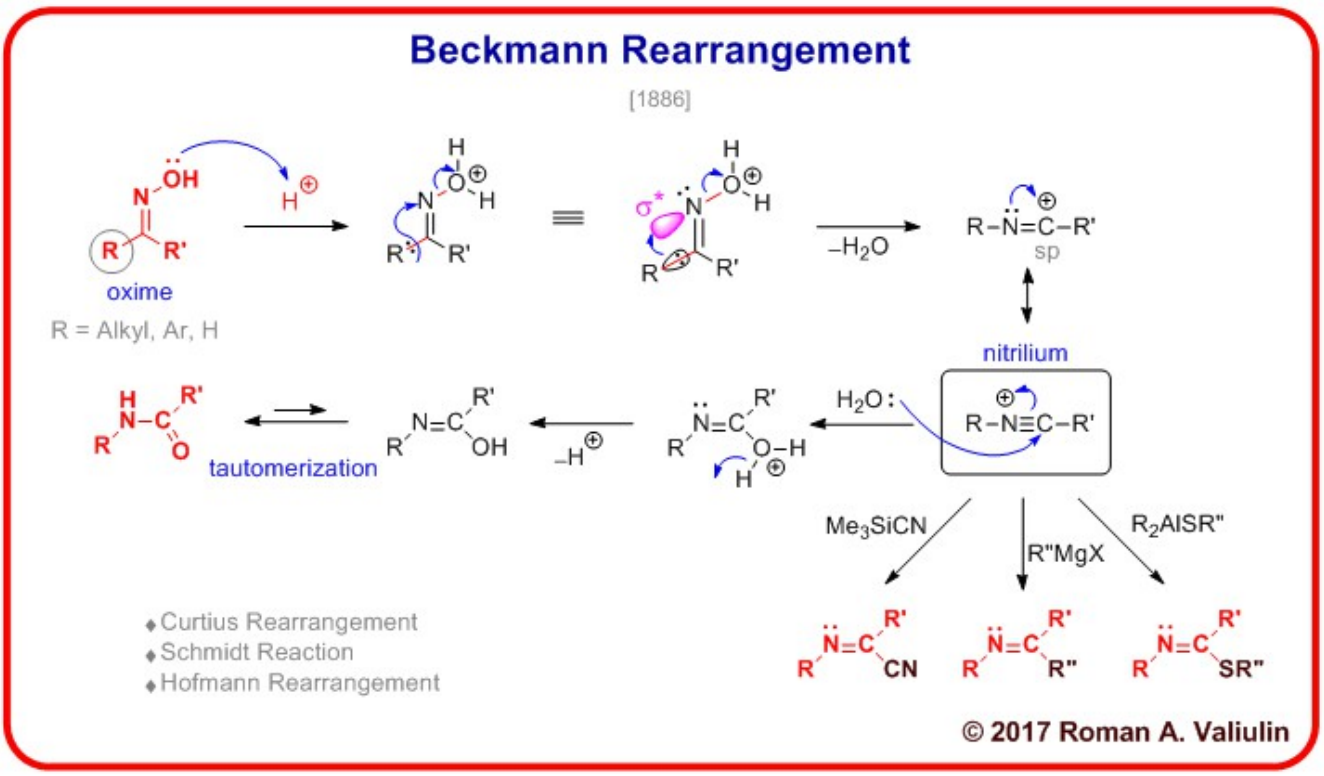

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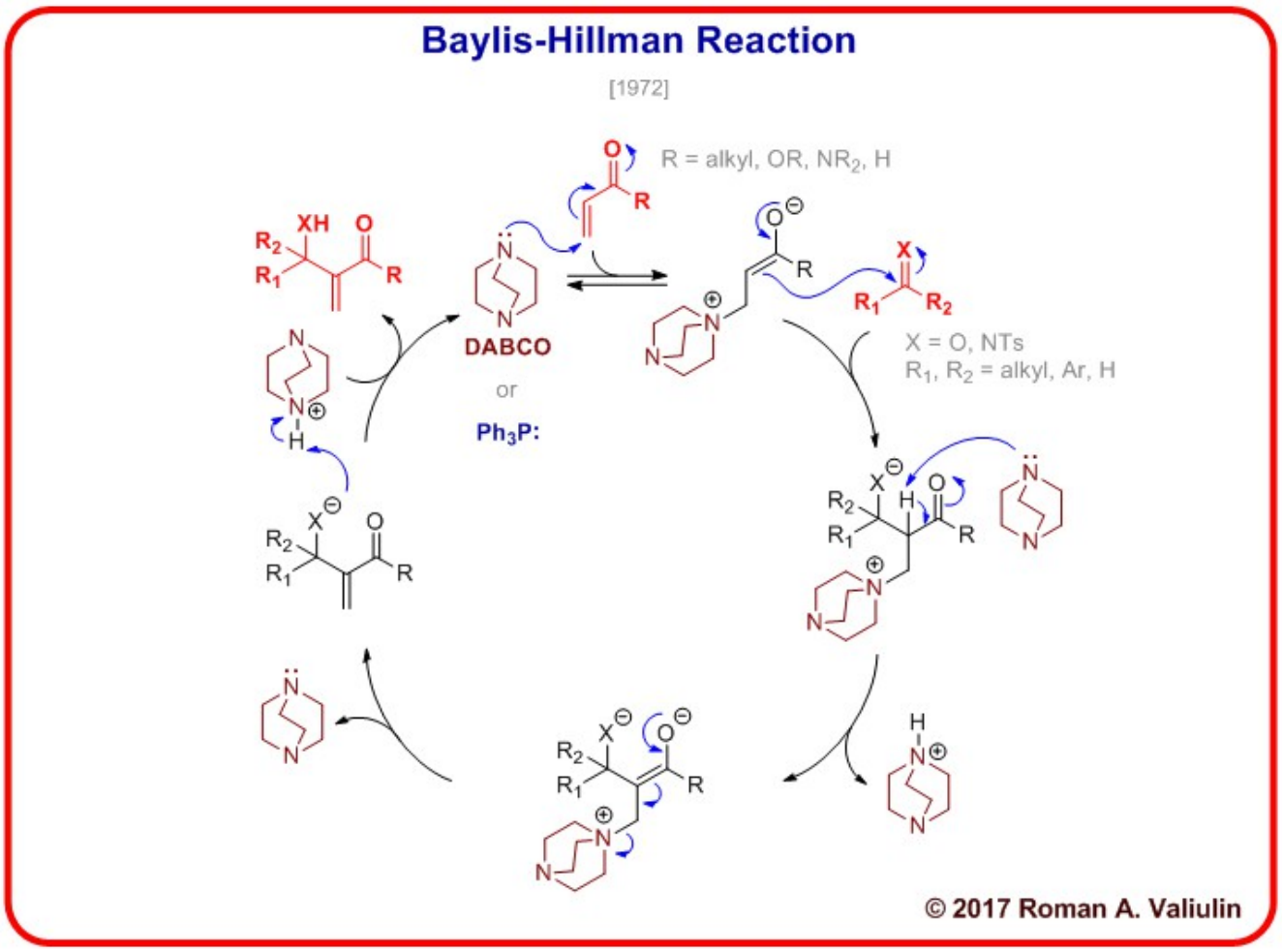

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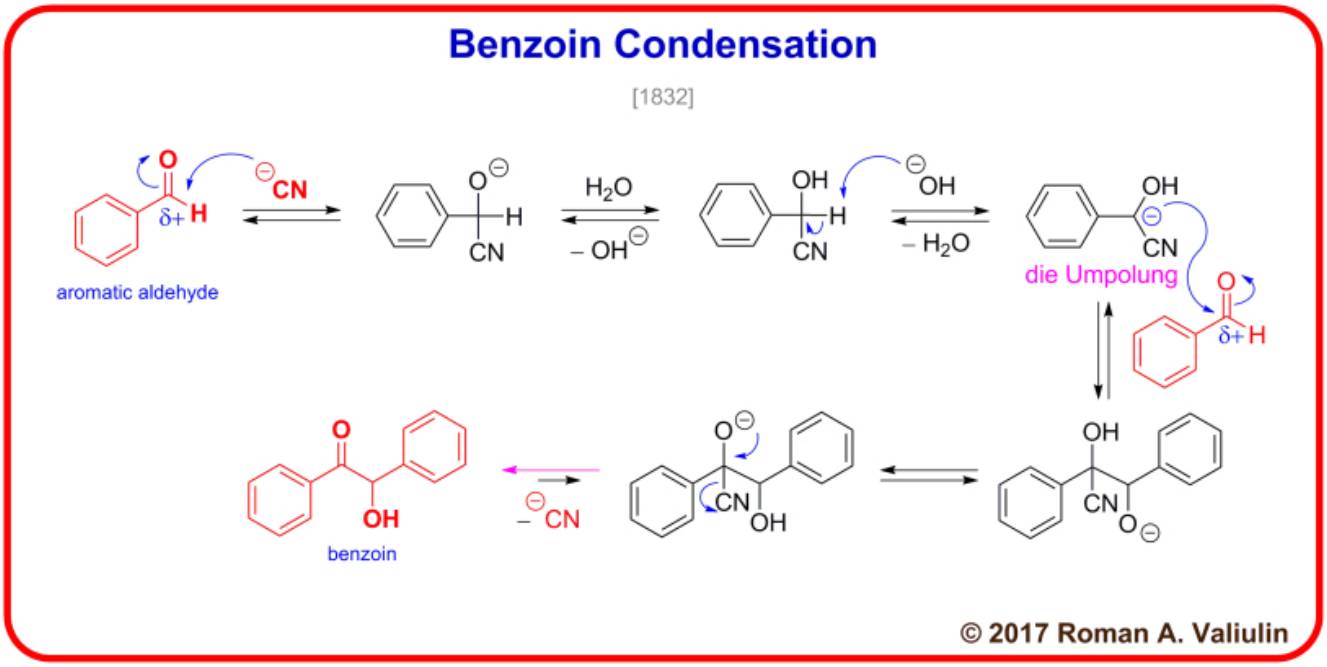

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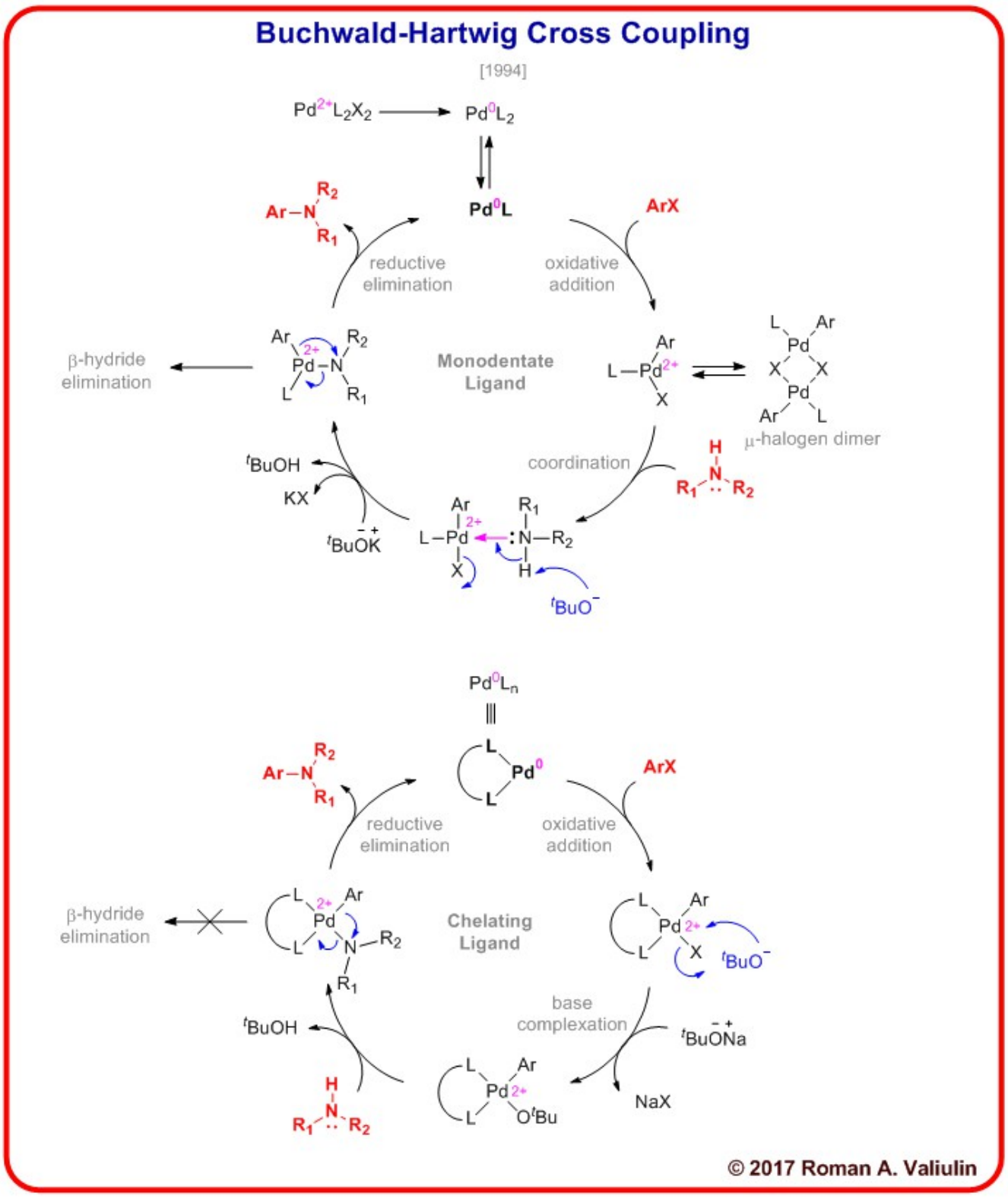

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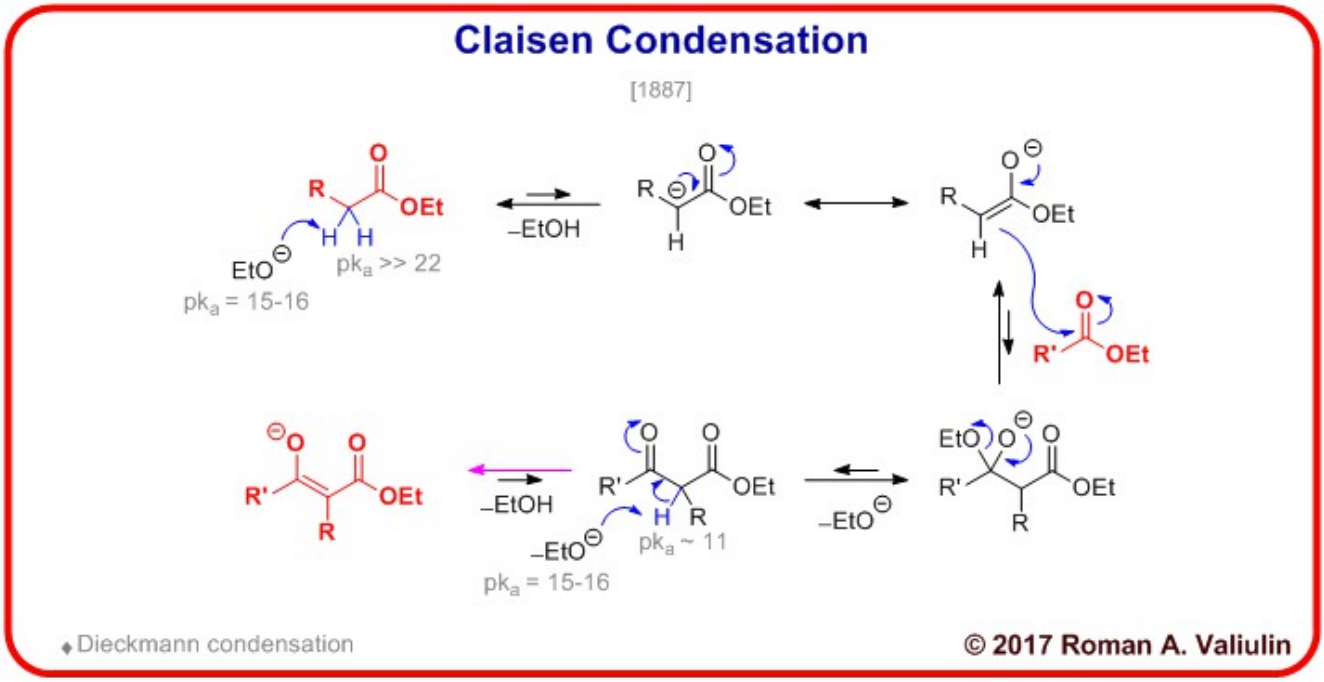

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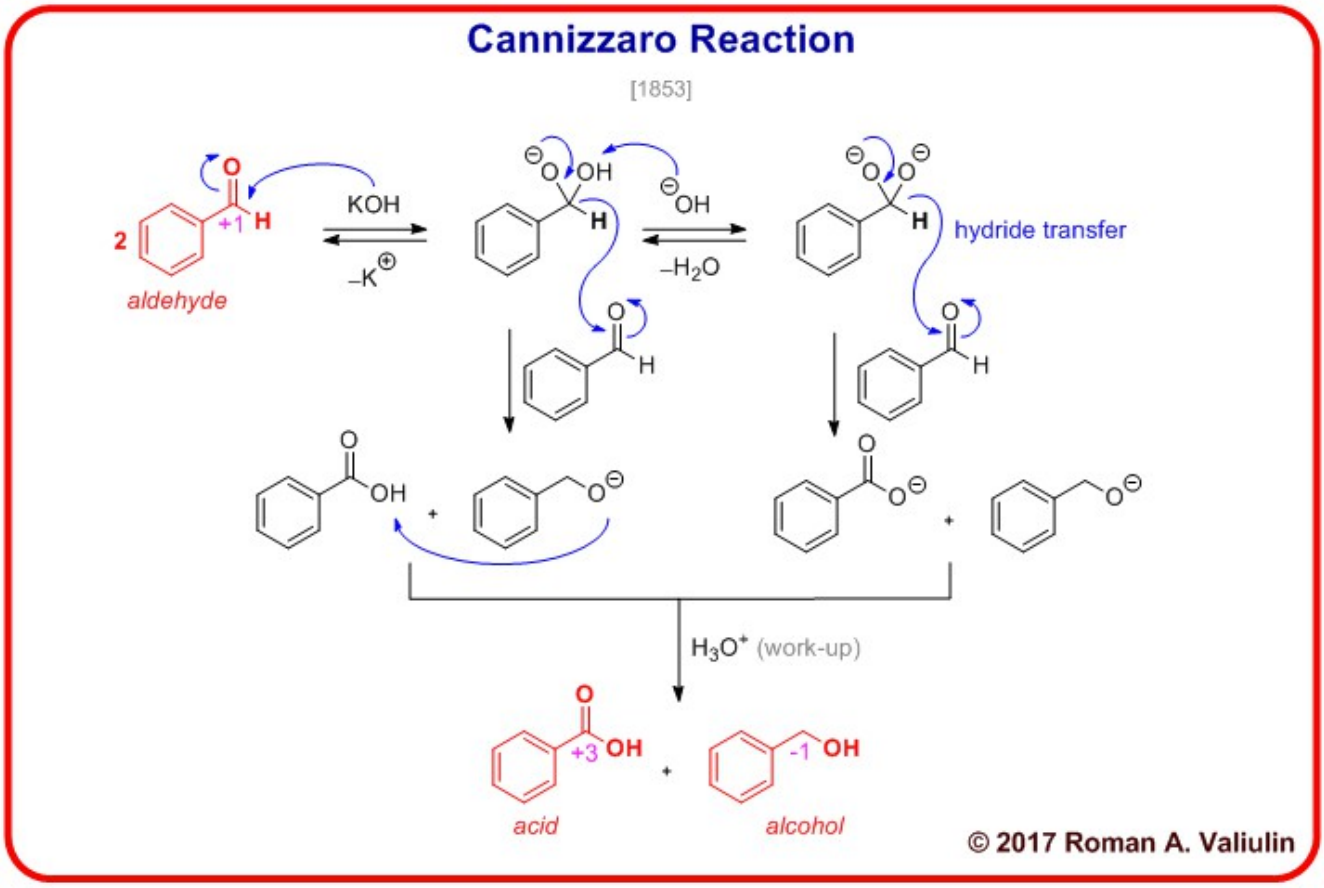

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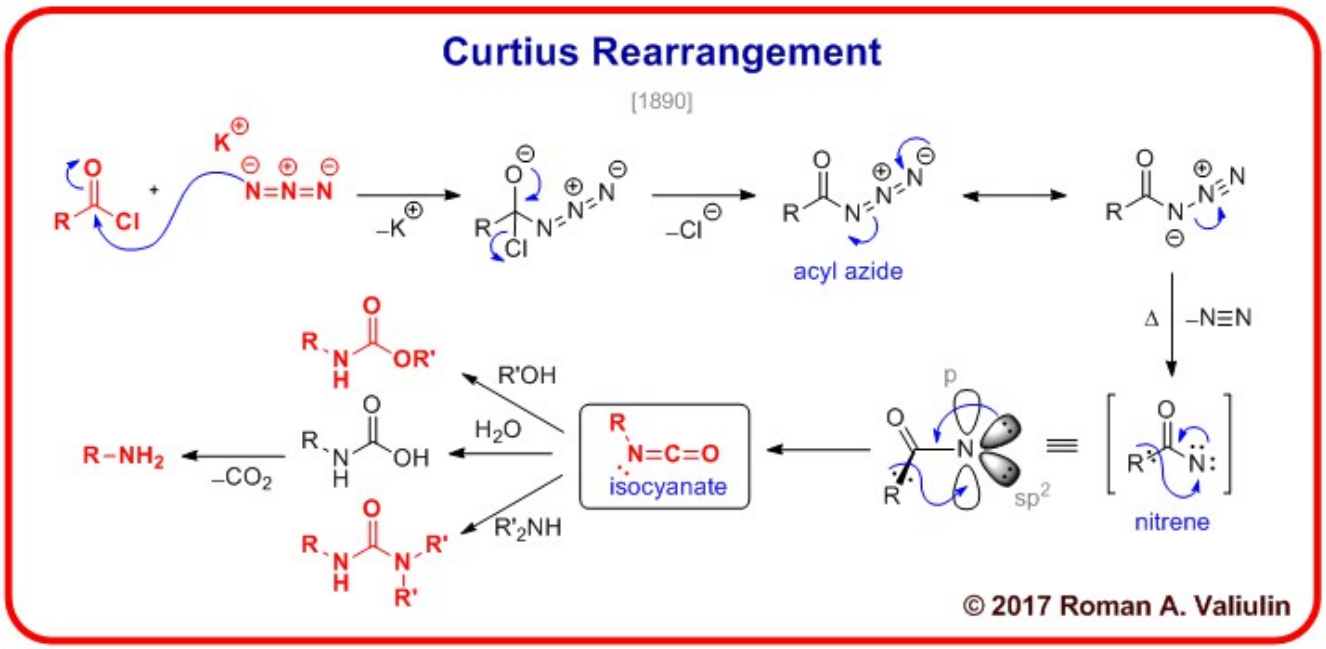

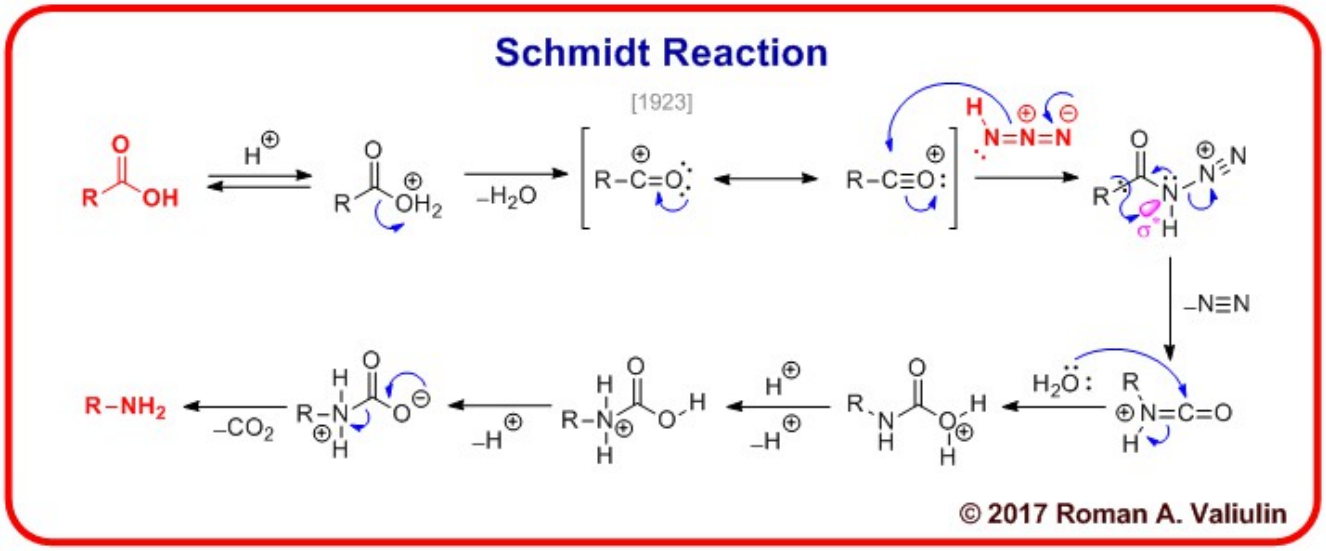

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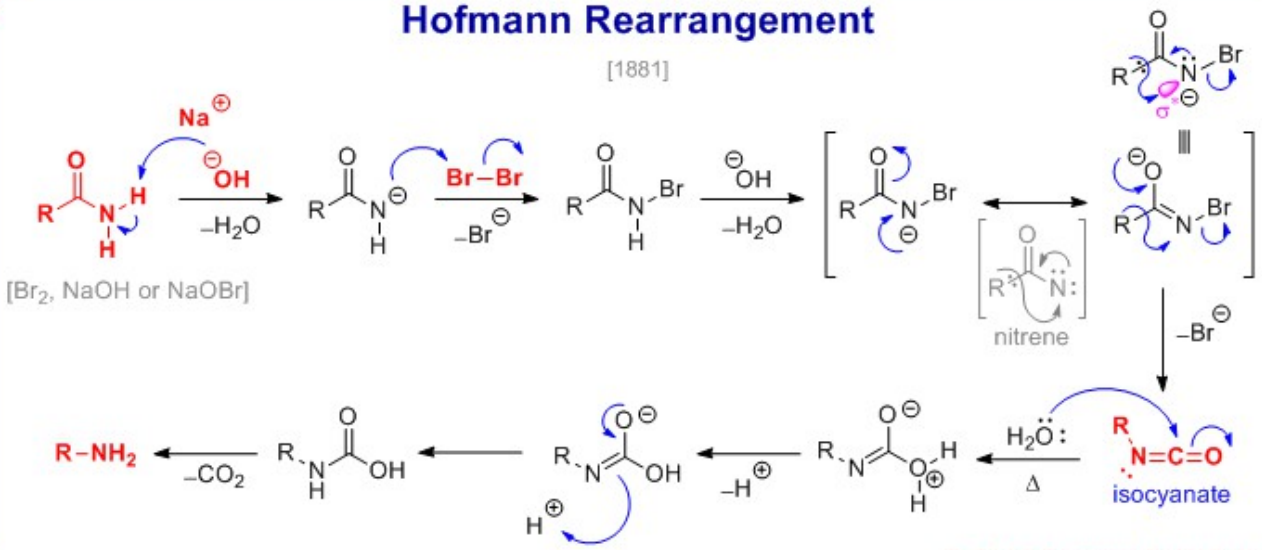
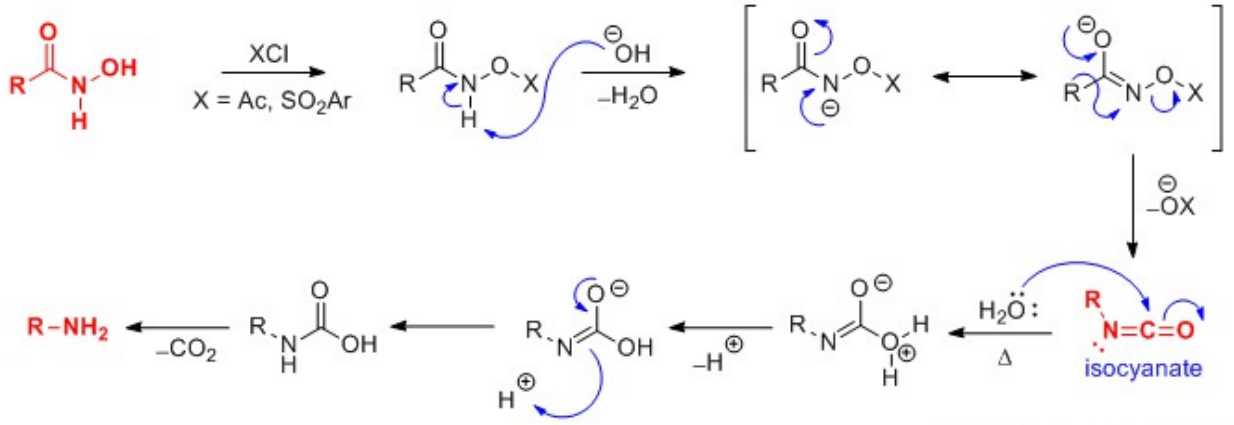
[1881]



[Br_2, NaOH or NaOBr]

Lossen Rearrangement

[1872]



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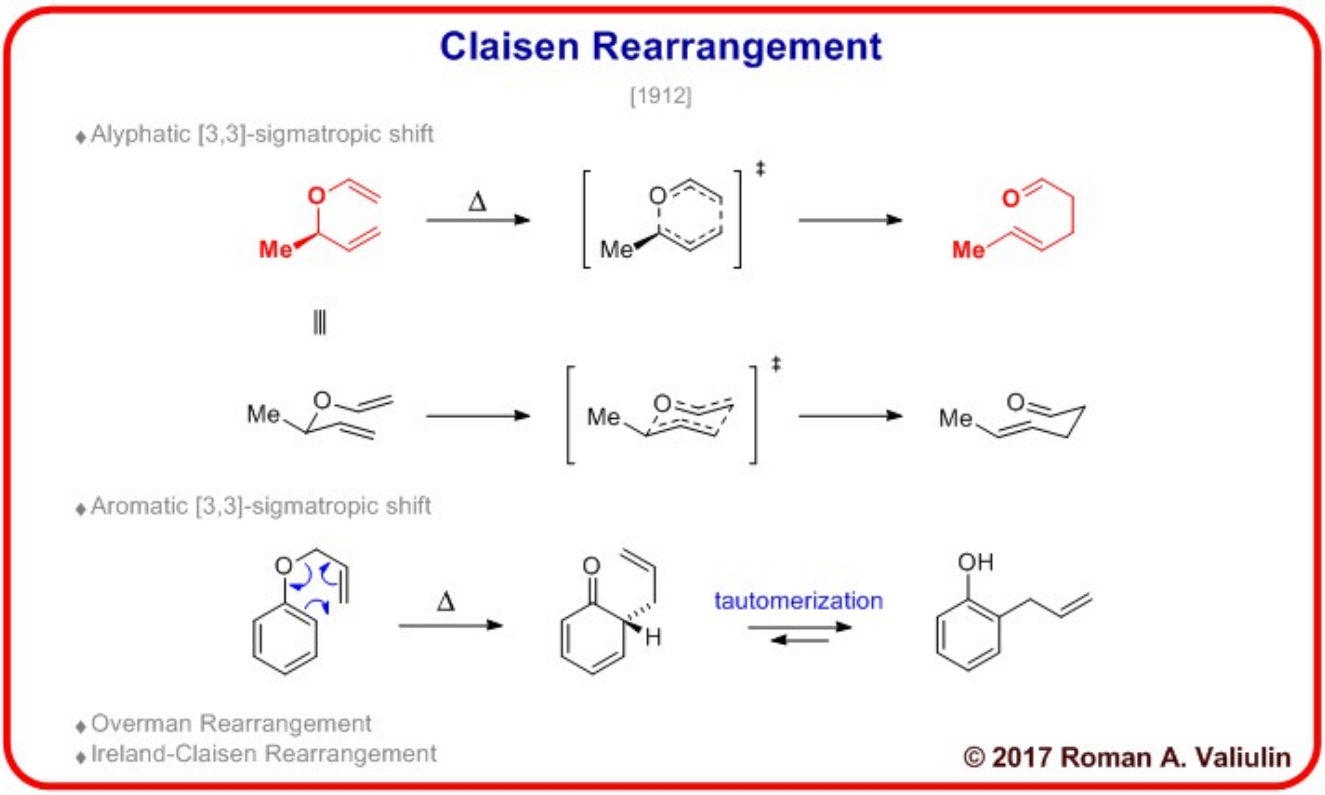

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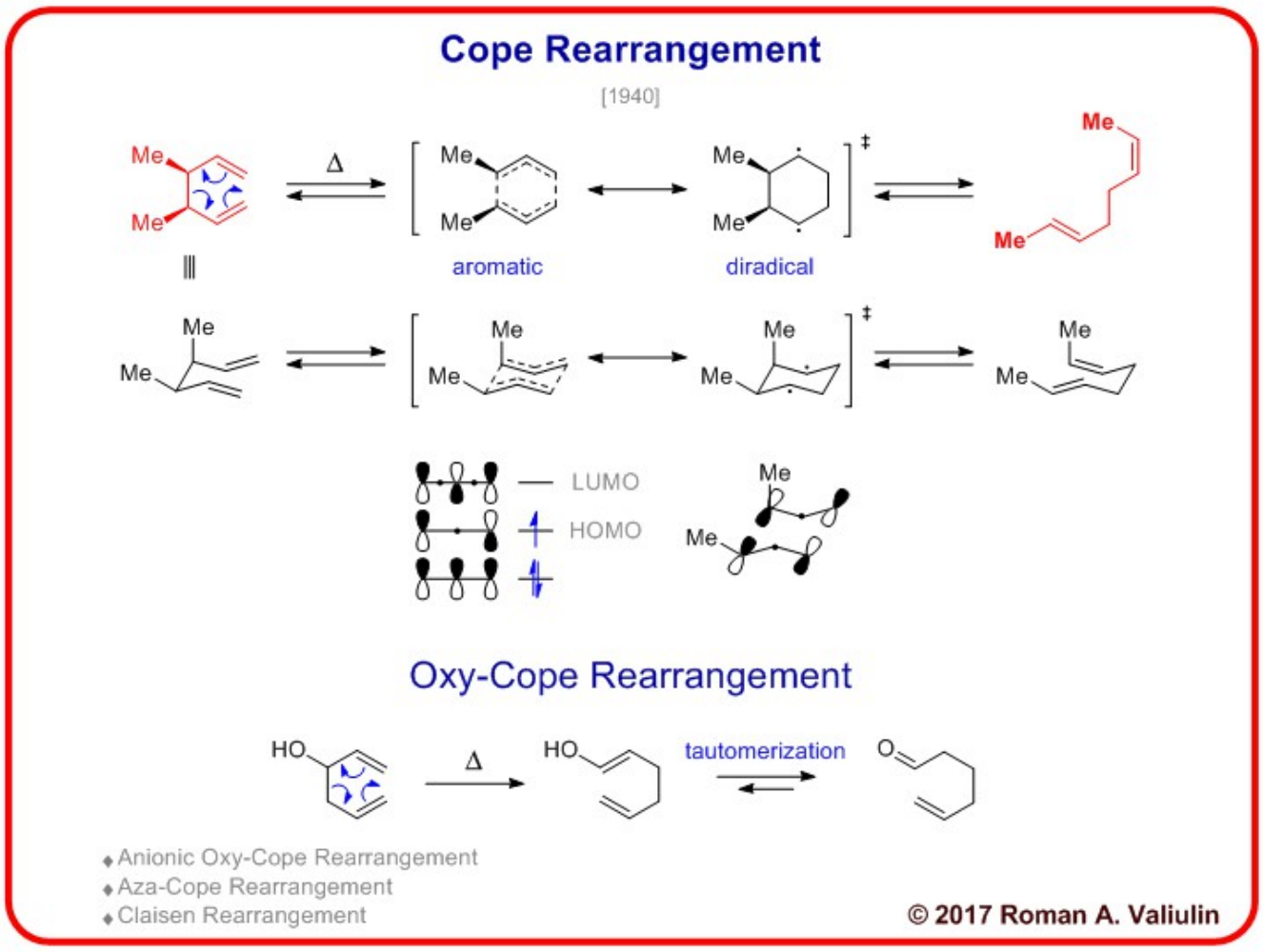

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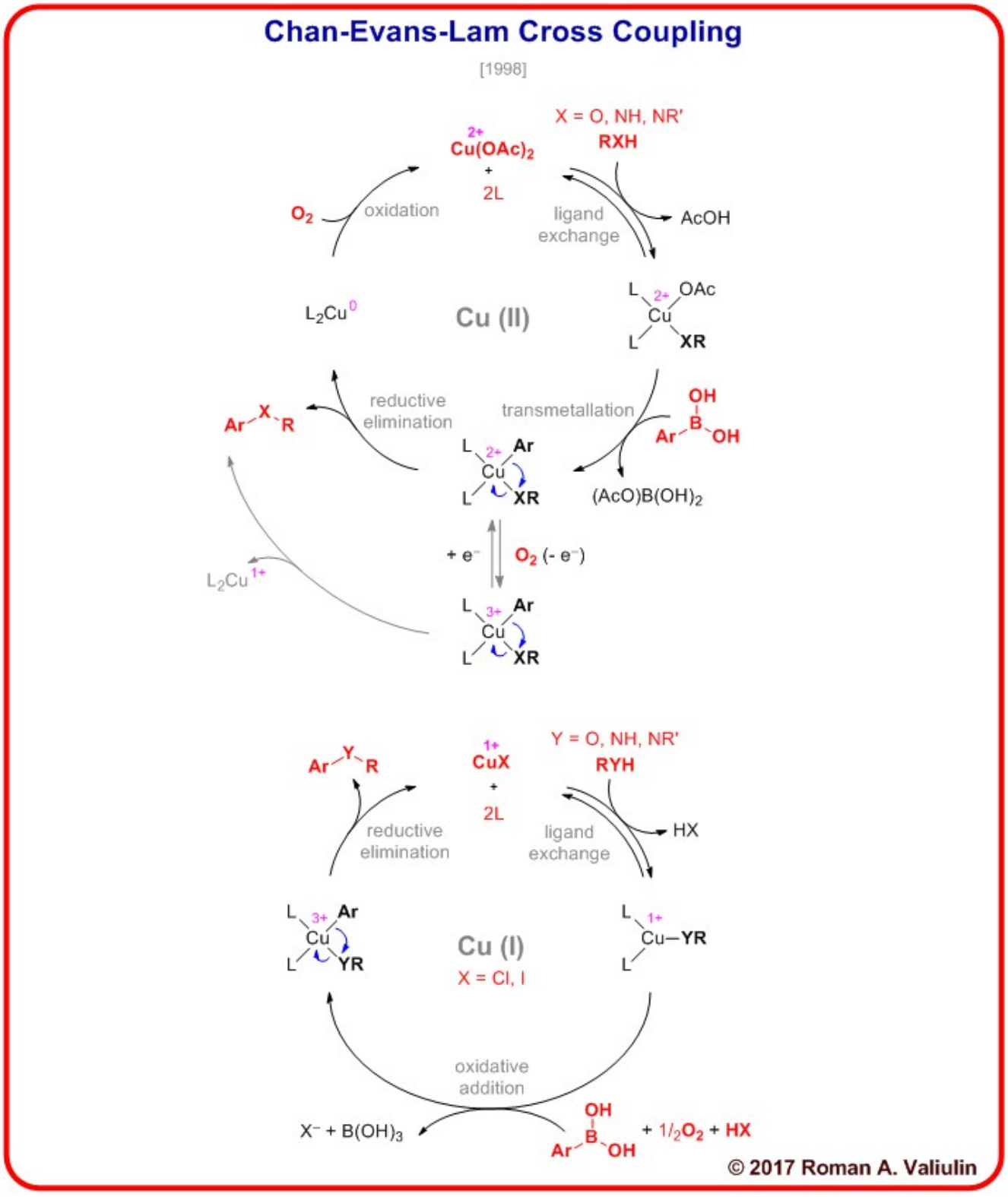

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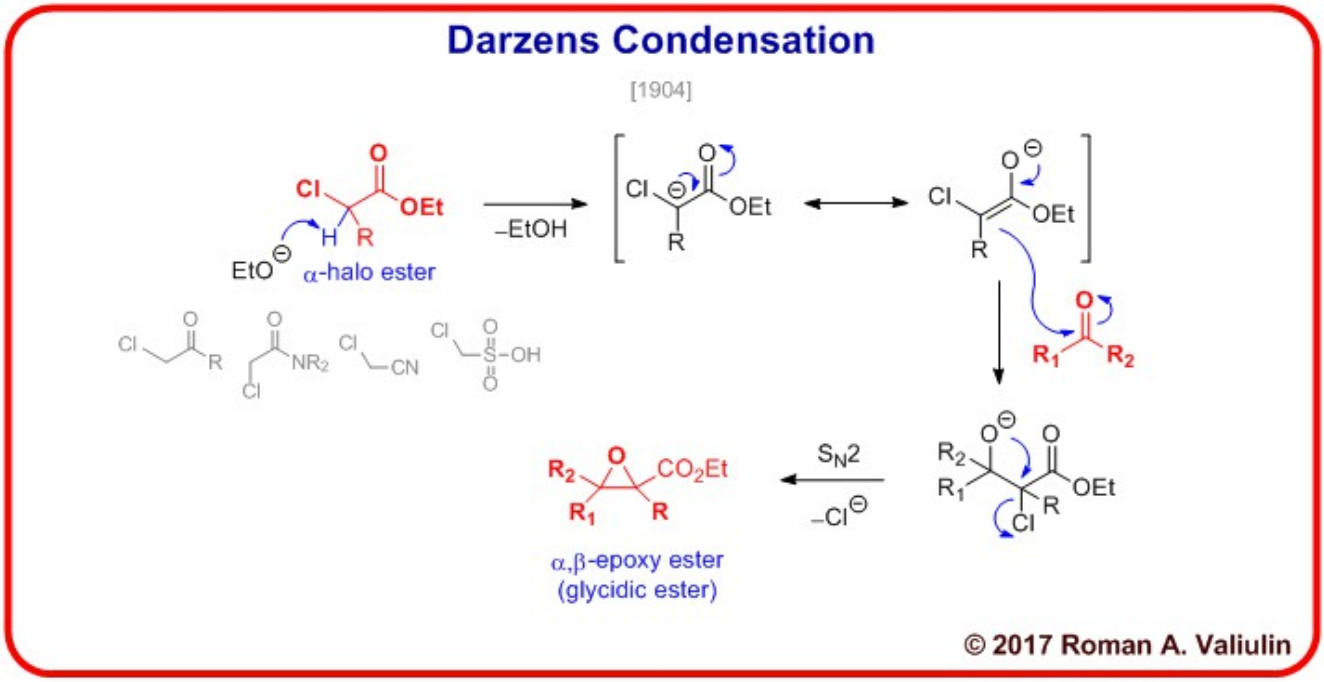

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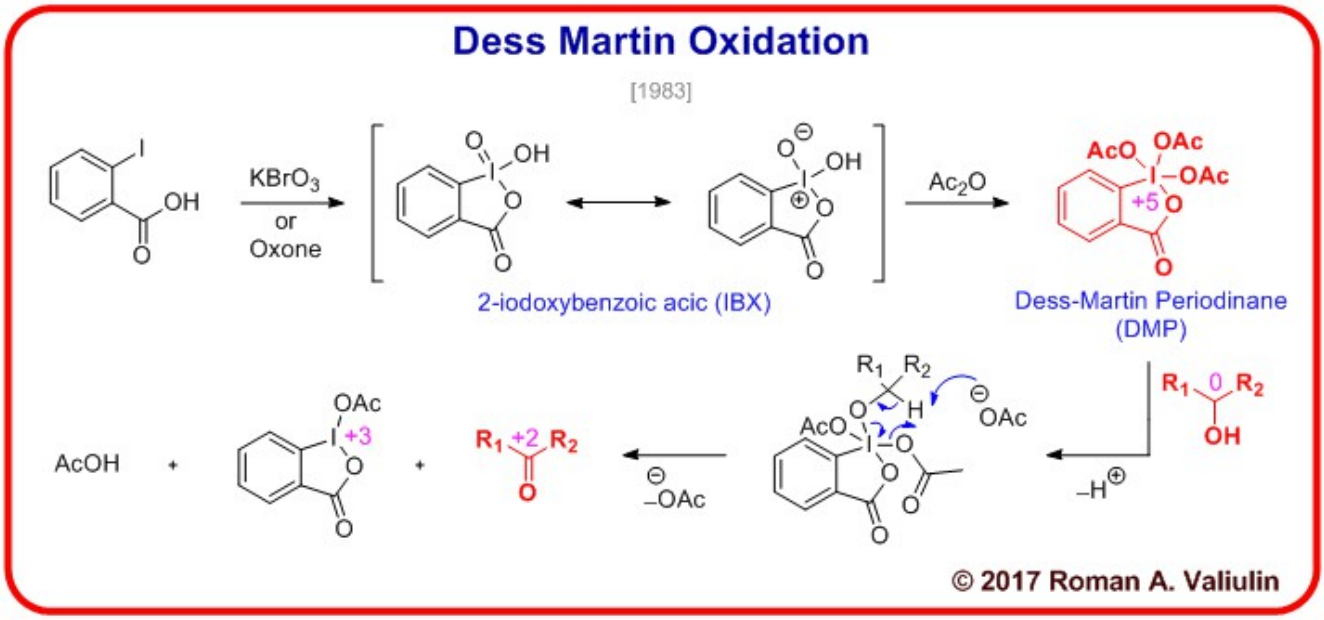

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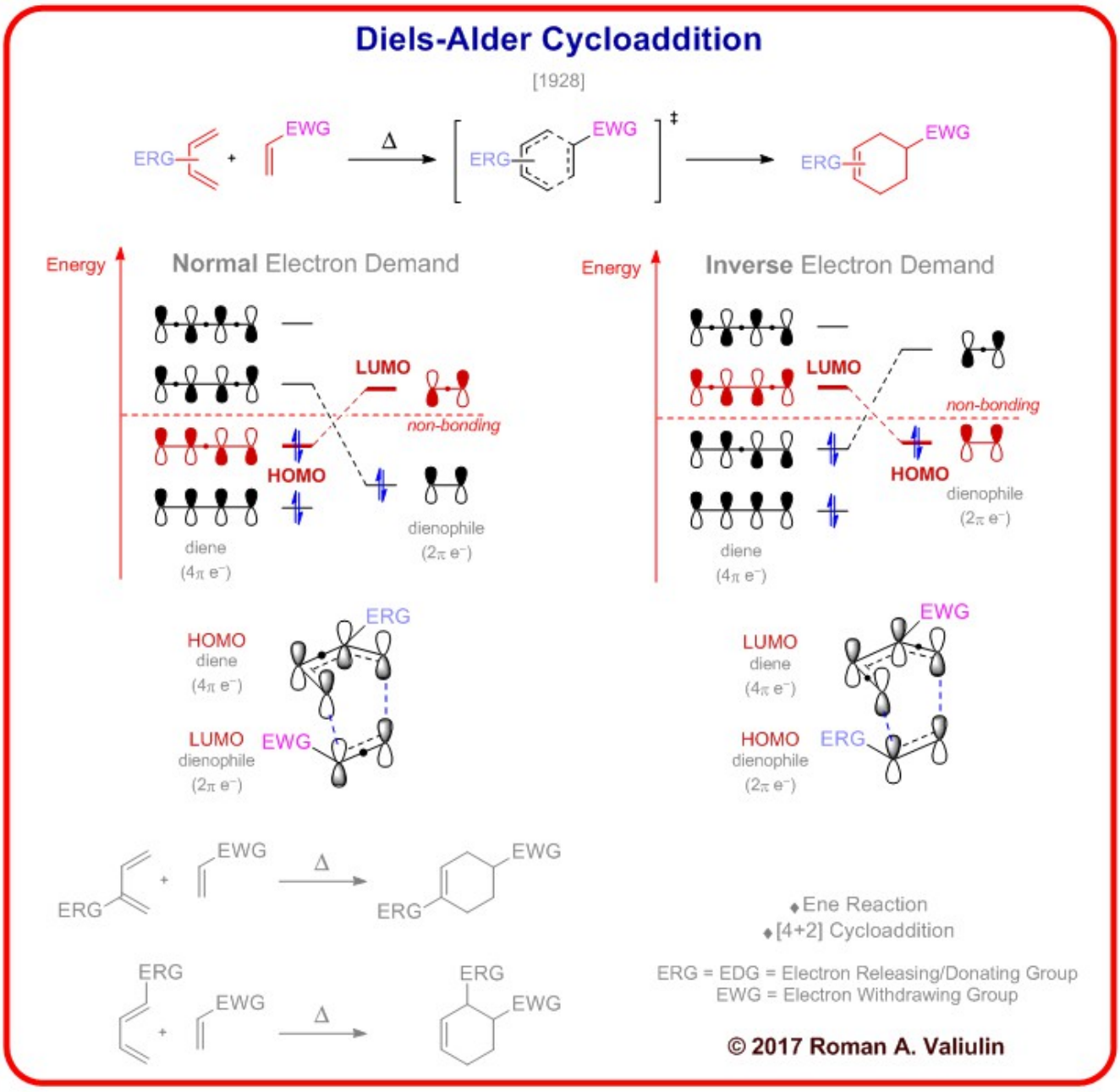

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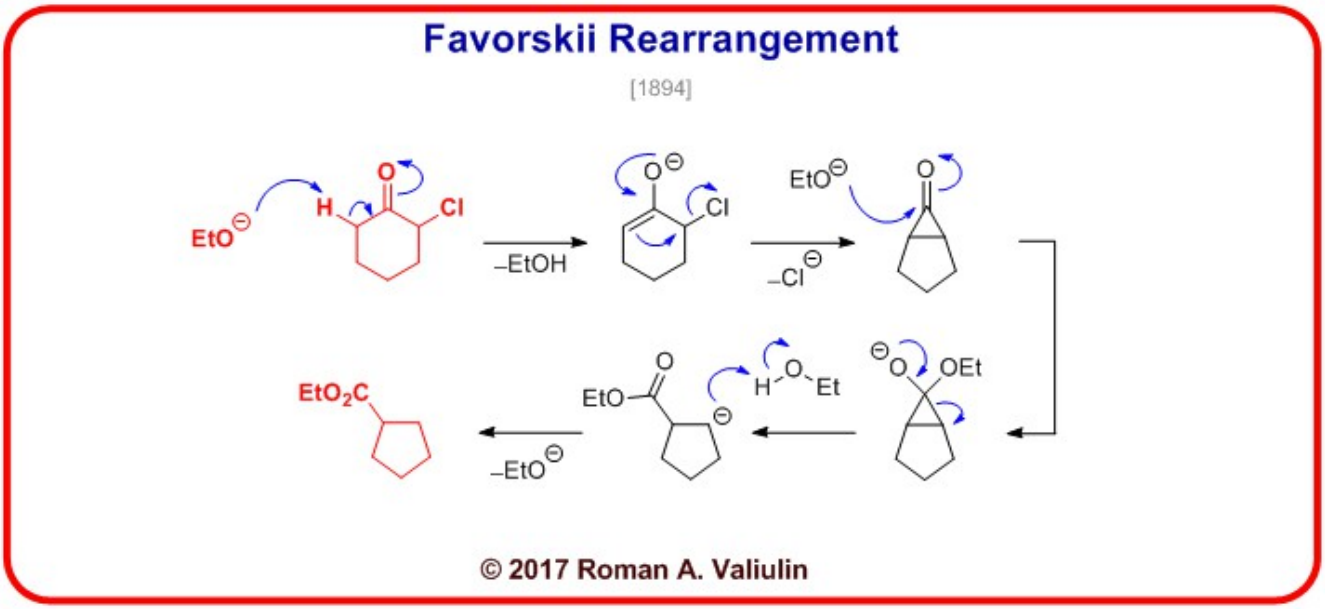

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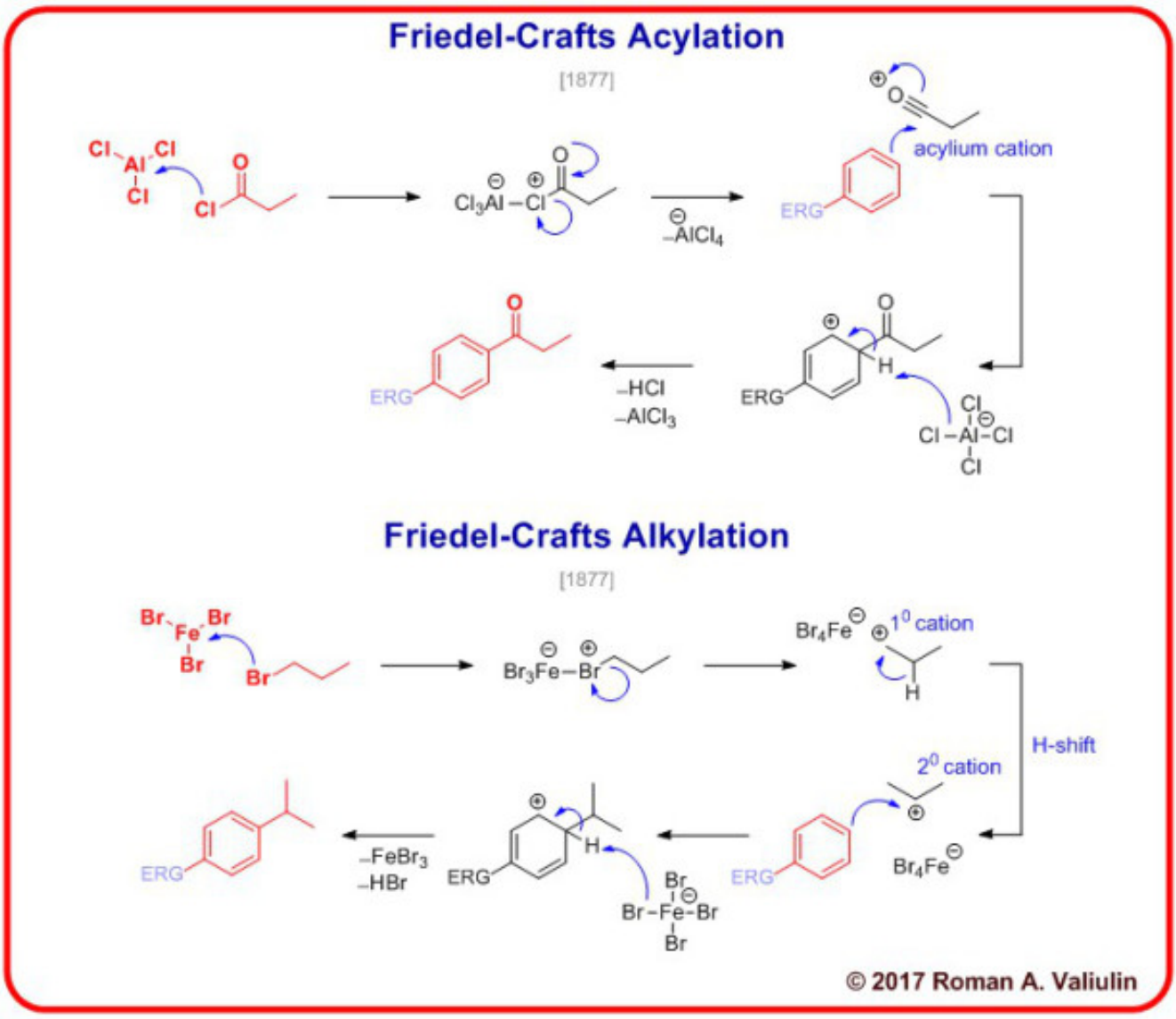

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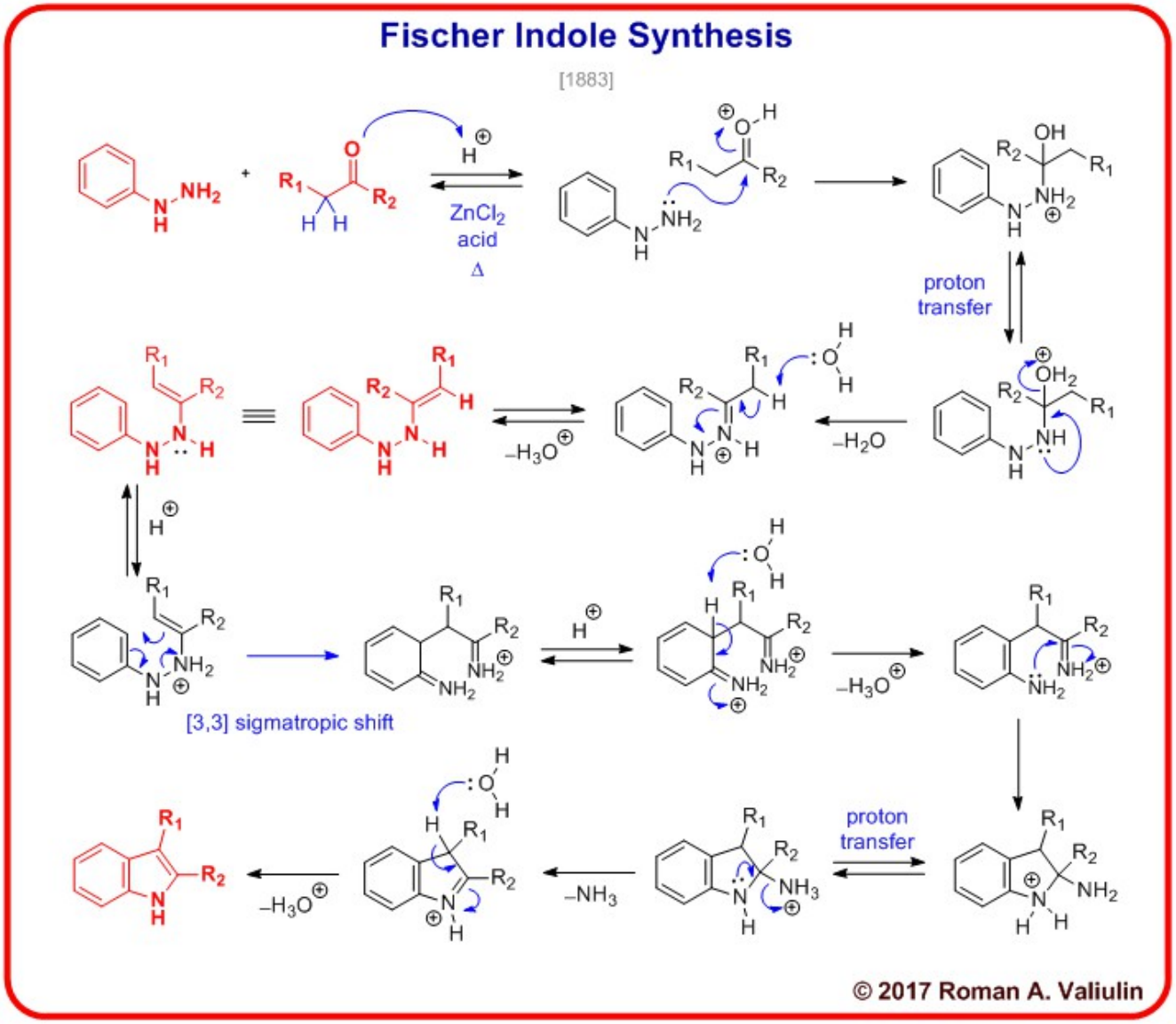

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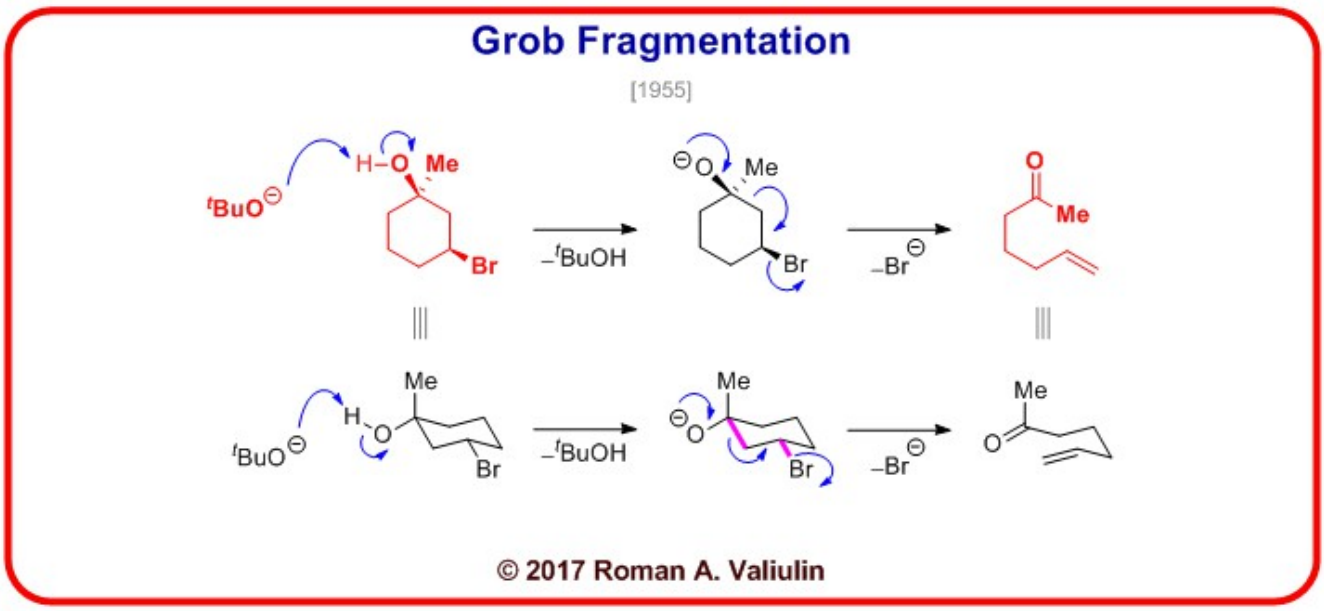

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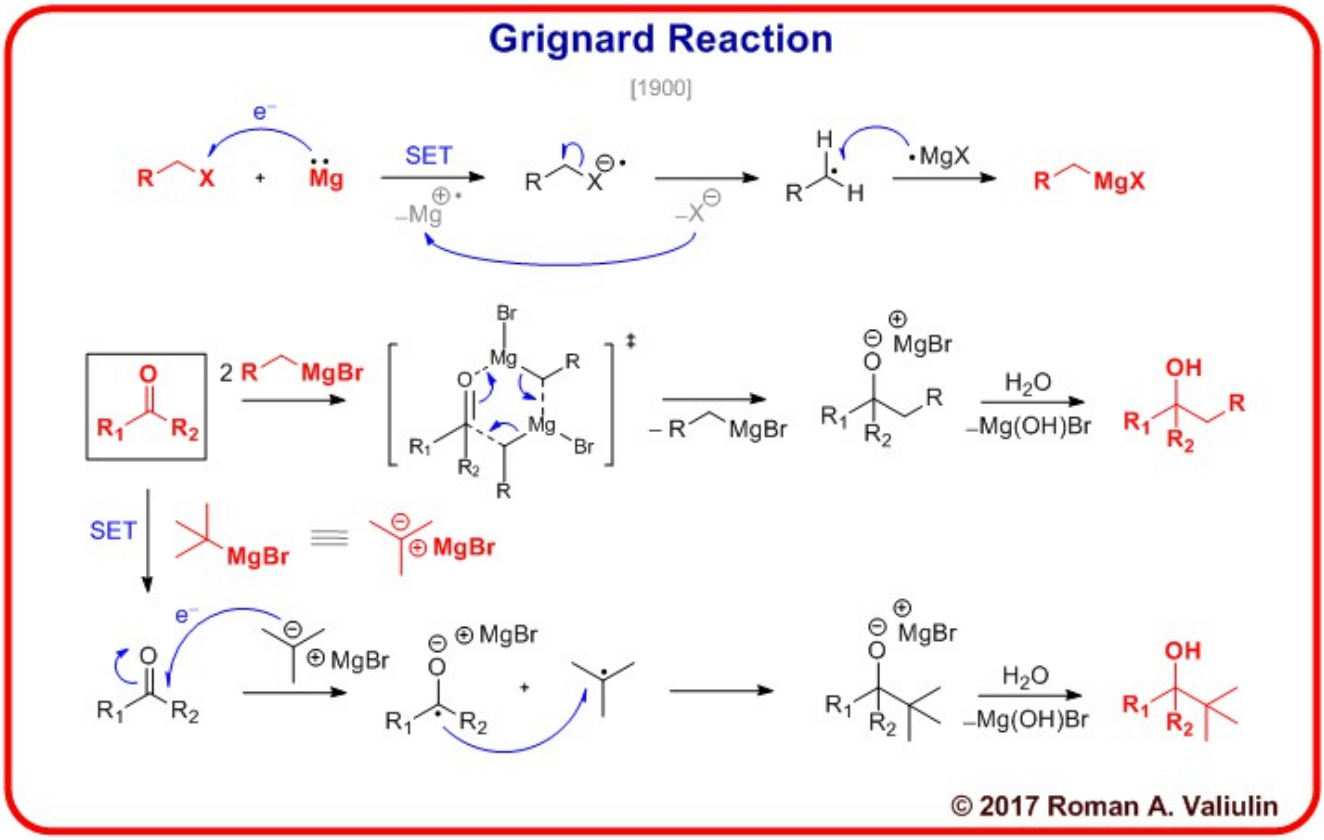

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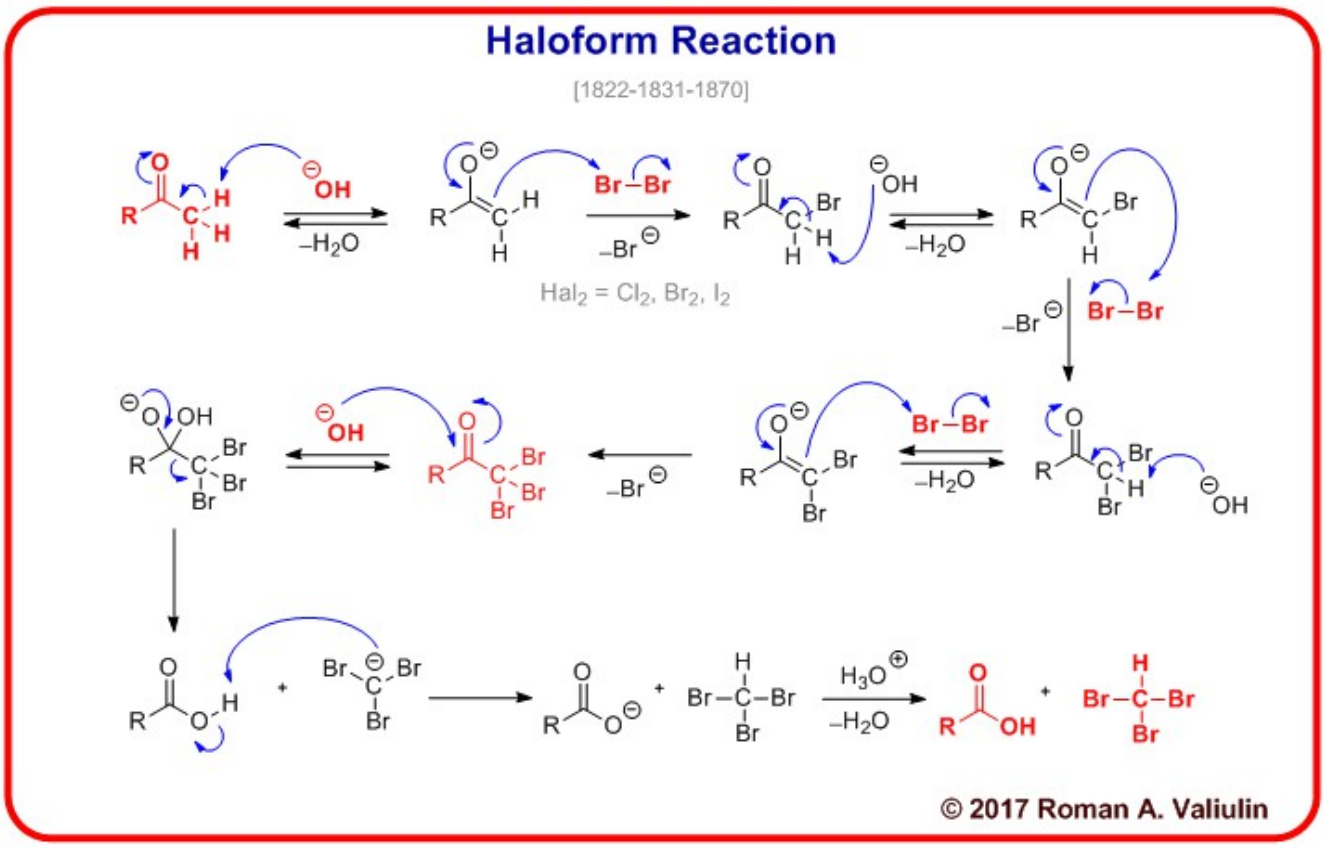

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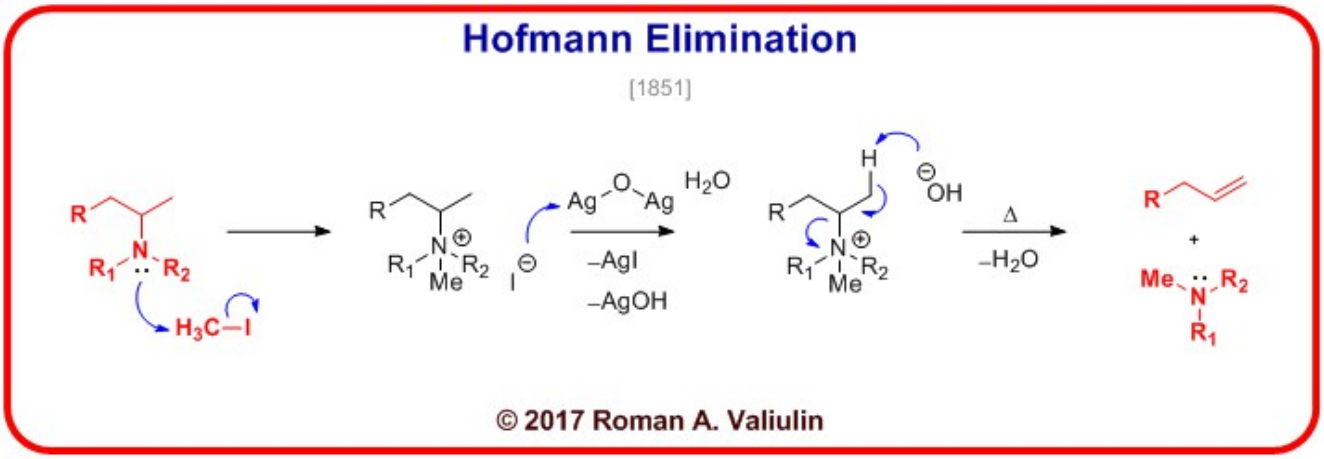

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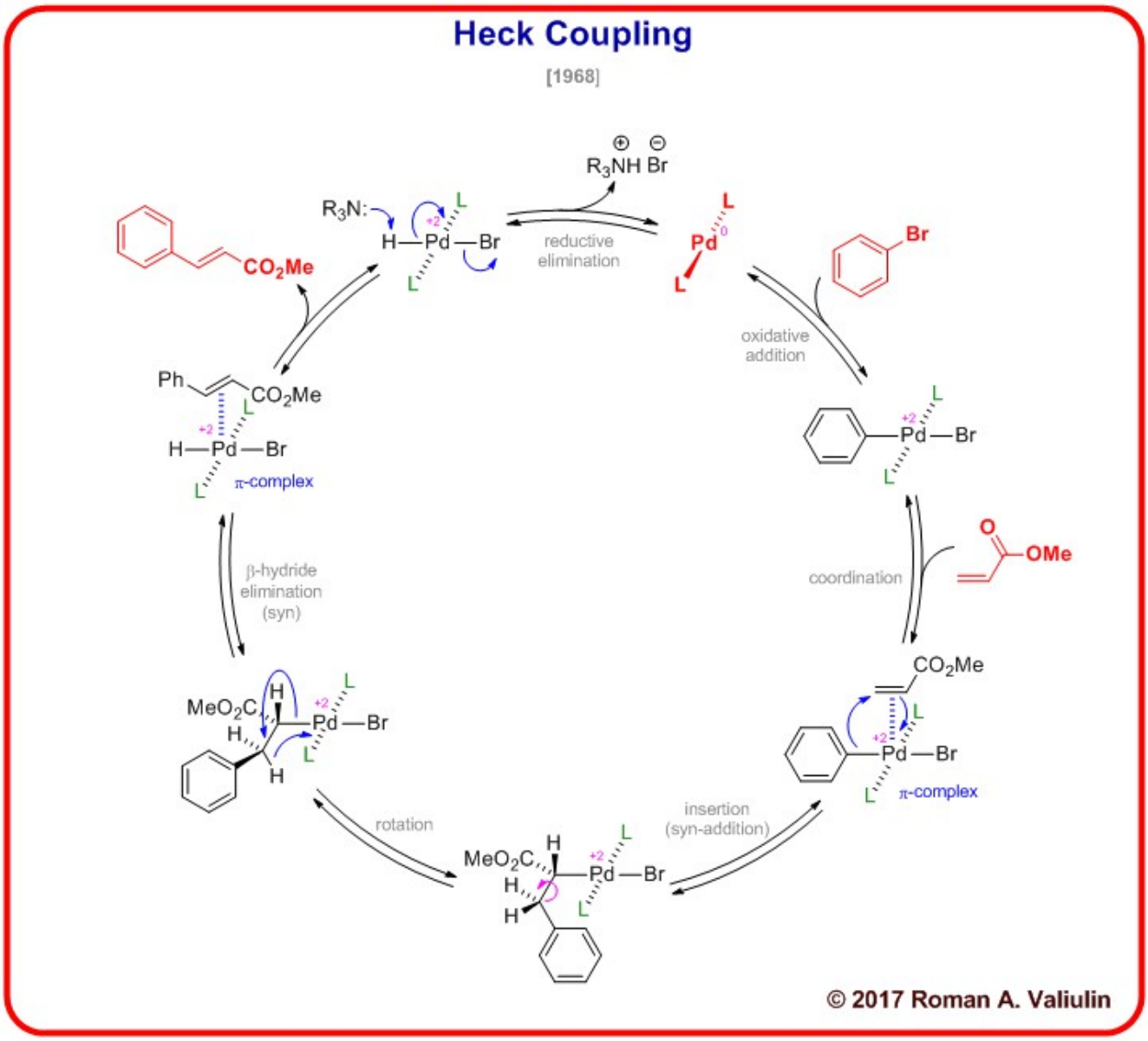

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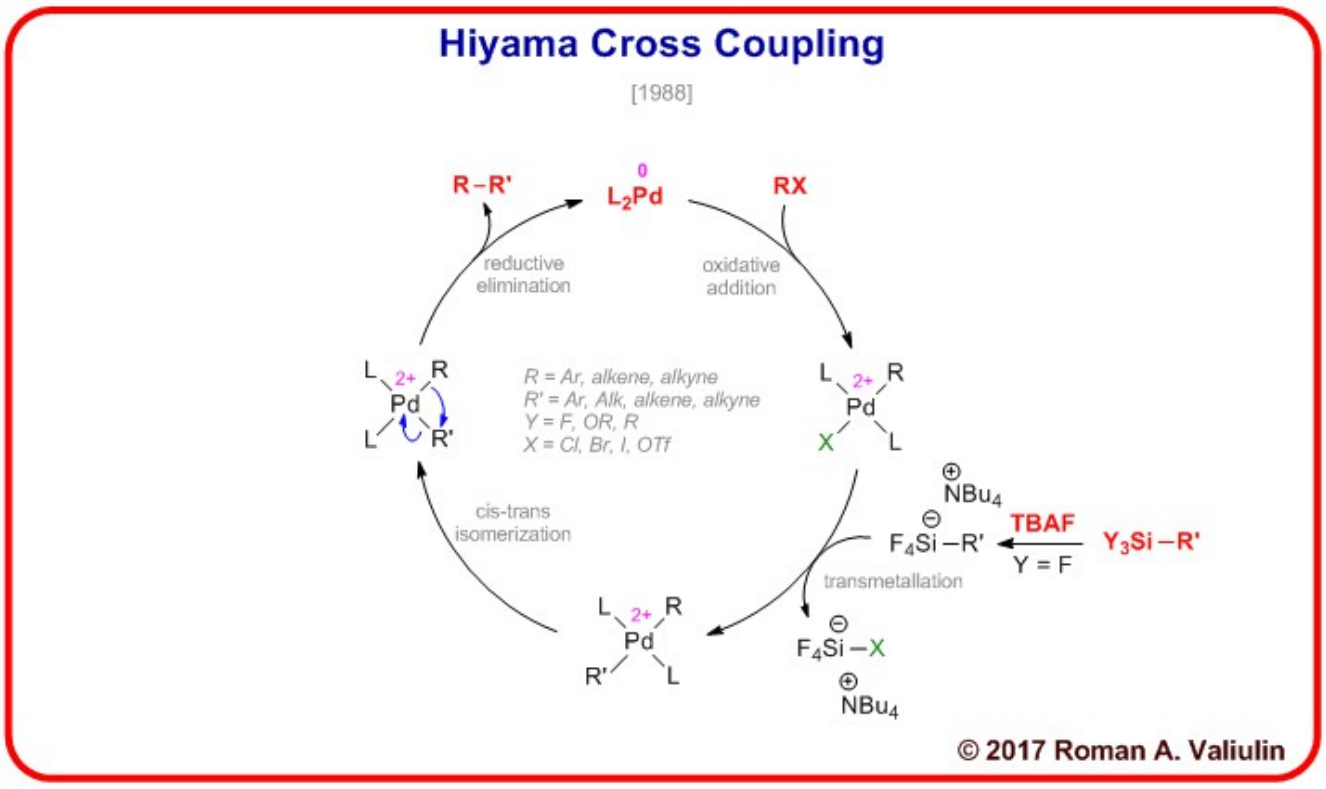

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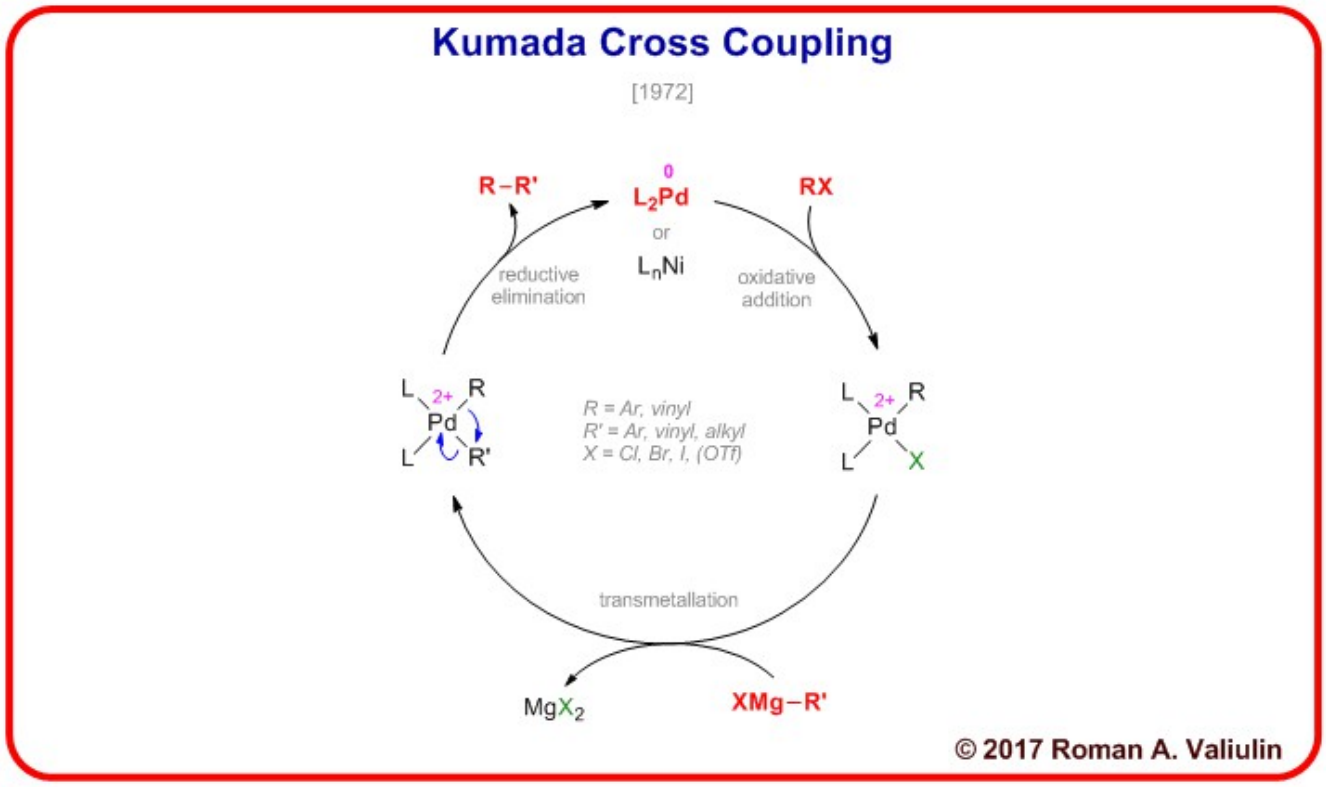

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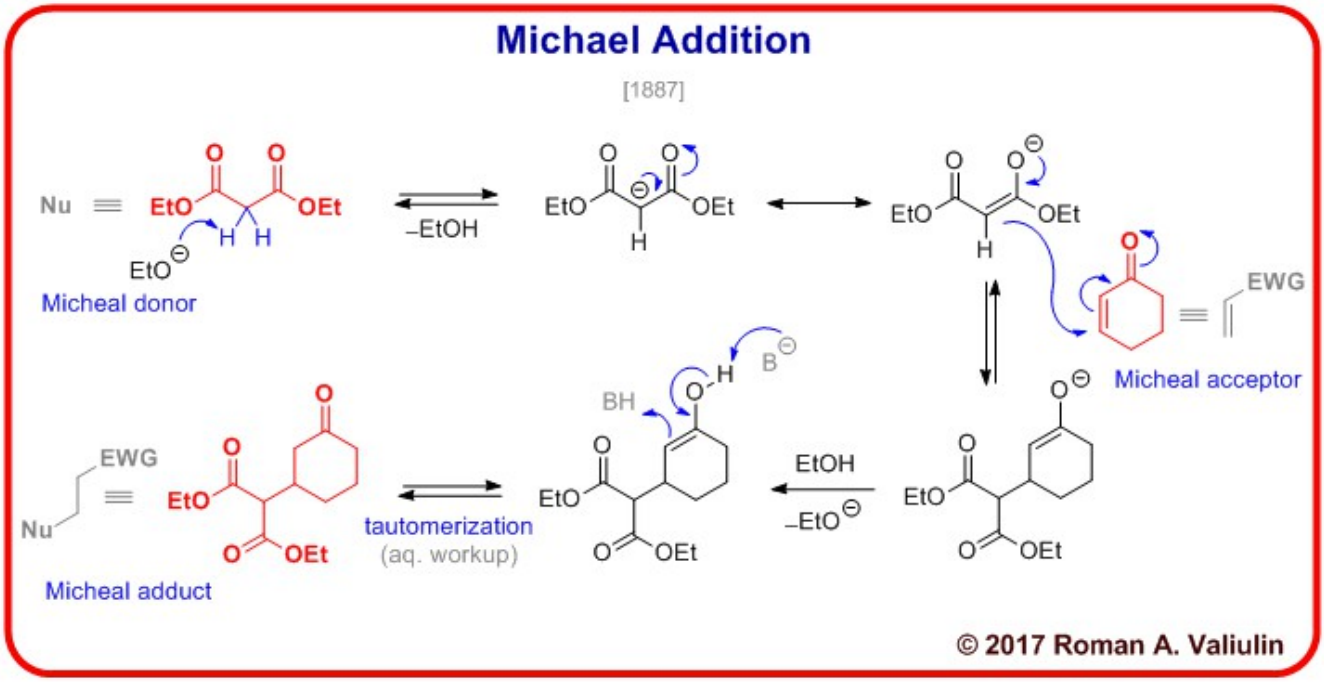

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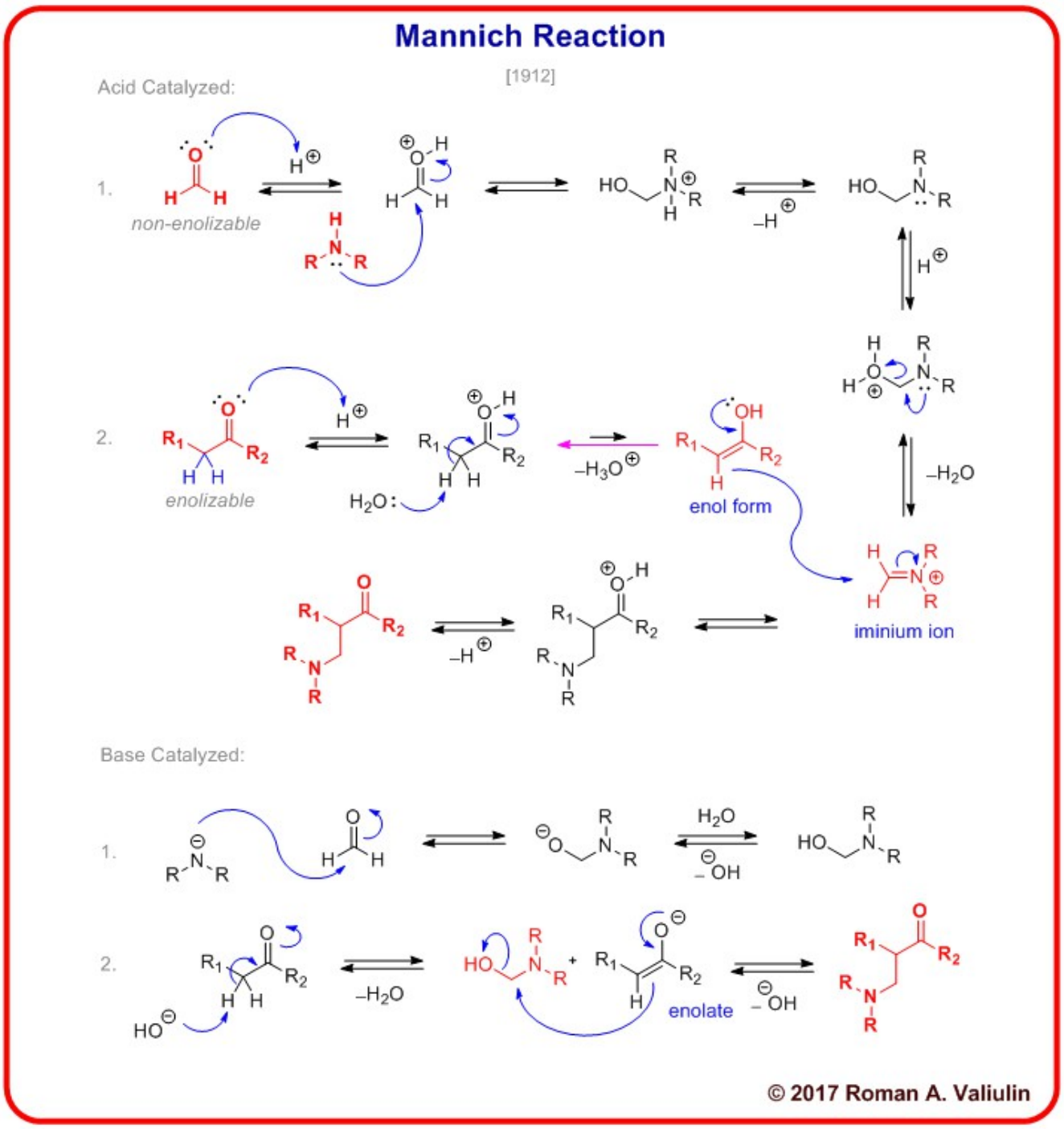

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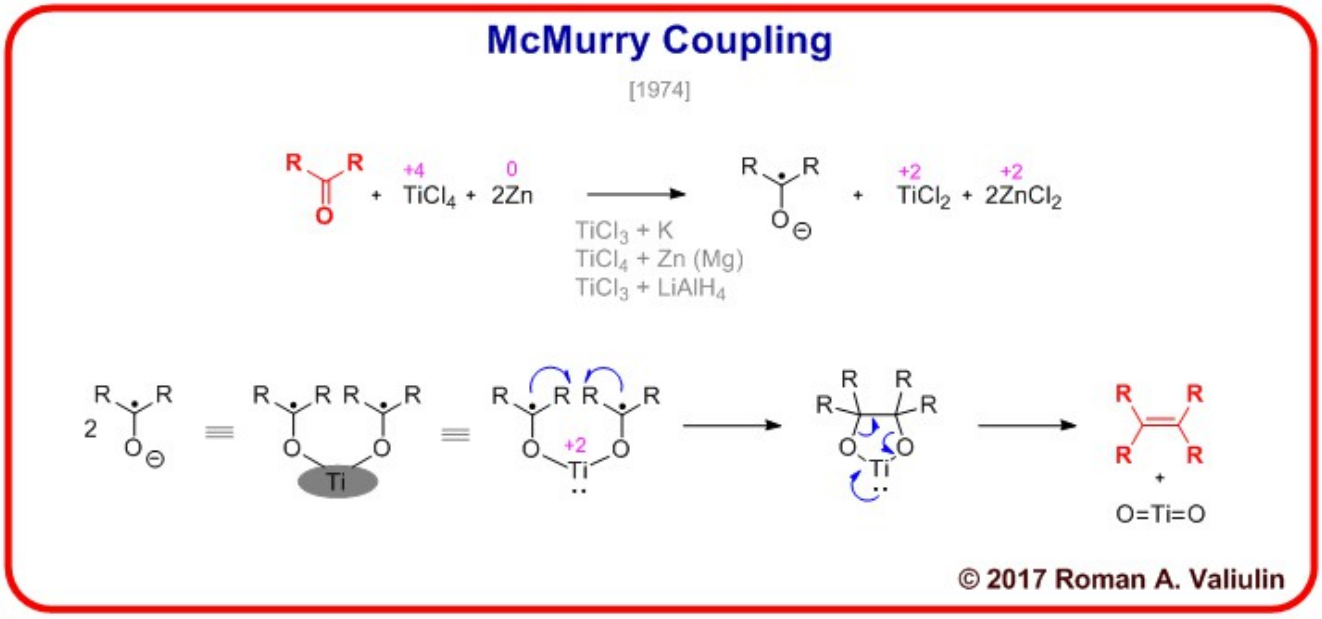

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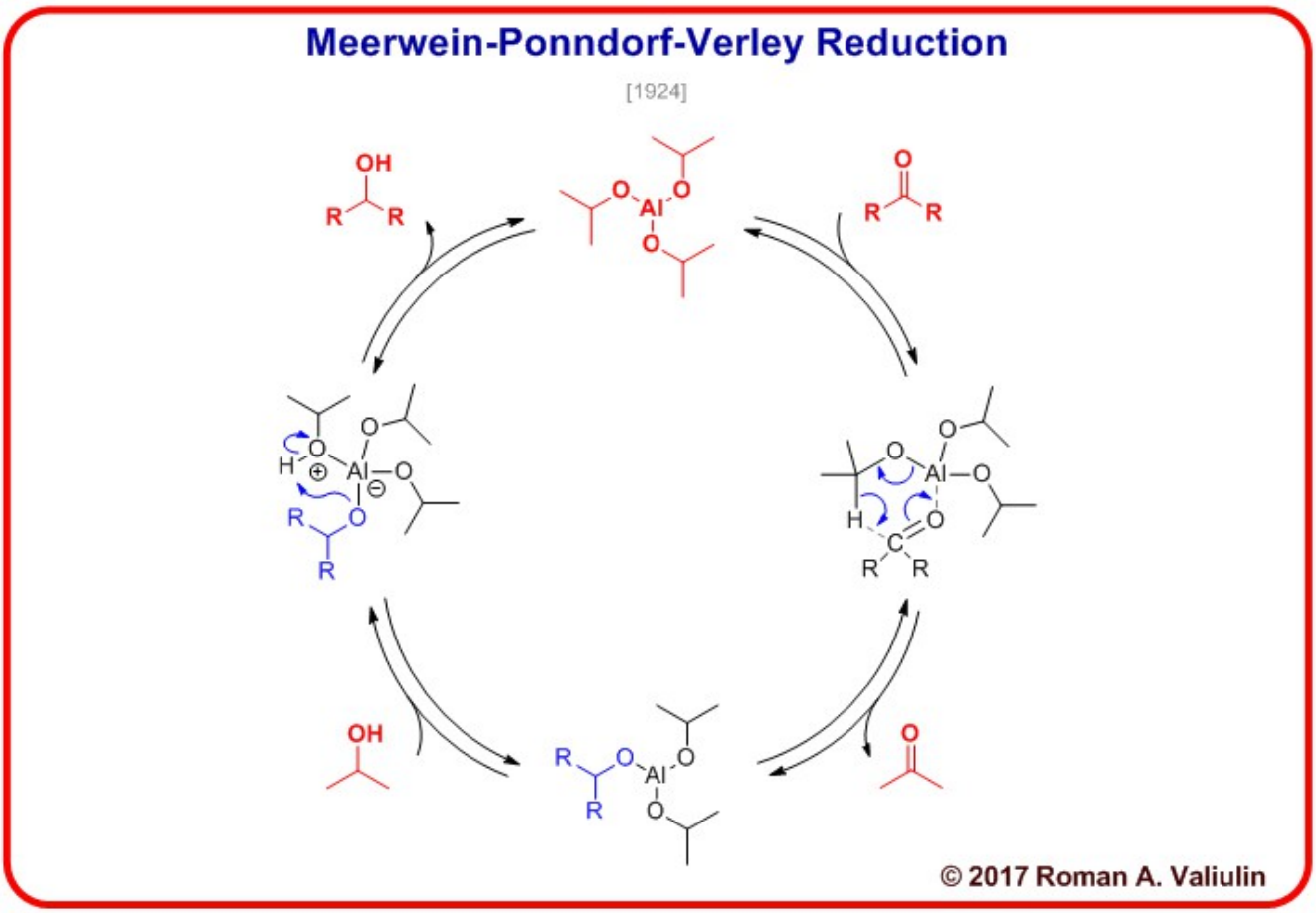

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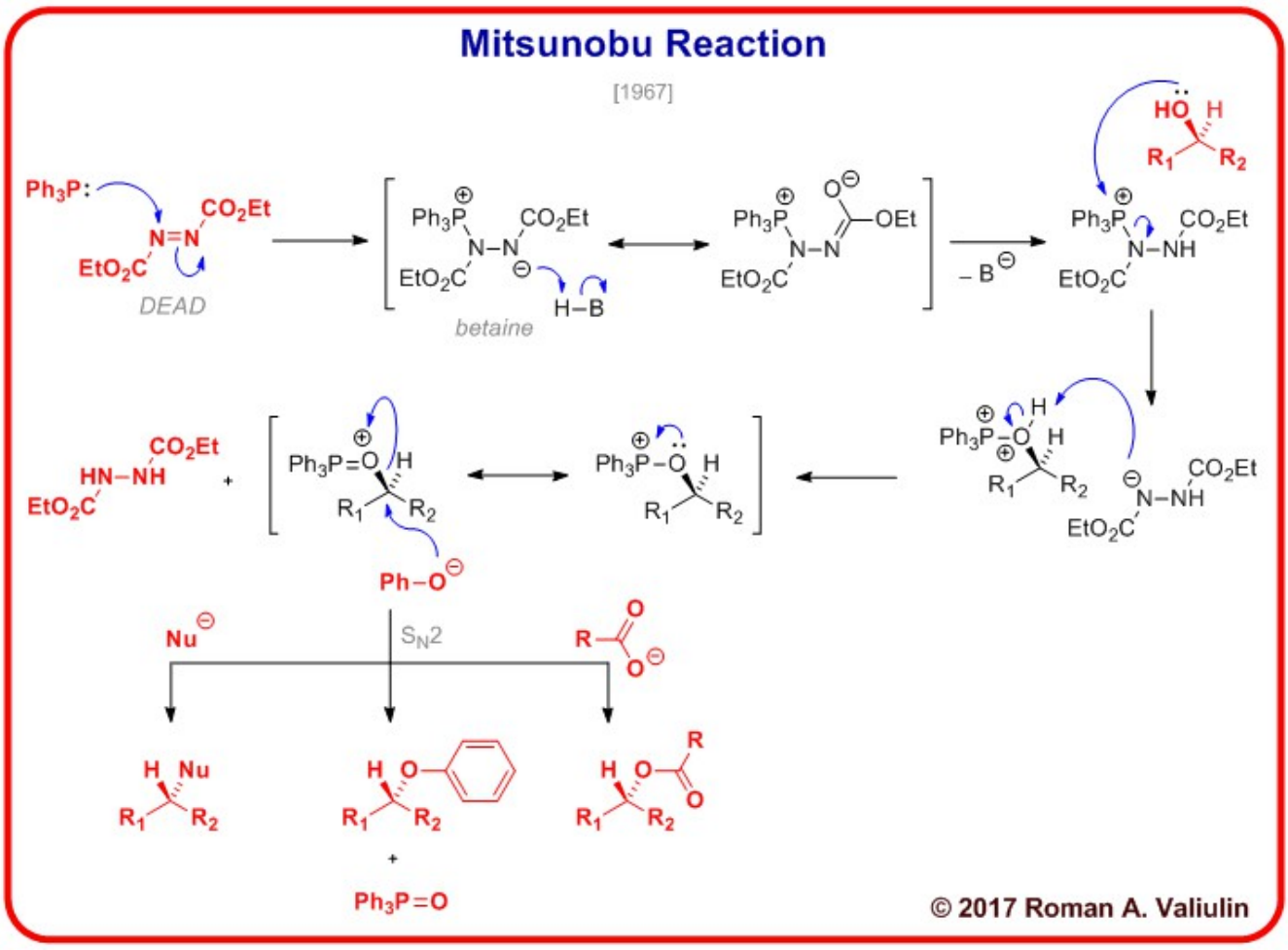

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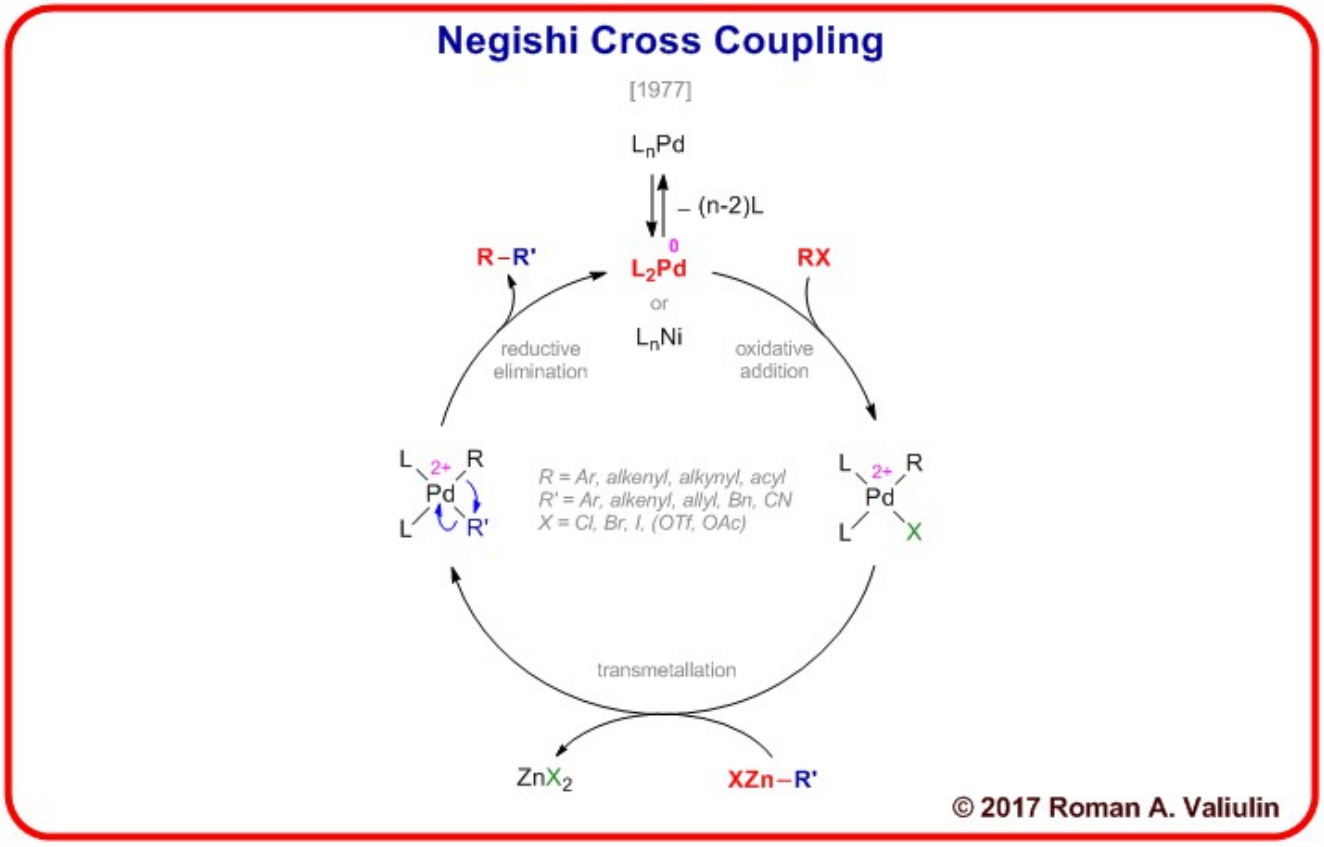

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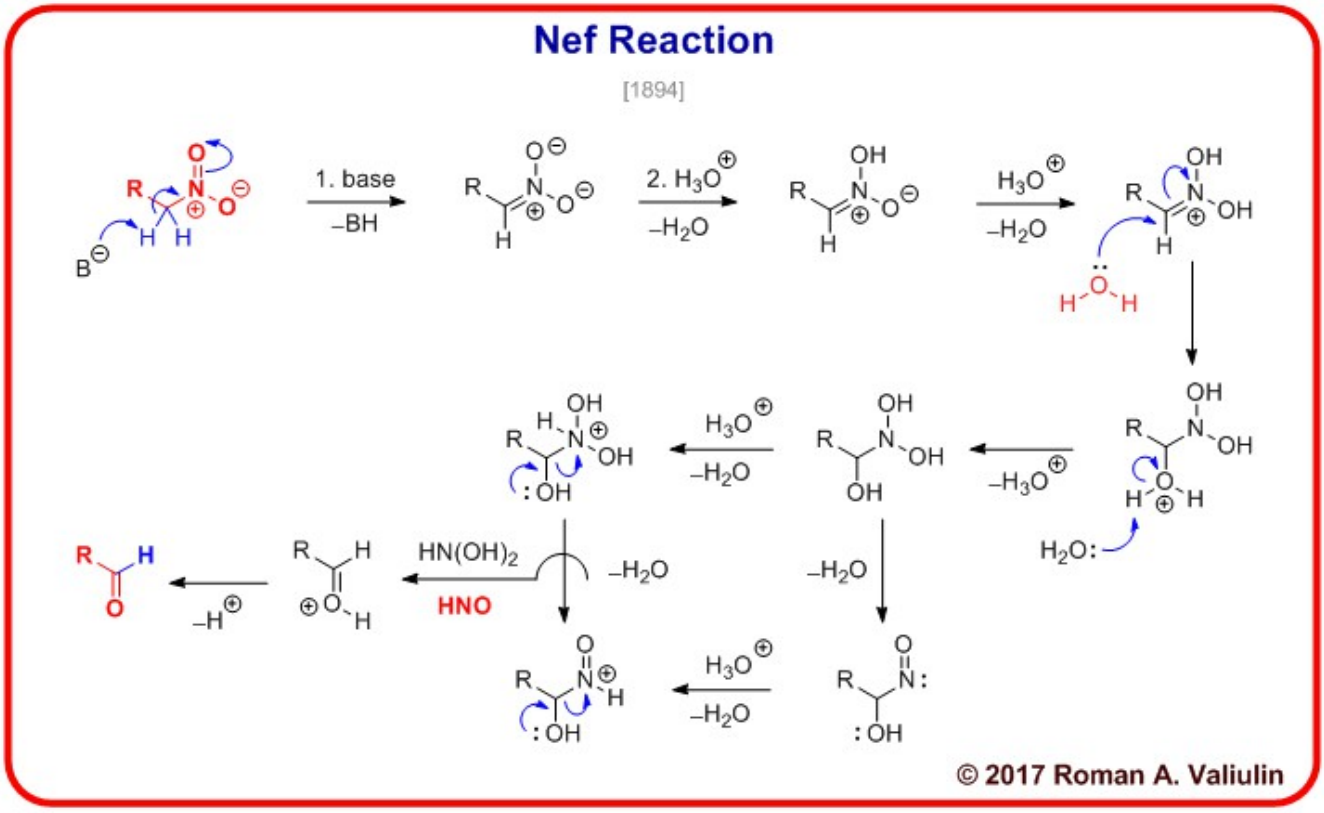

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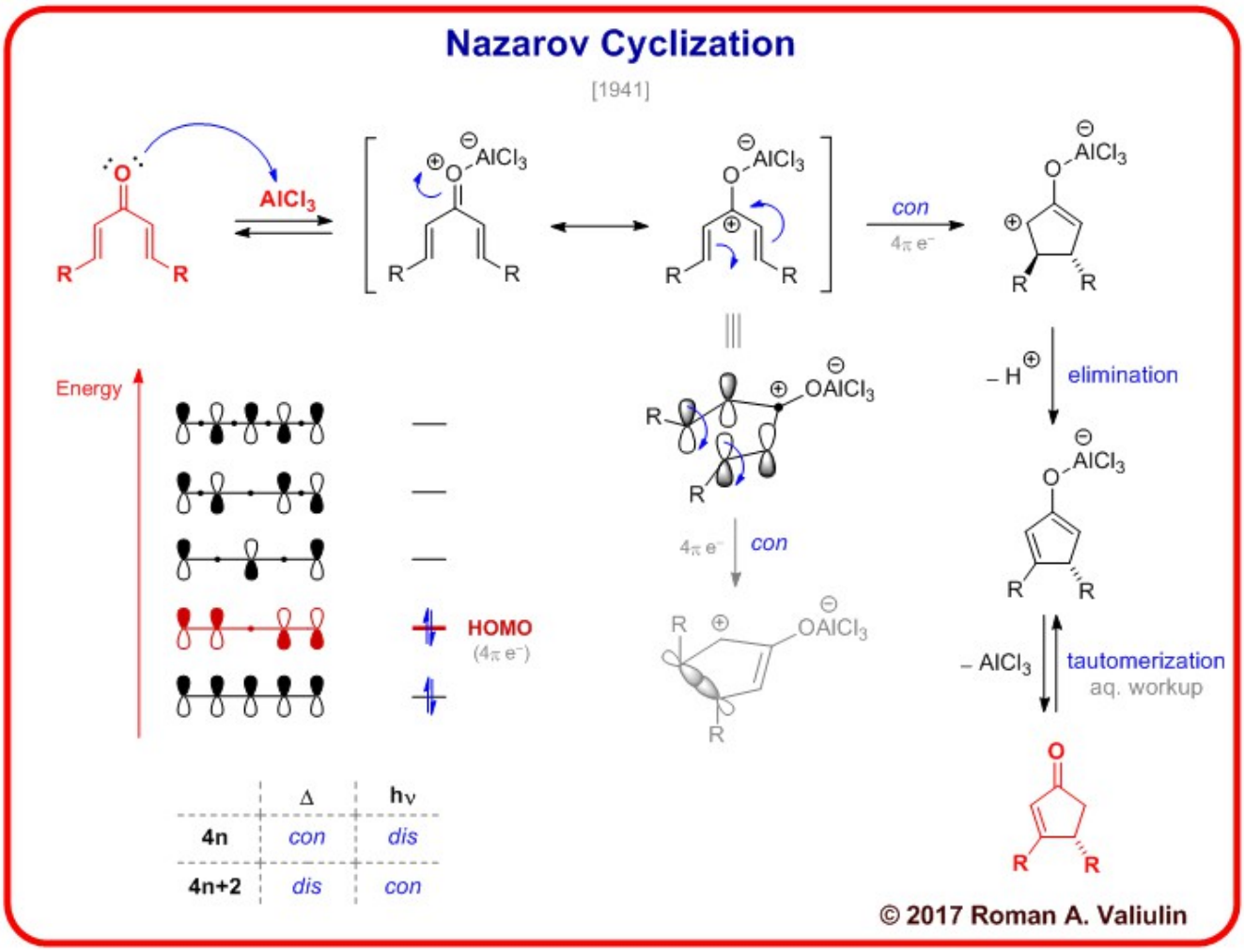

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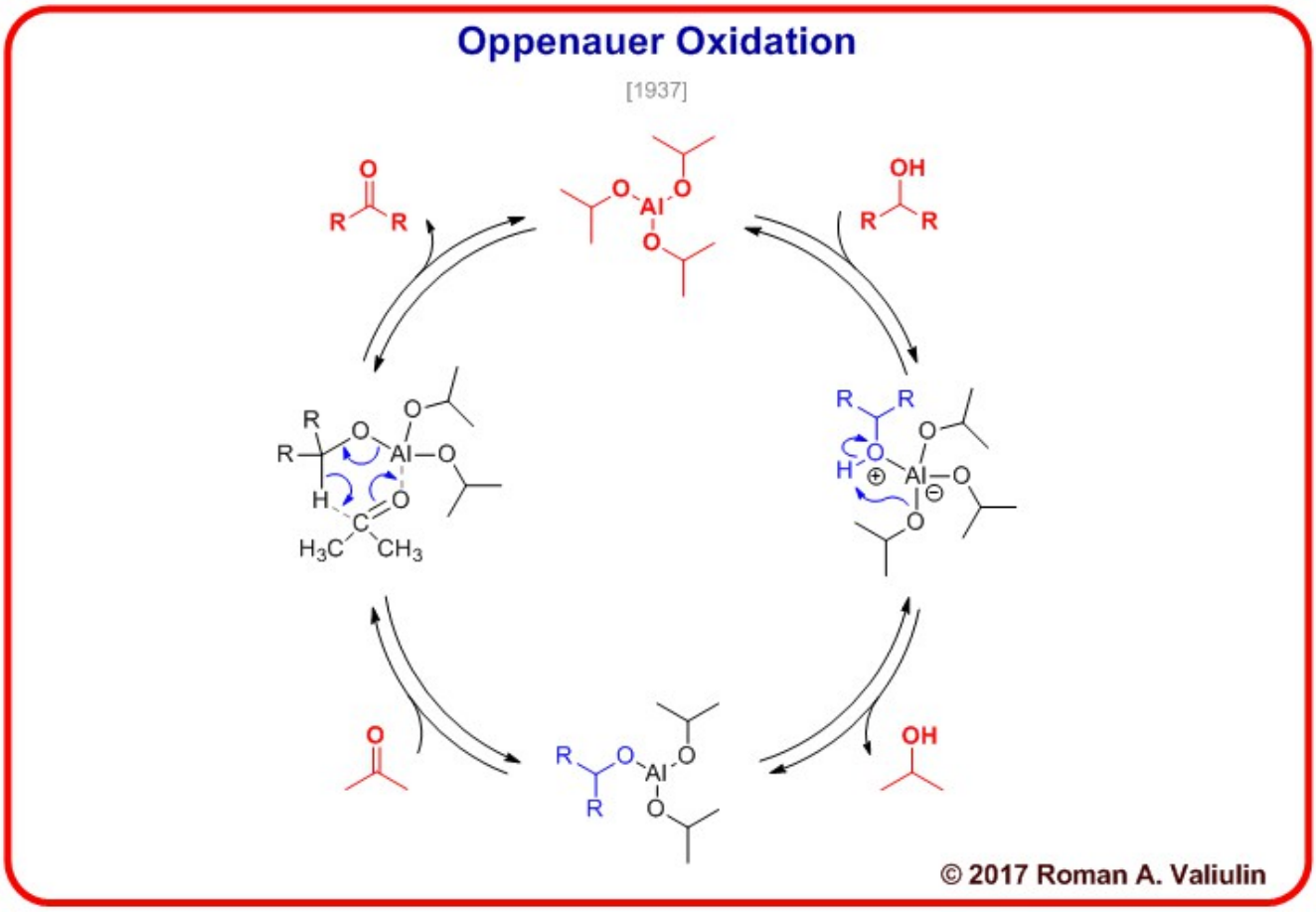

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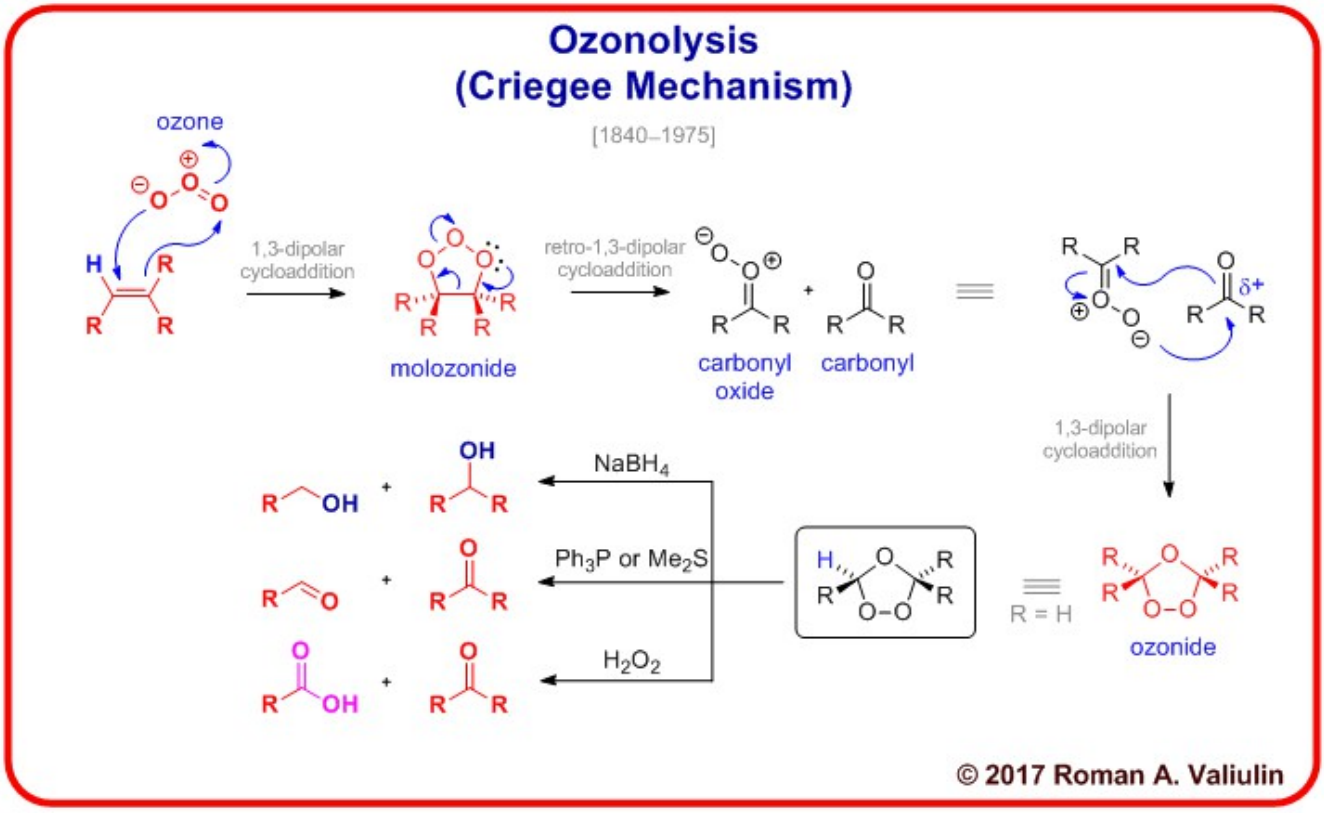

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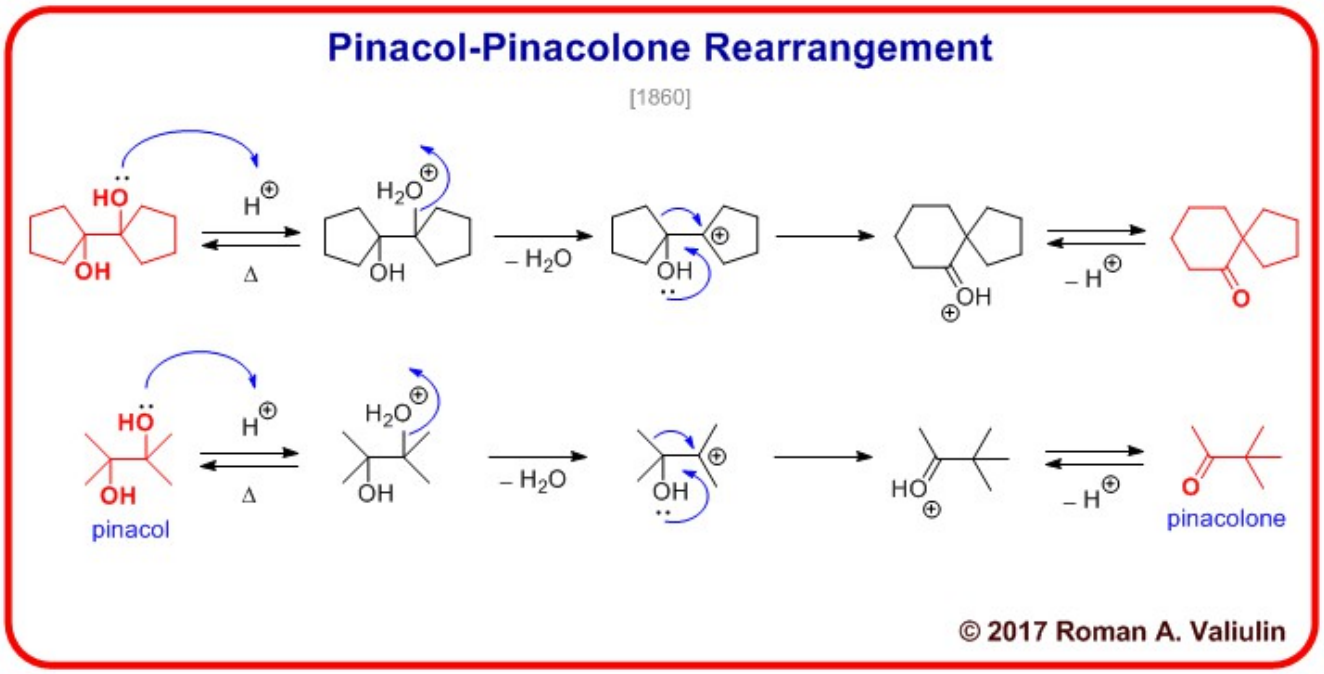

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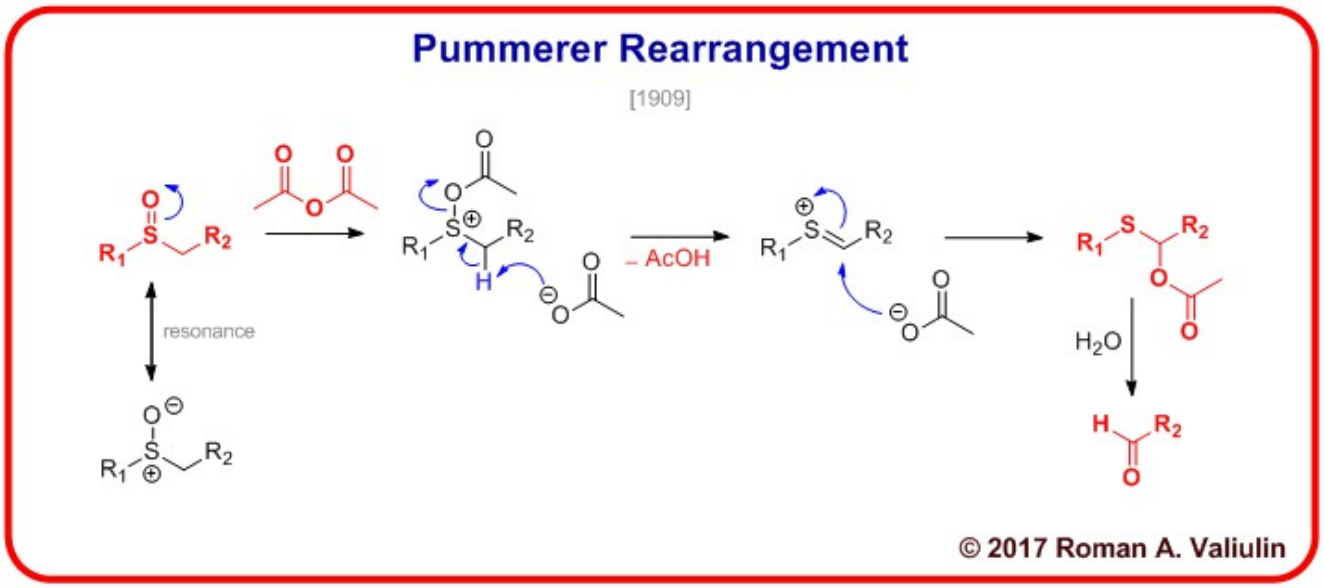

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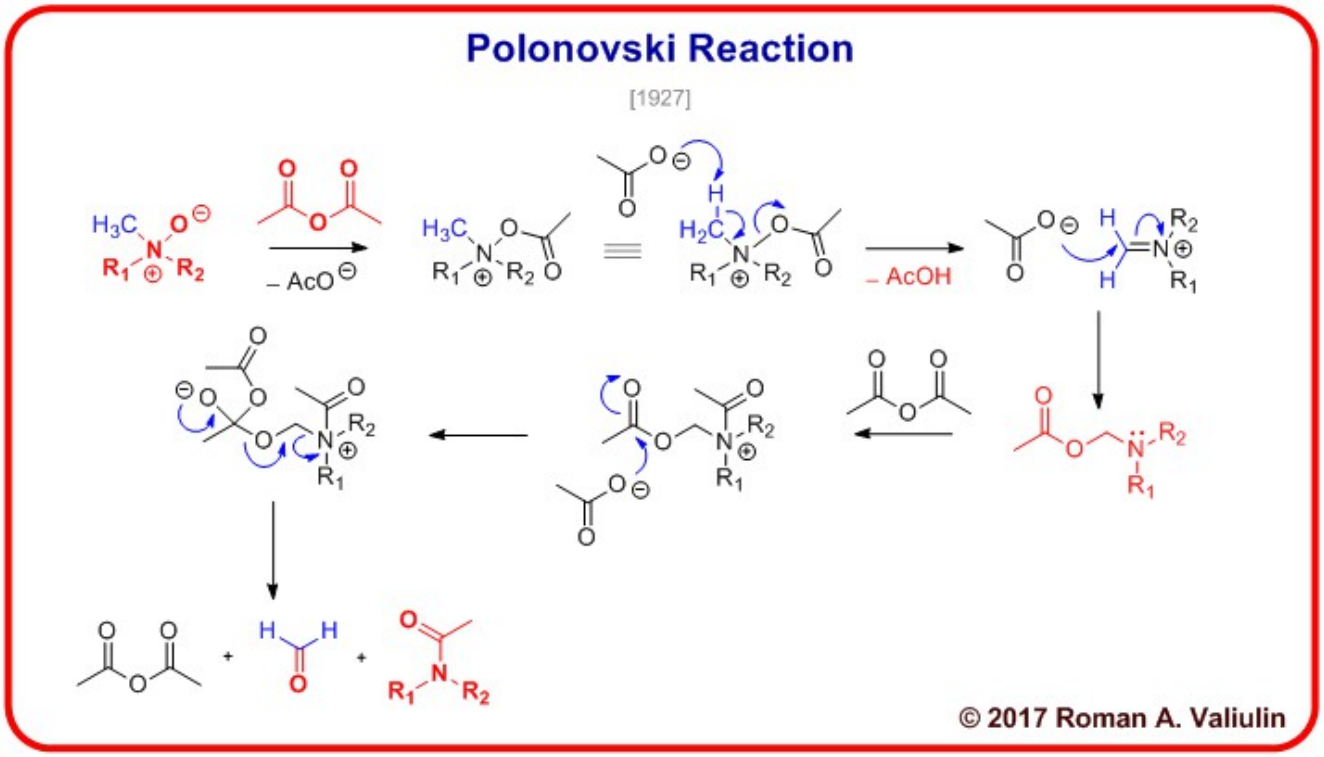

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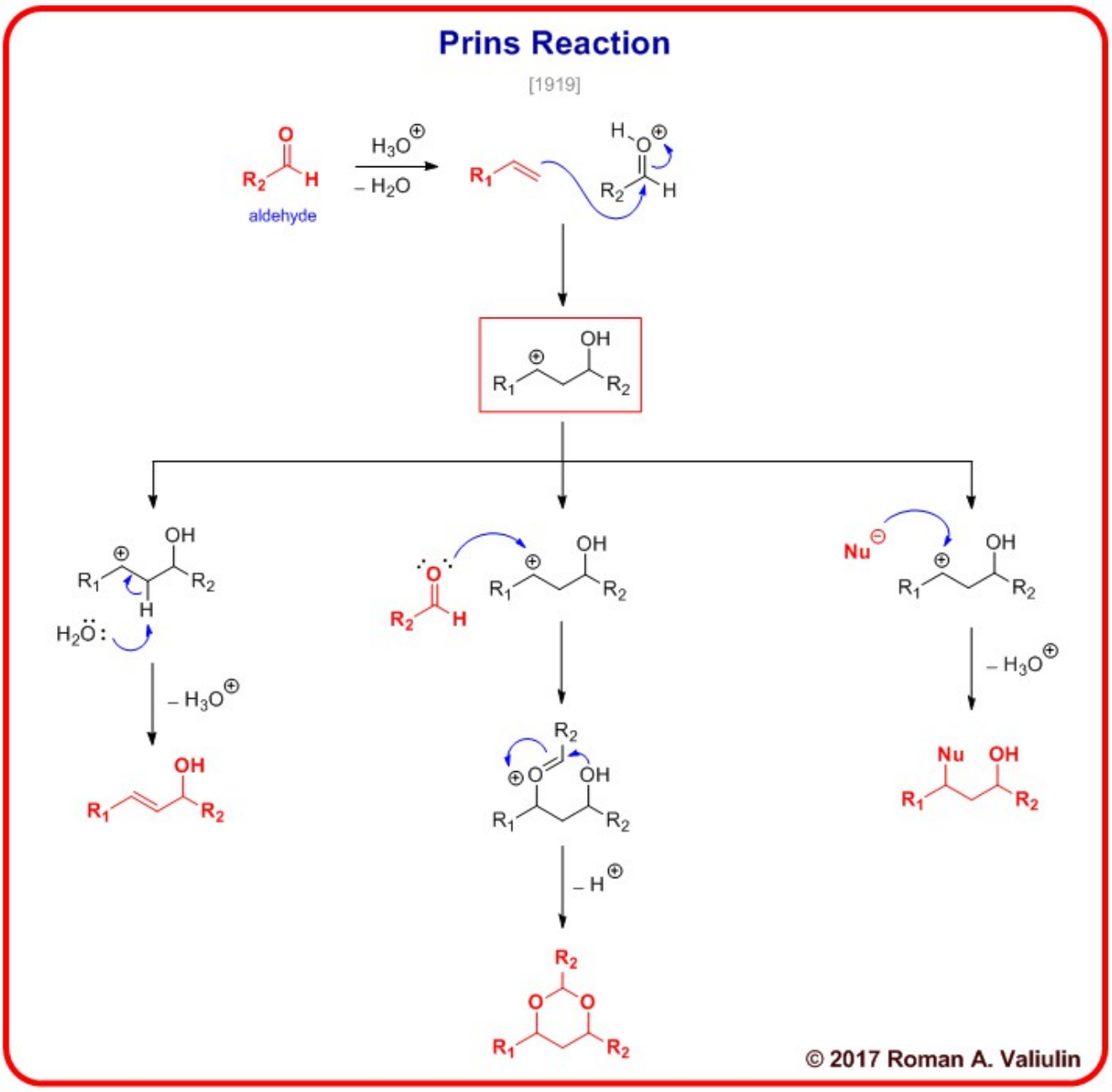

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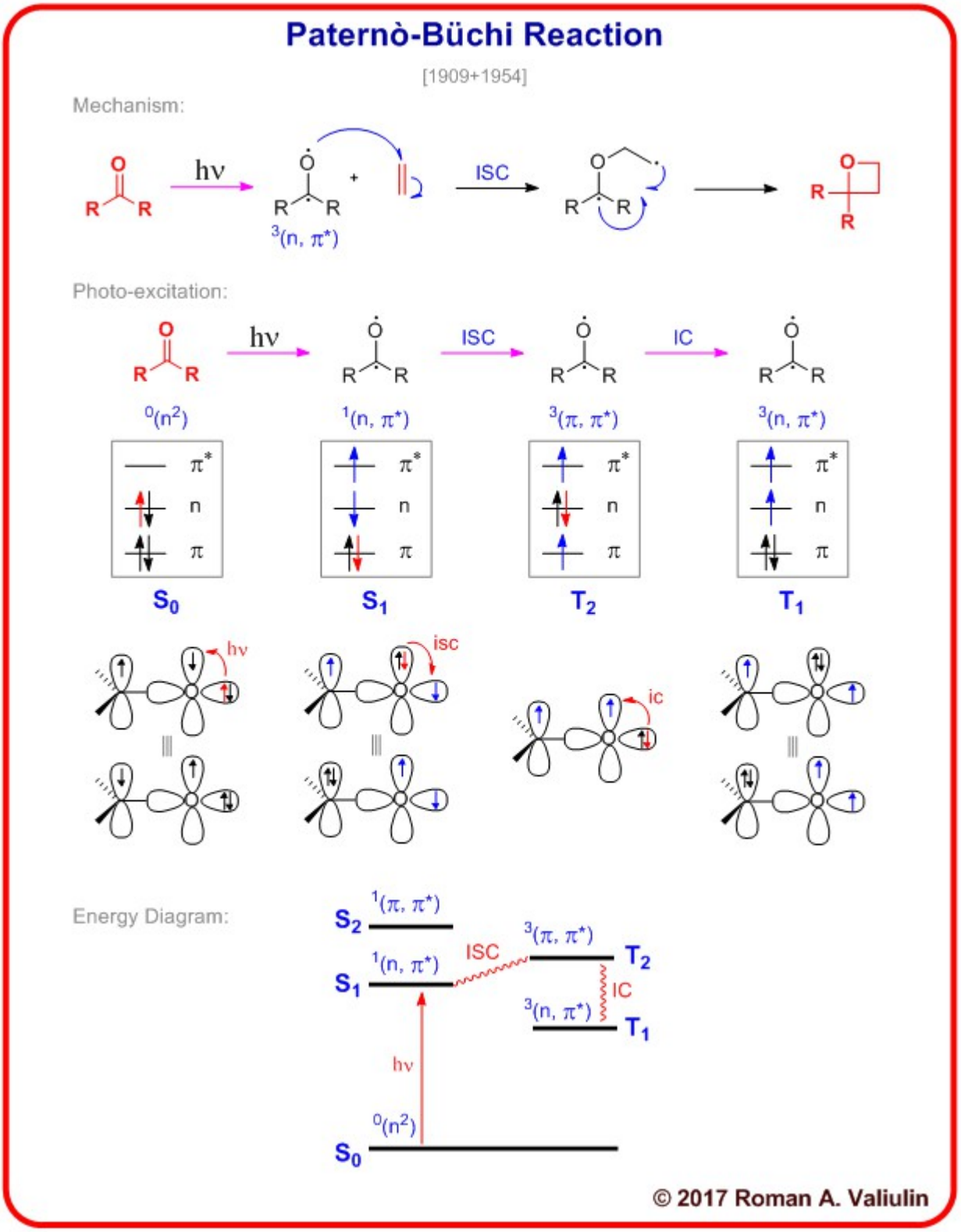

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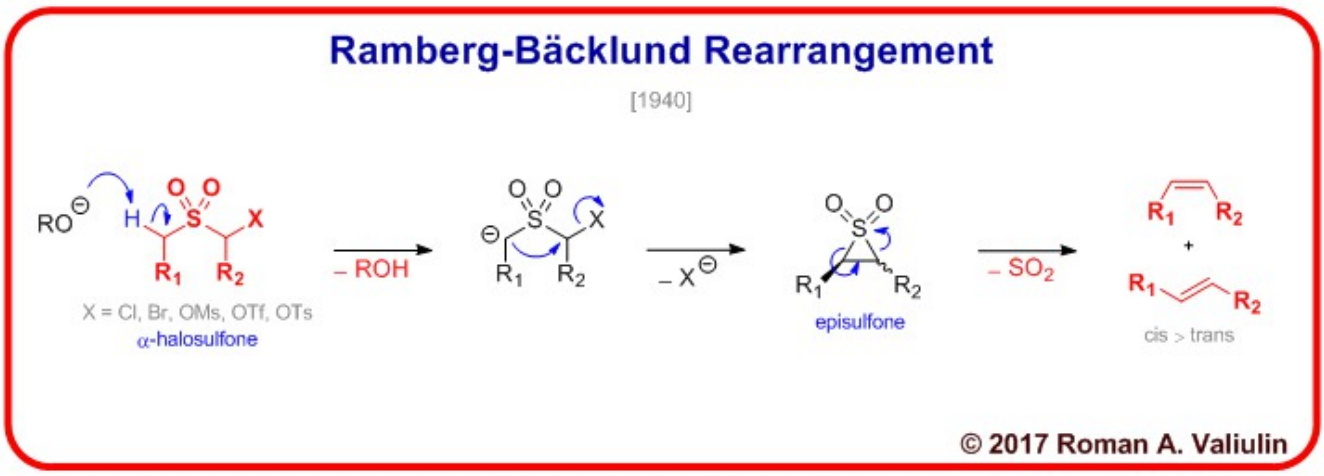

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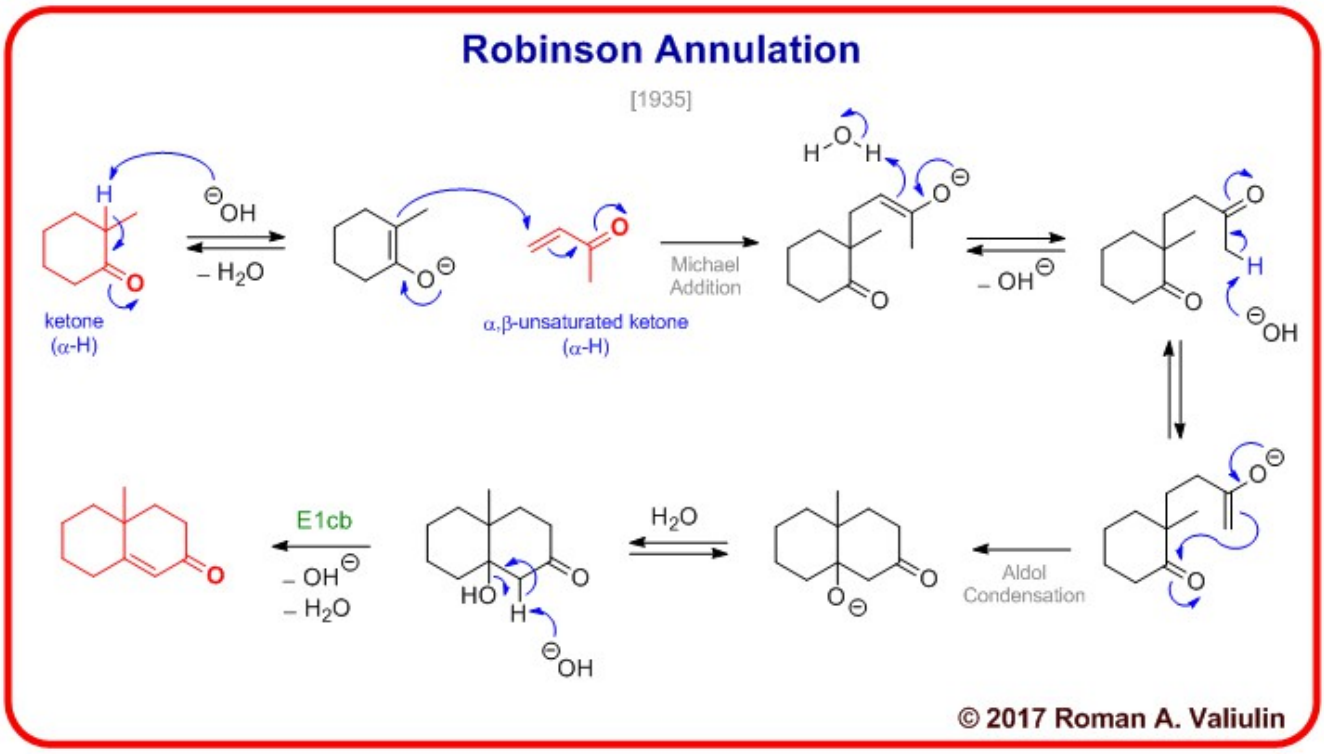

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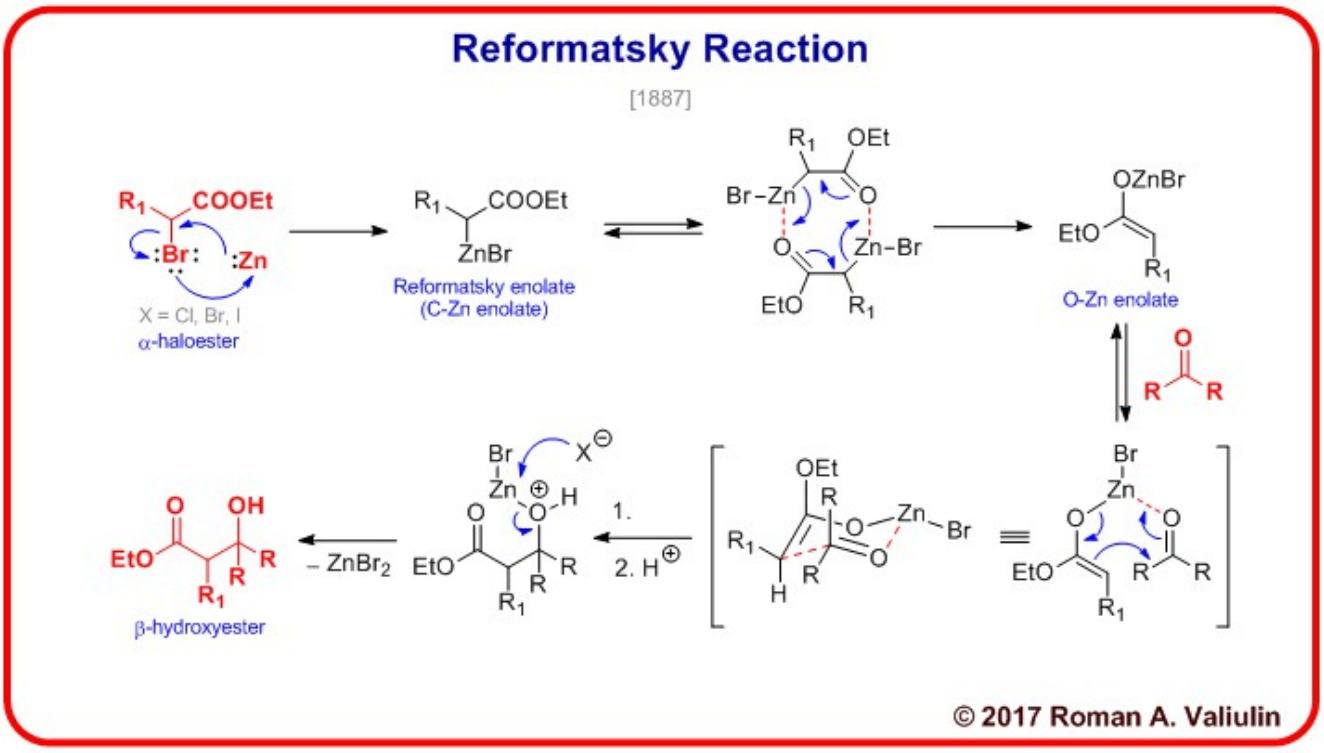

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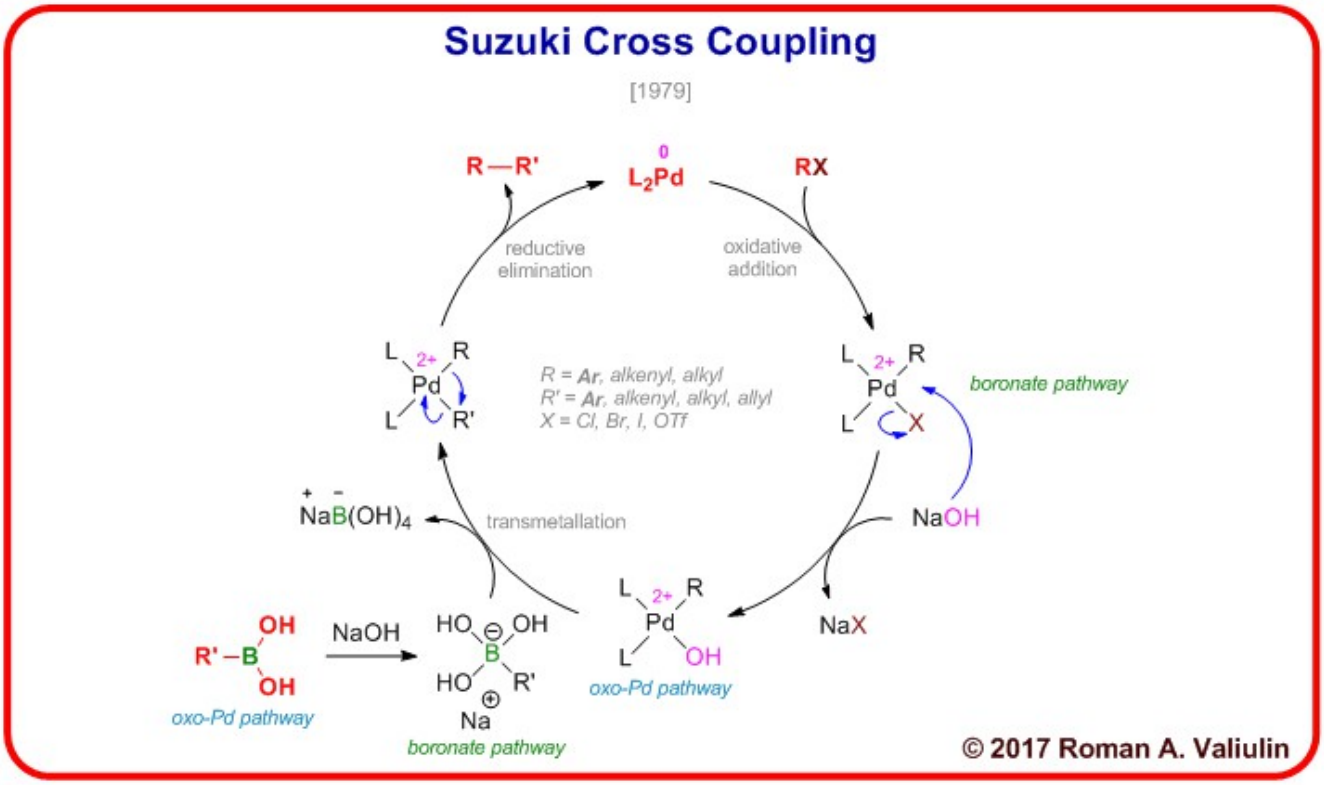

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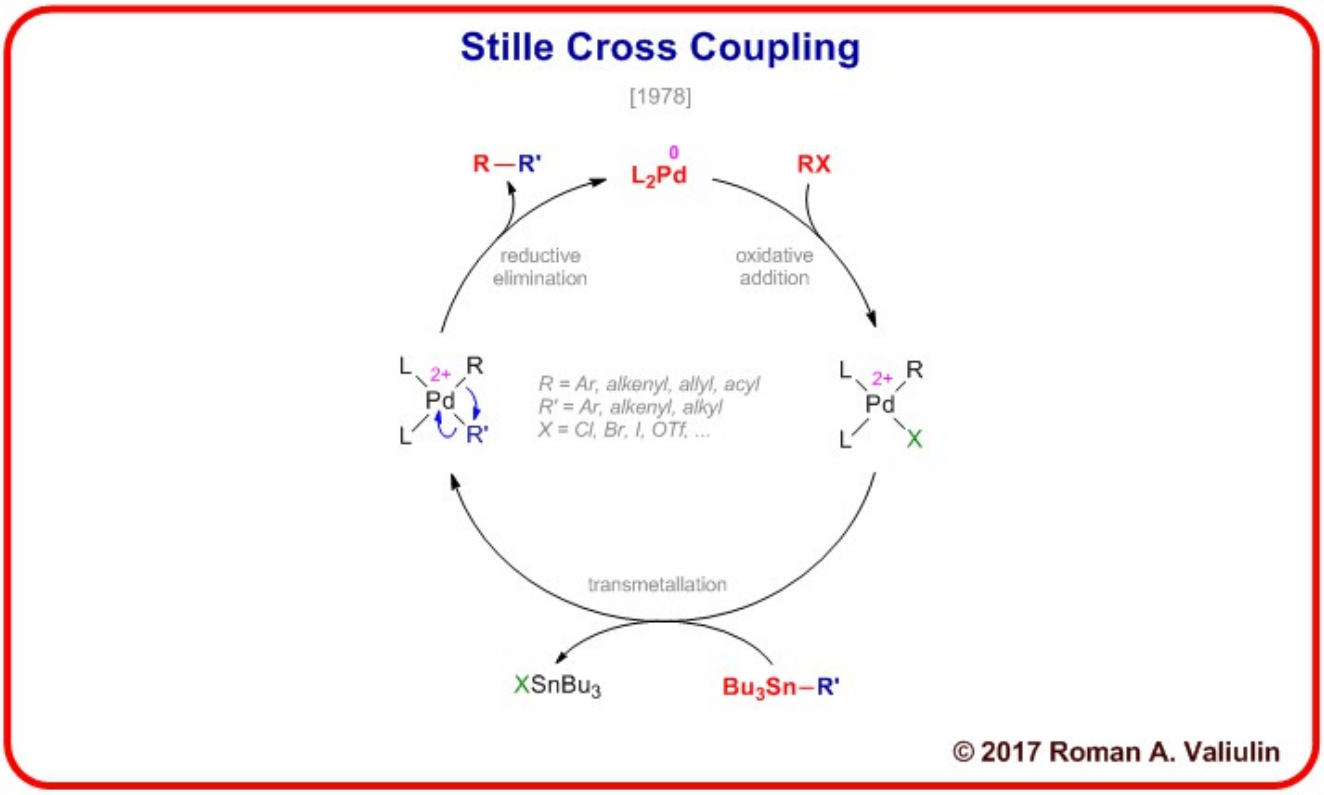

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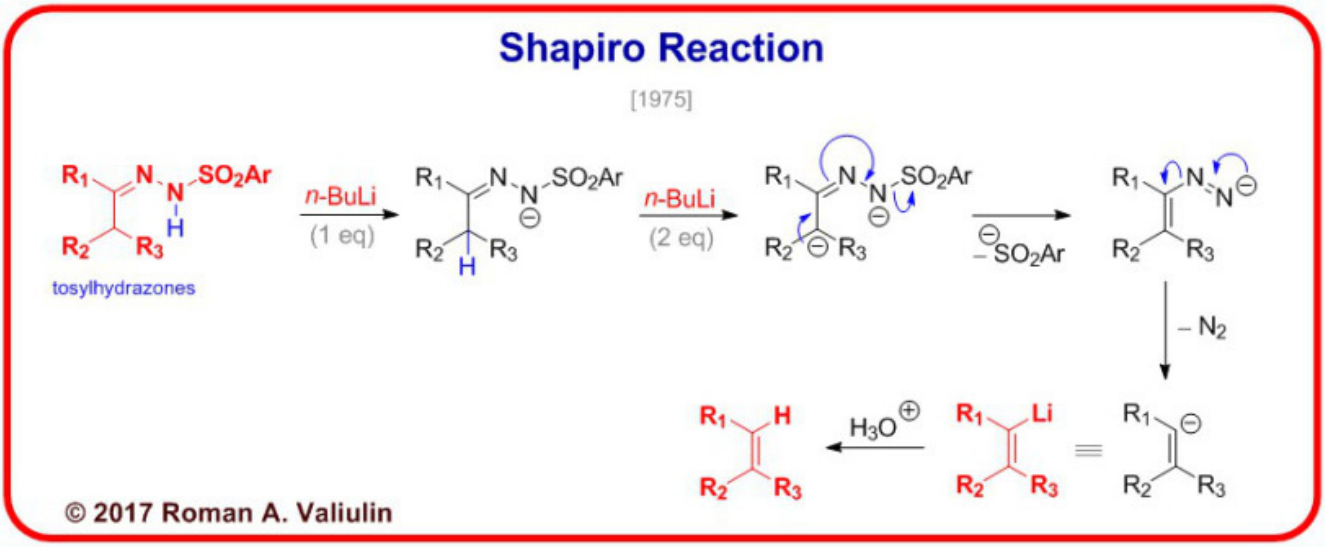

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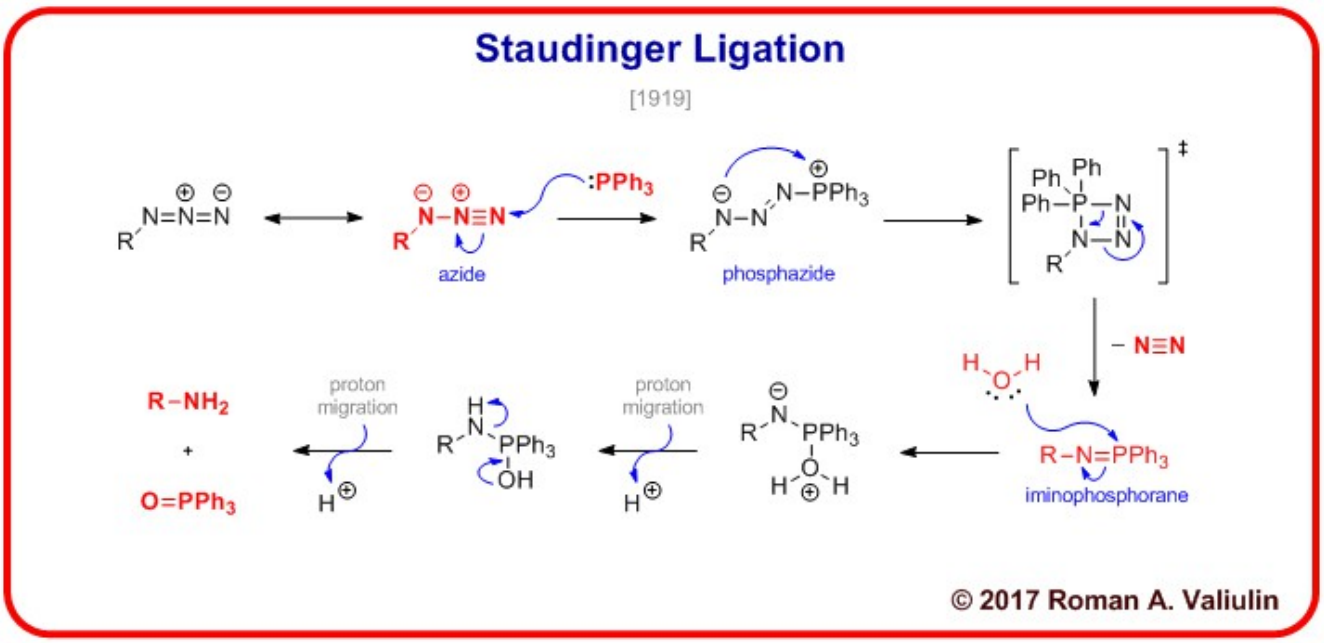

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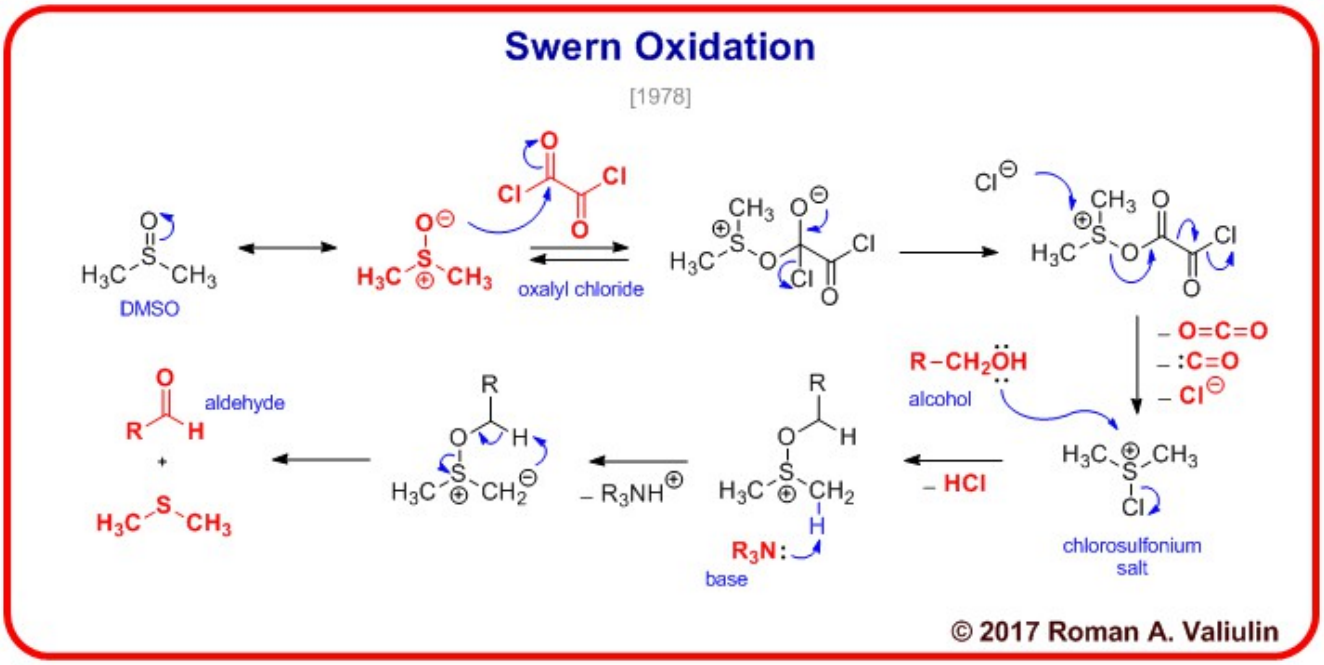

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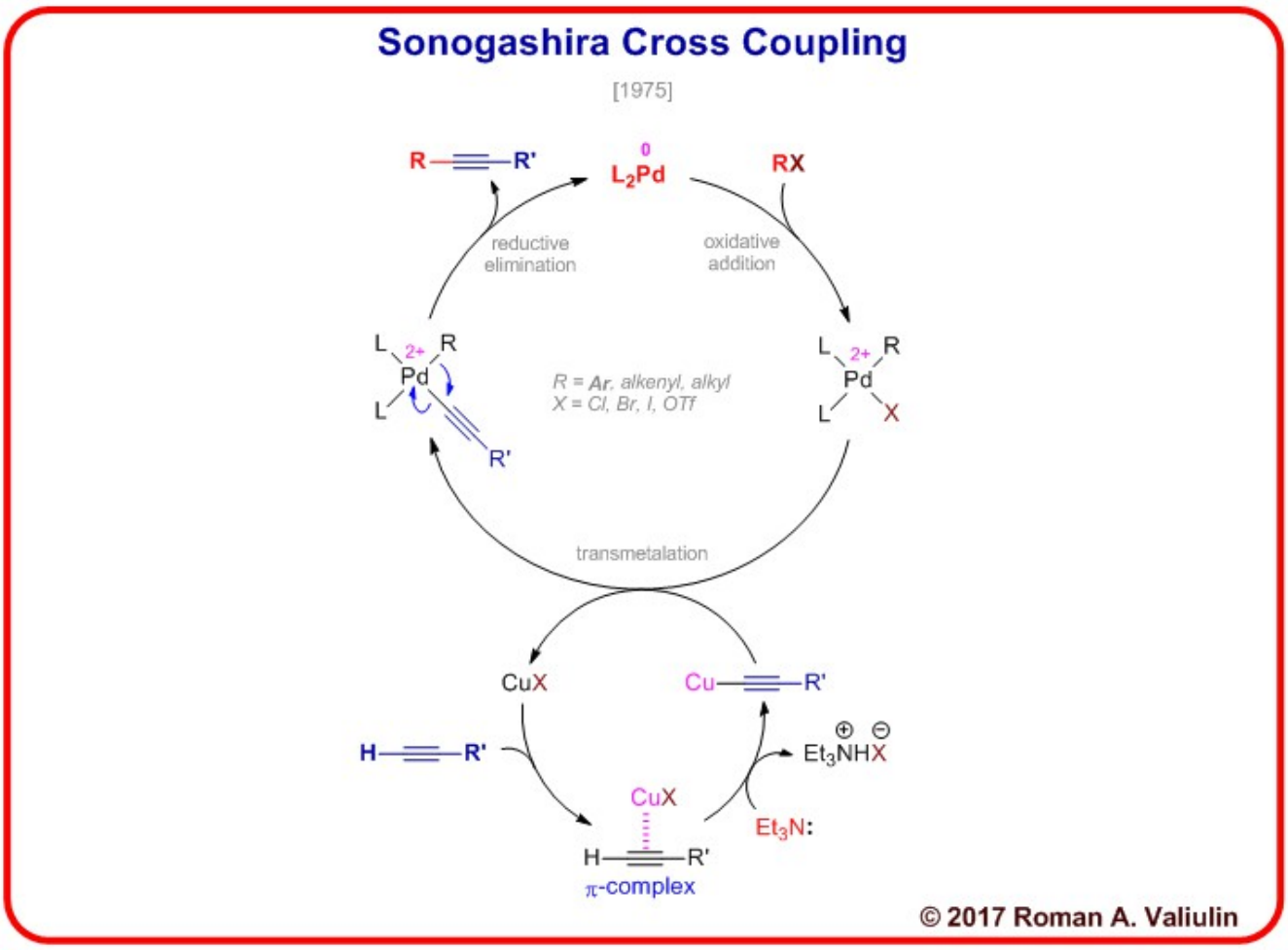

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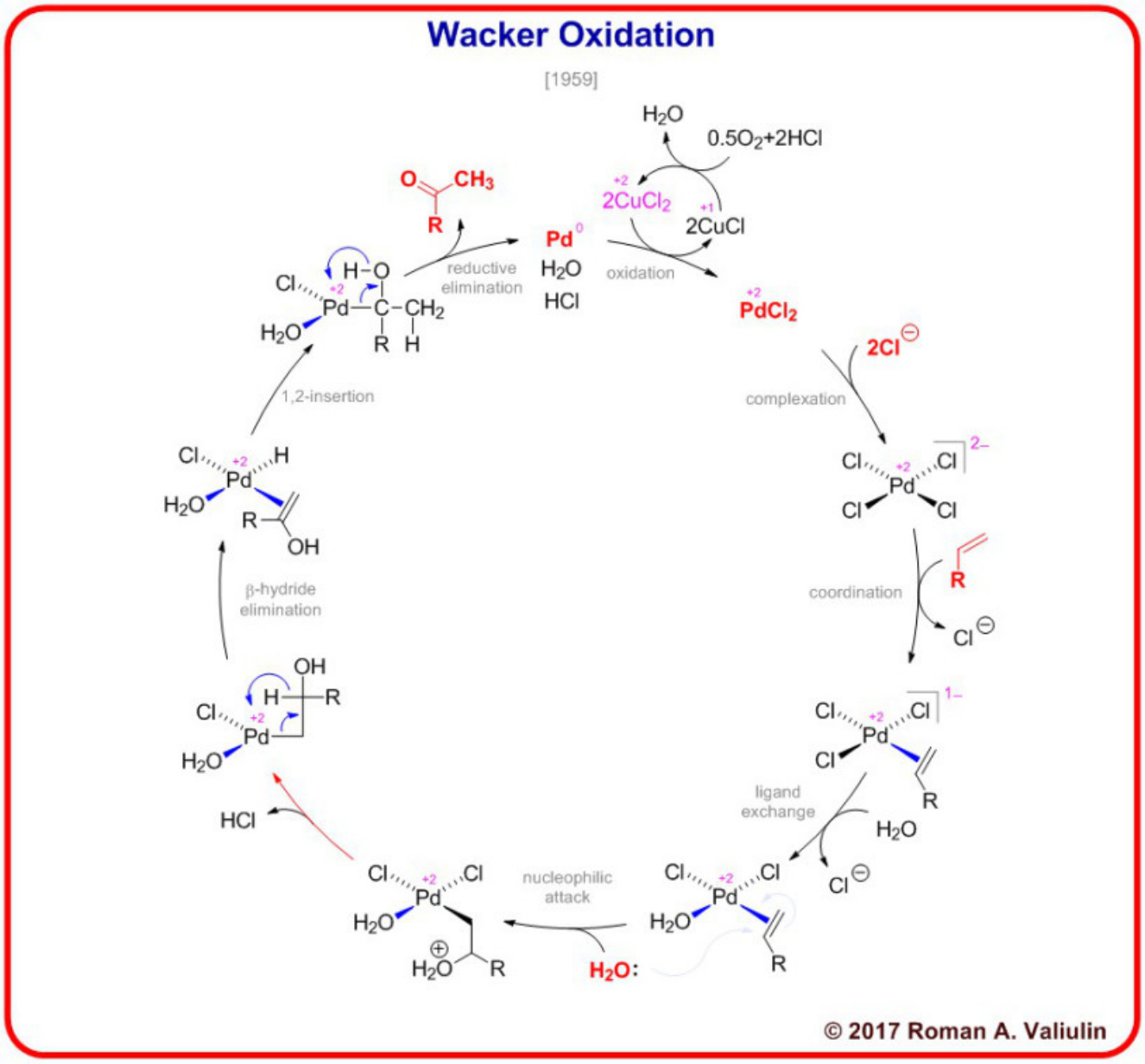

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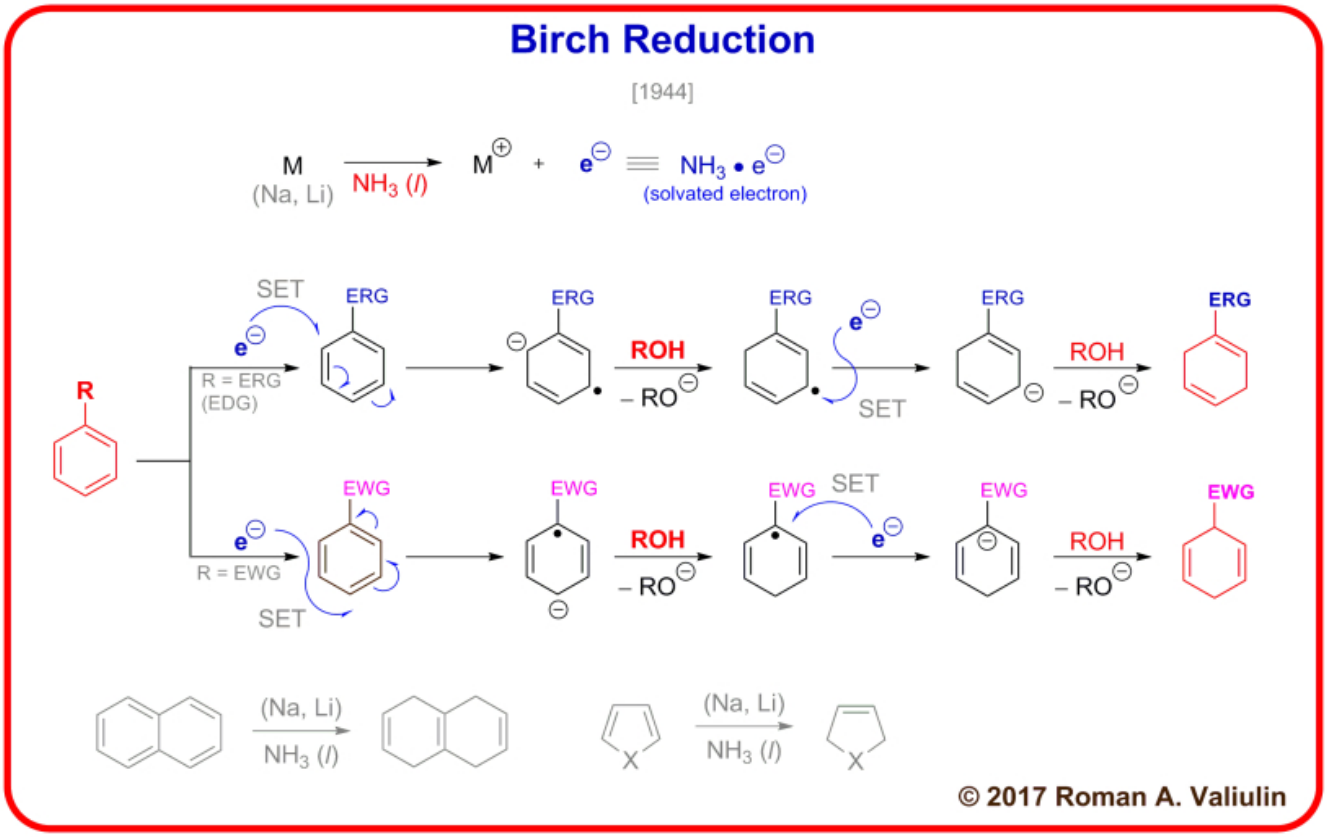
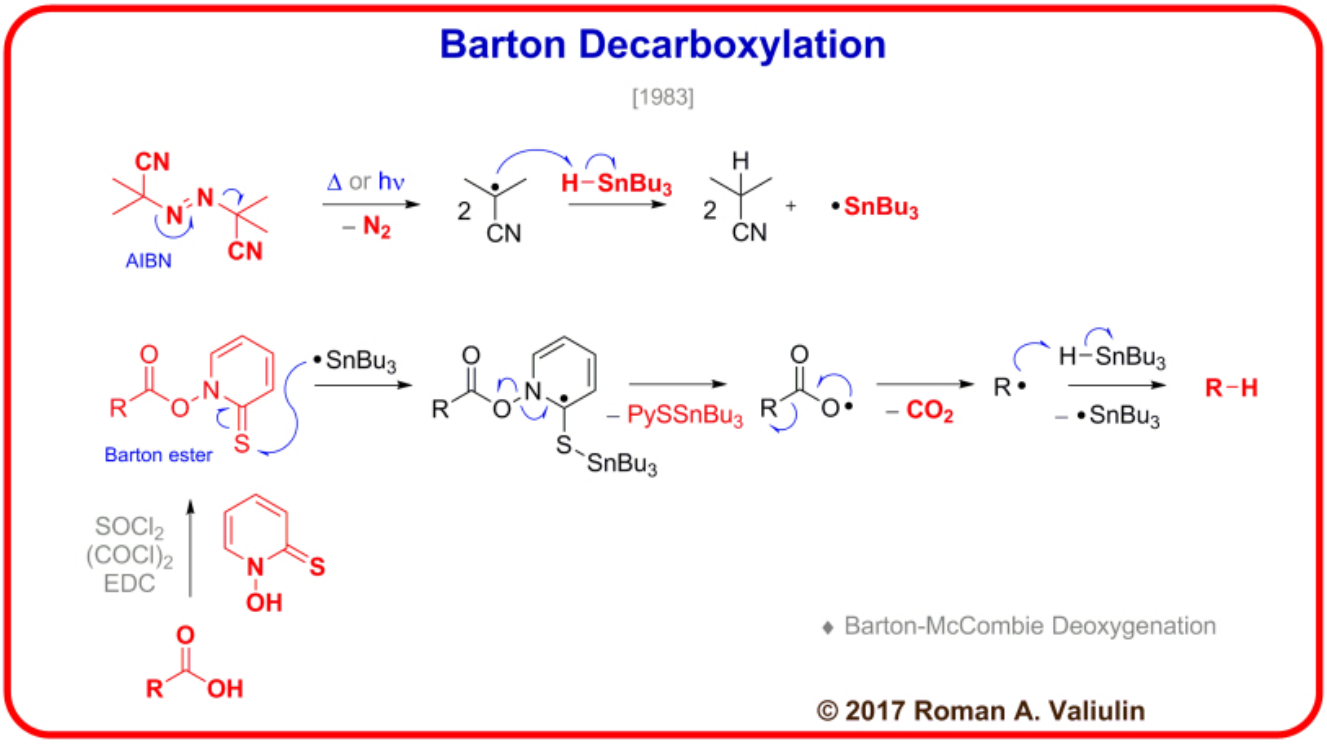
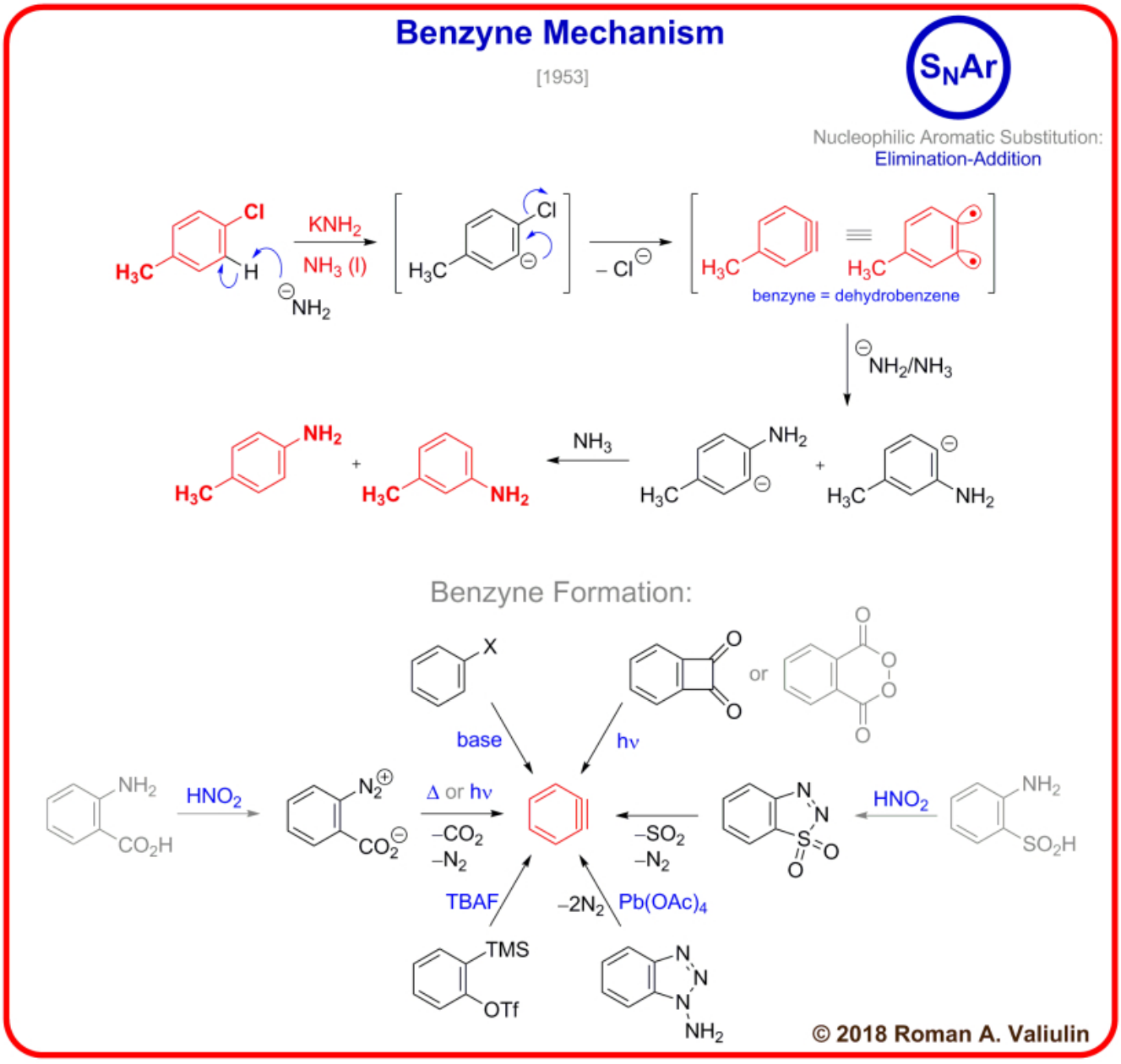


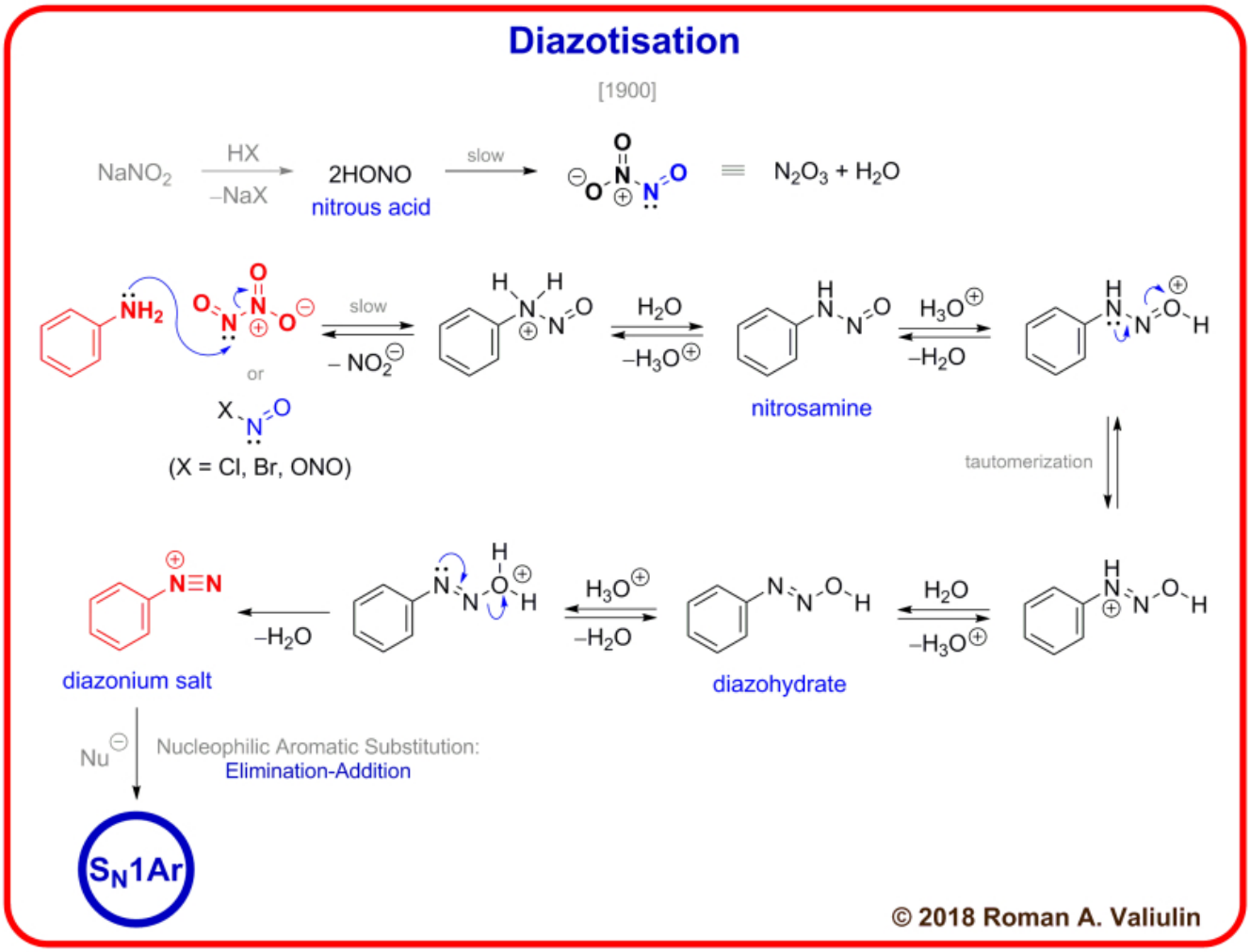
57. Barton Decarboxylation 1983



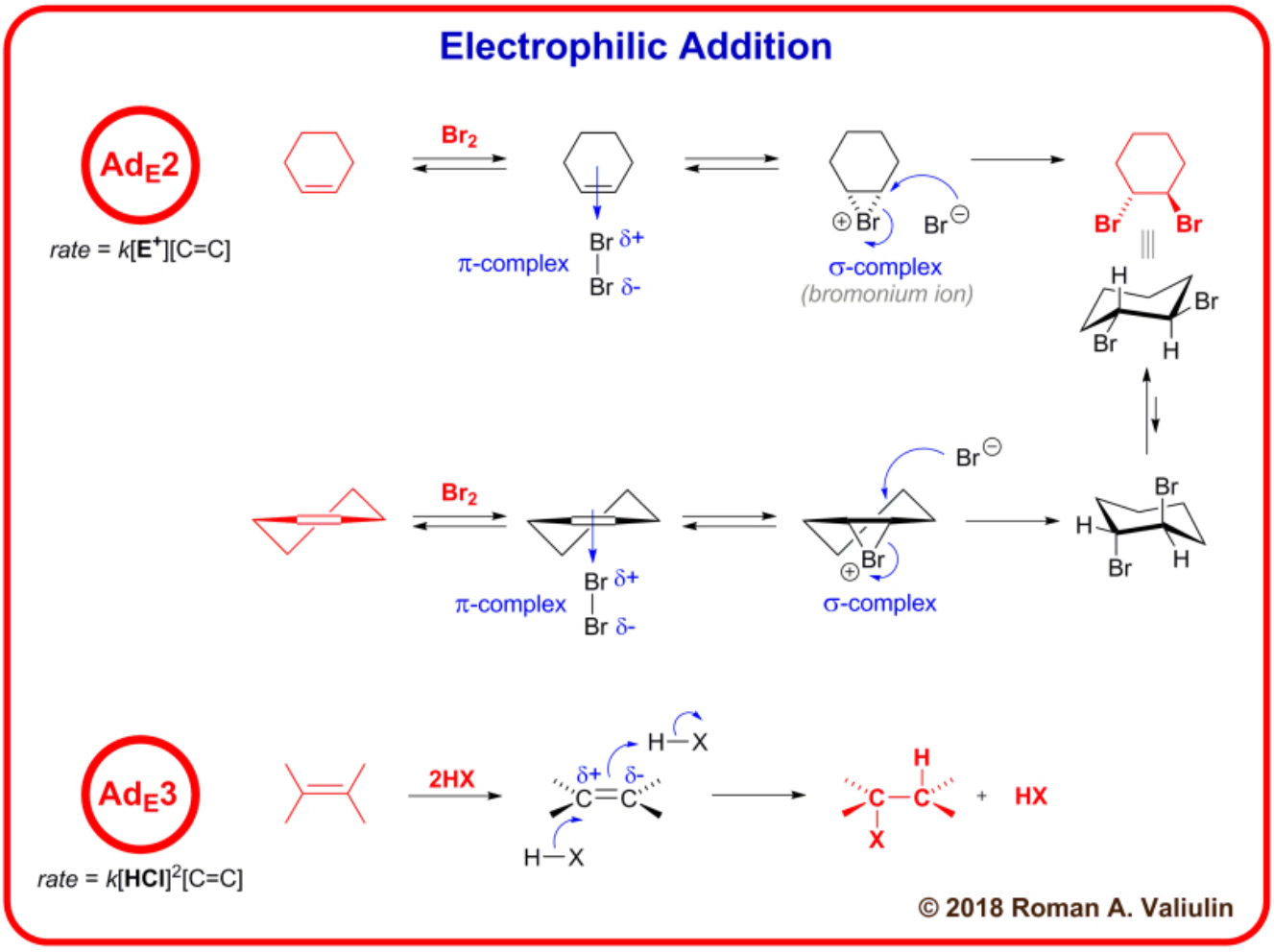
58. Benzyne Mechanism 1953



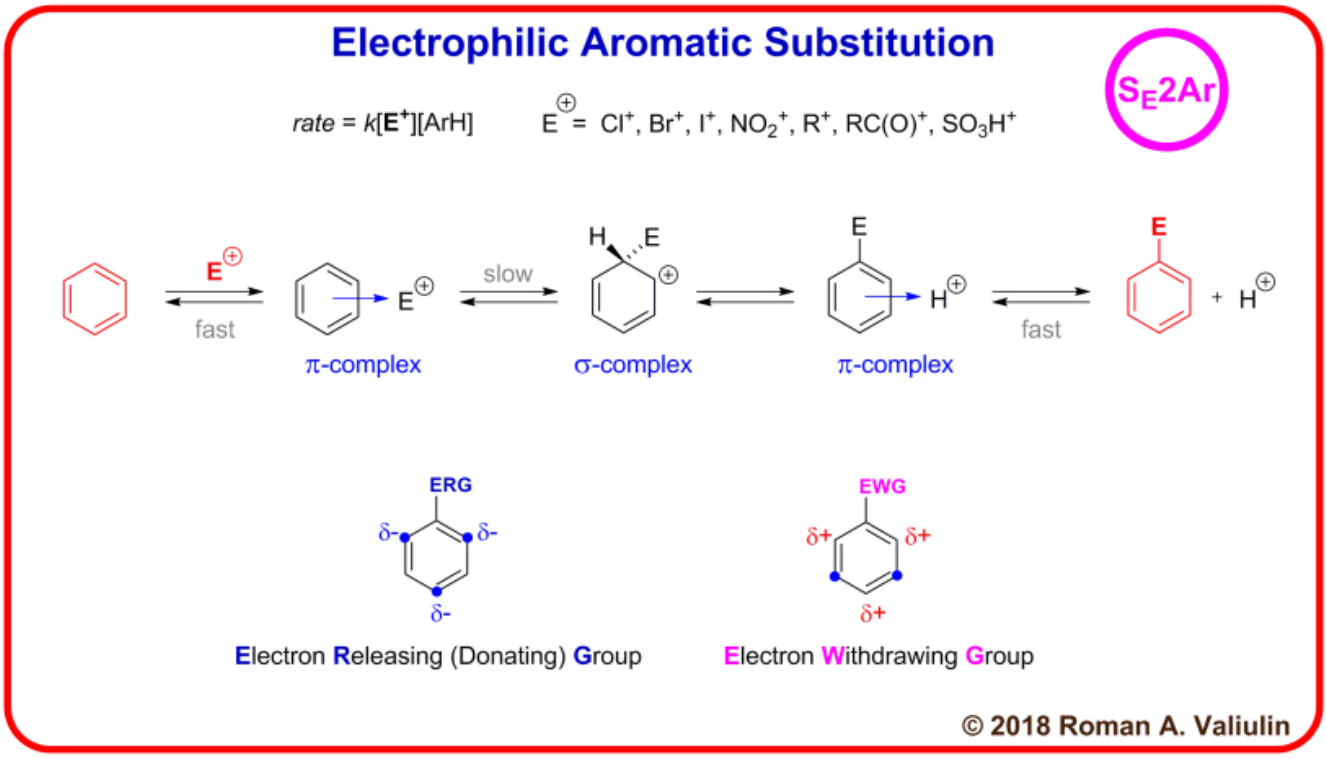
59. Diazotisation 1900



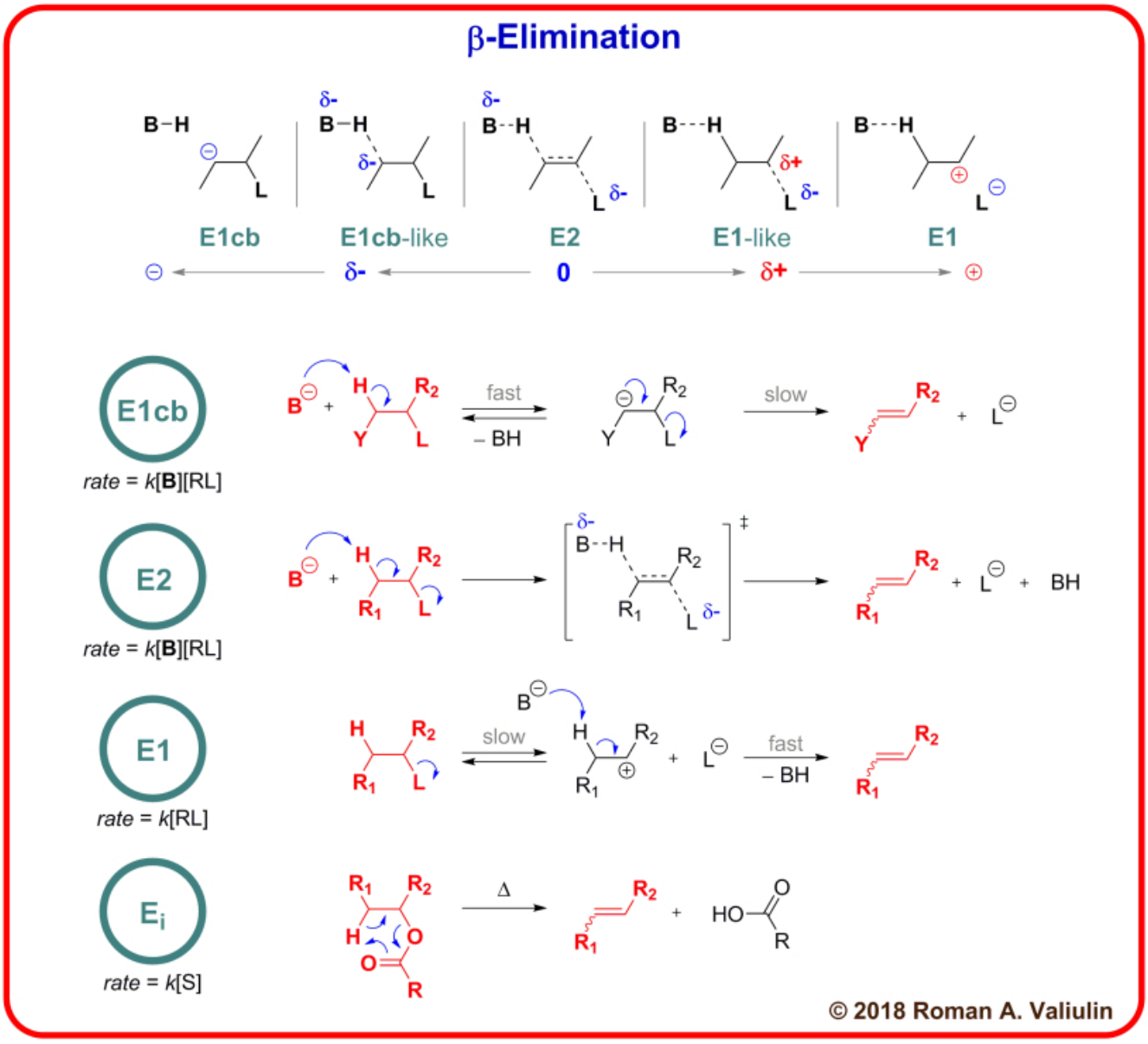
60. Electrophilic Addition



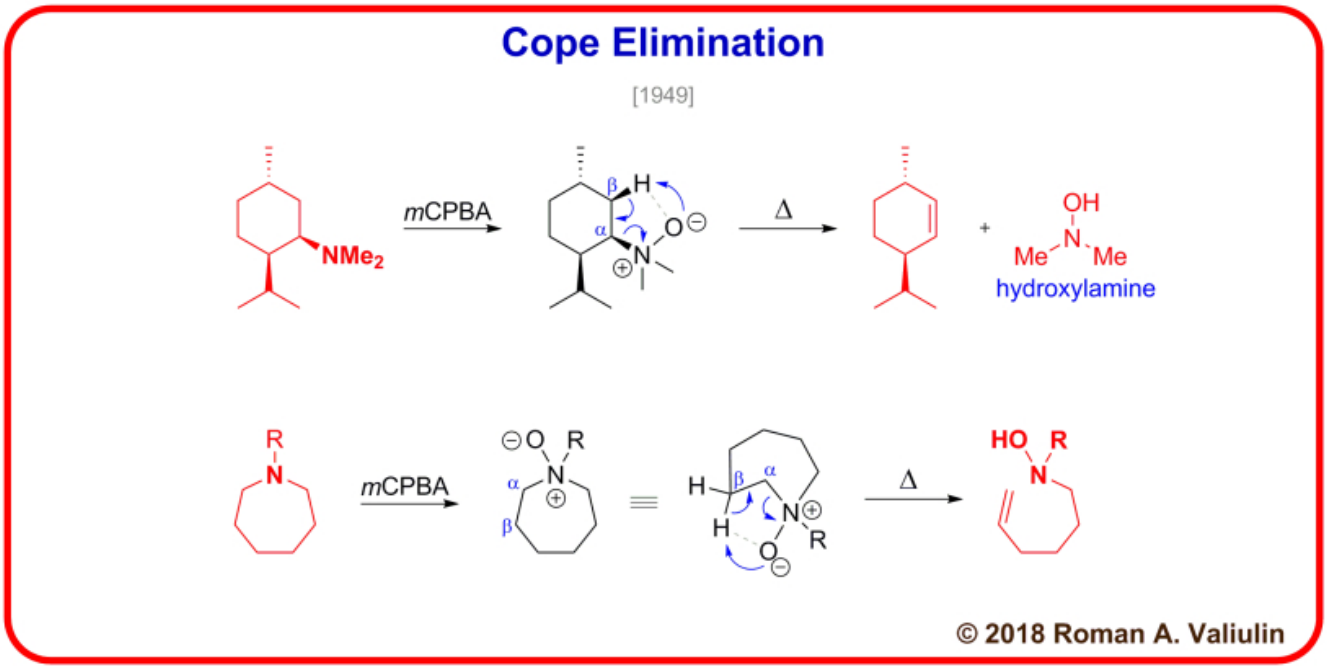
61. Electrophilic Aromatic Substitution



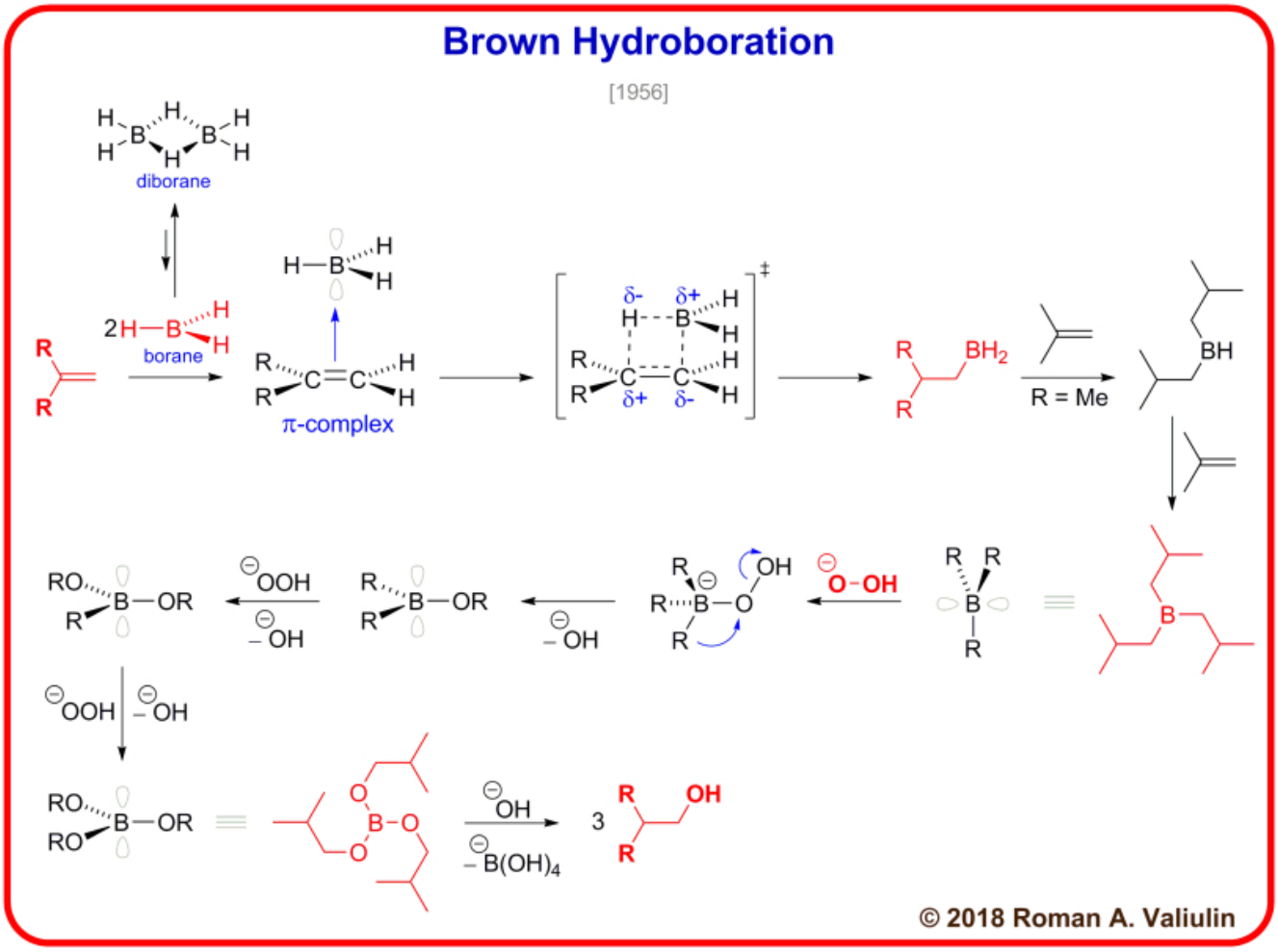
62. Beta-Elimination



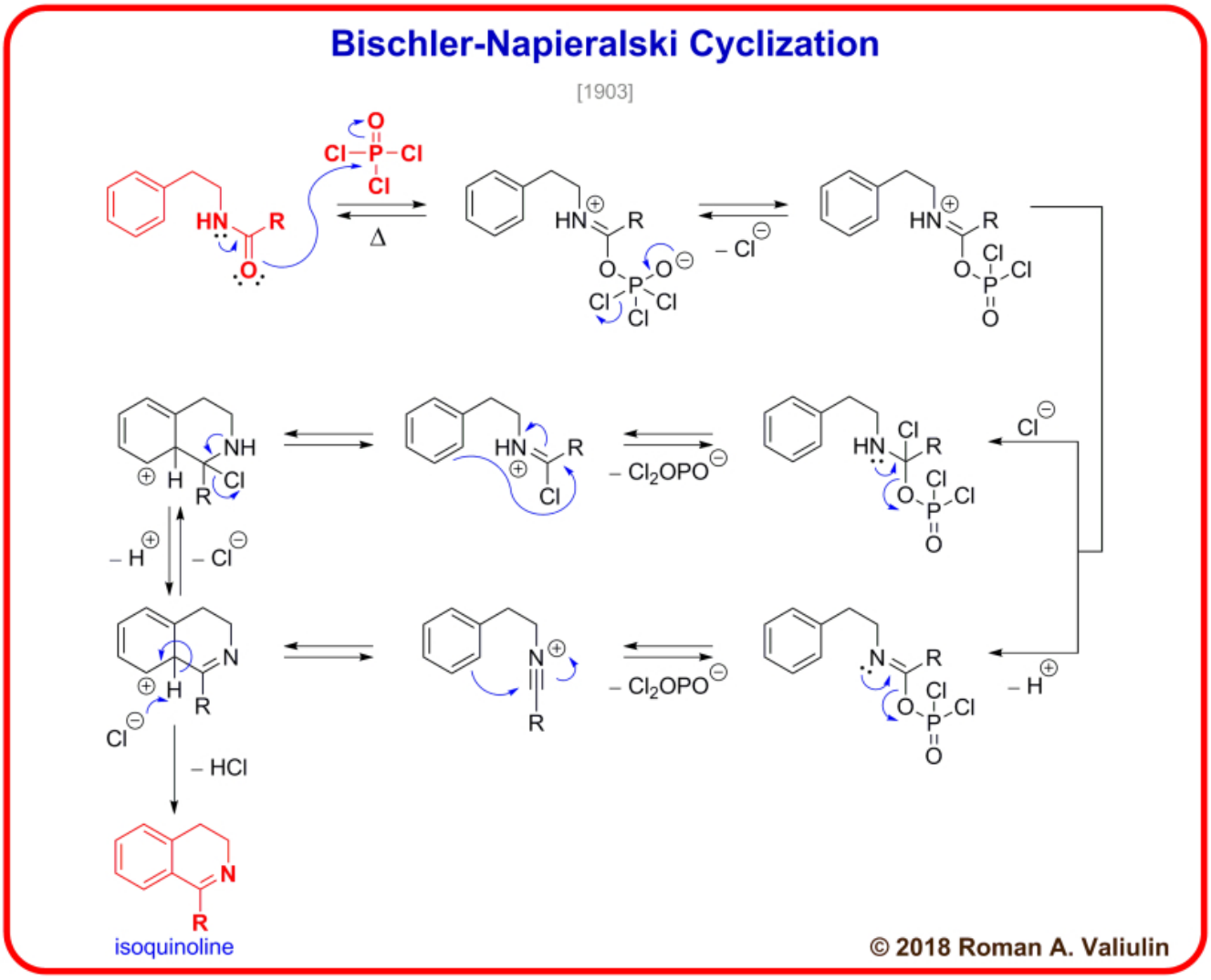
63. Cope Elimination 1949



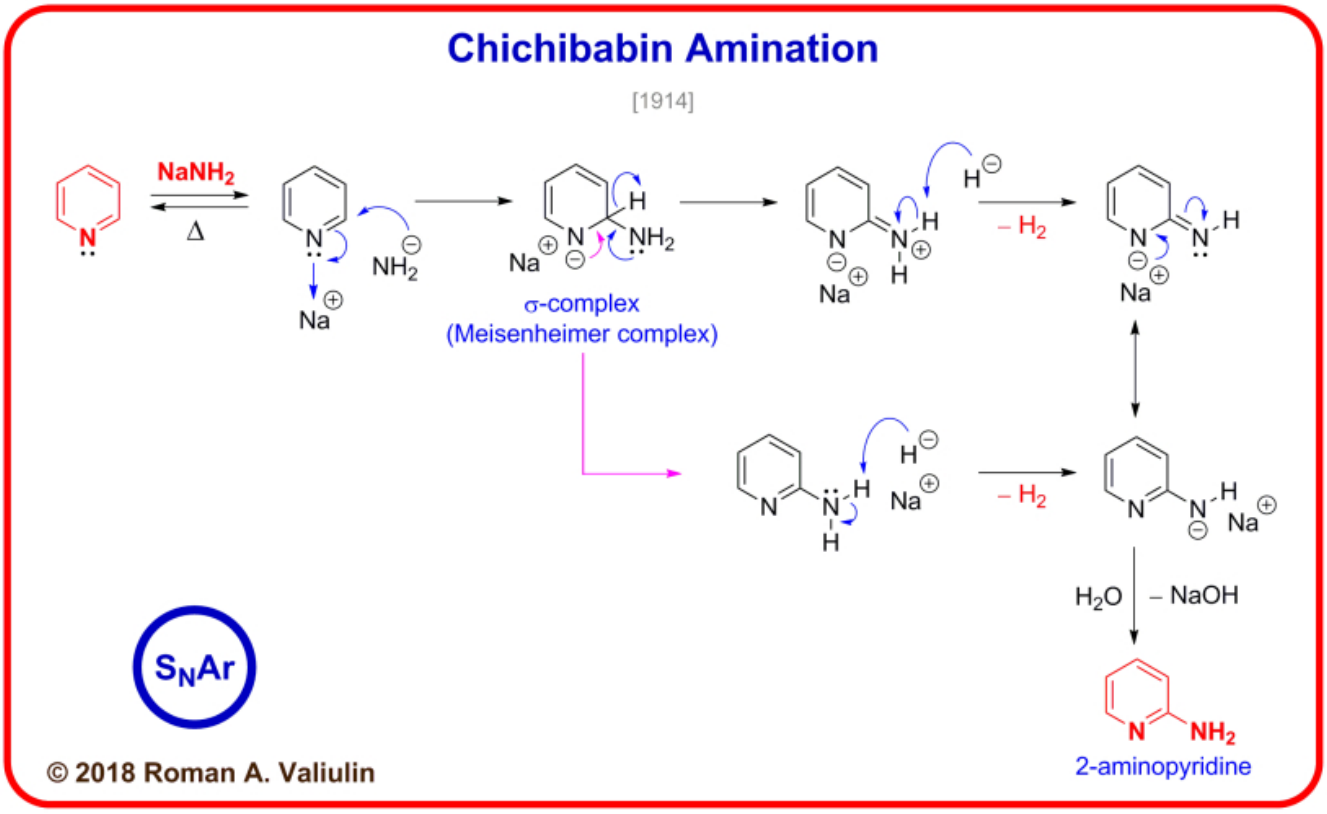
64. Brown Hydroboration 1956



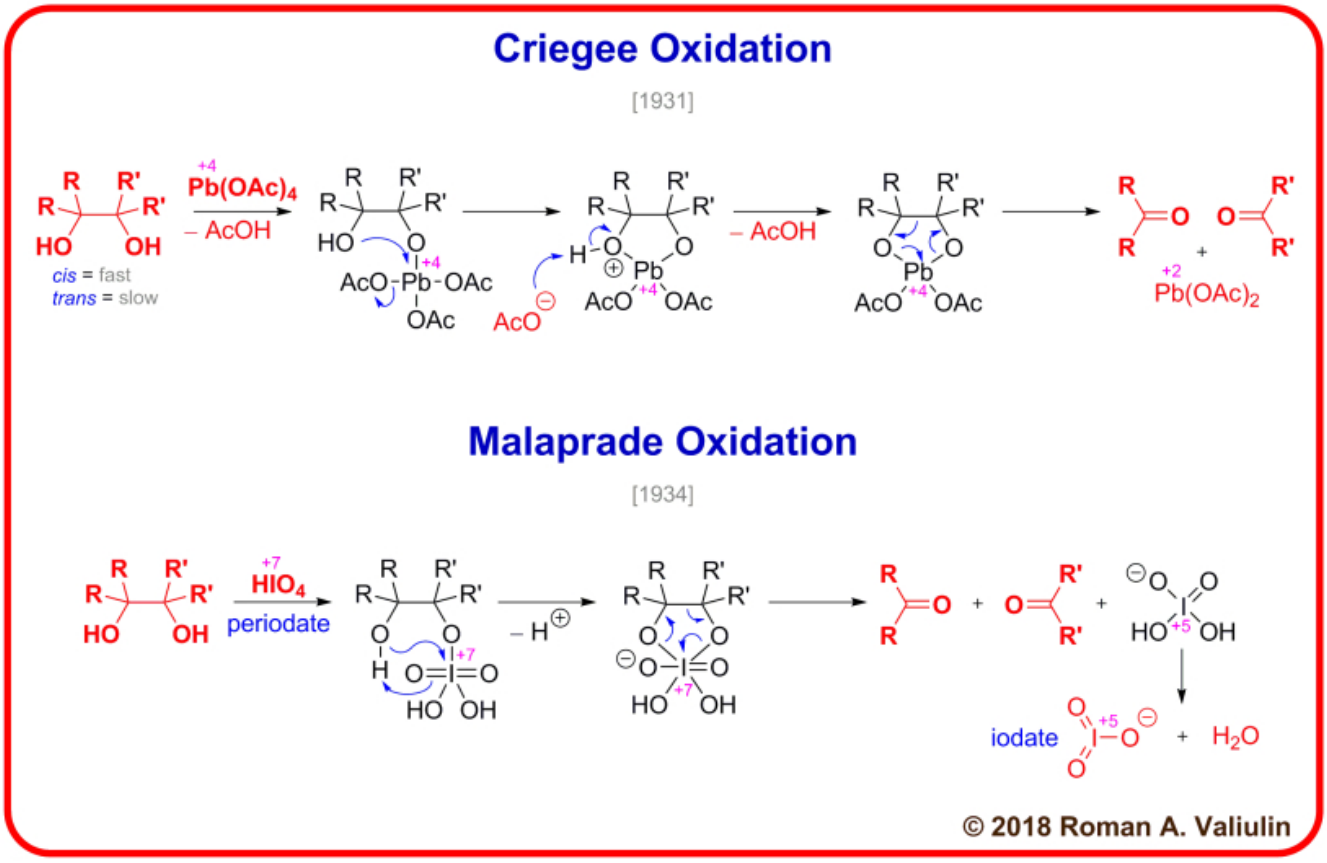
65. Bischer-Napieralski Reaction 1903



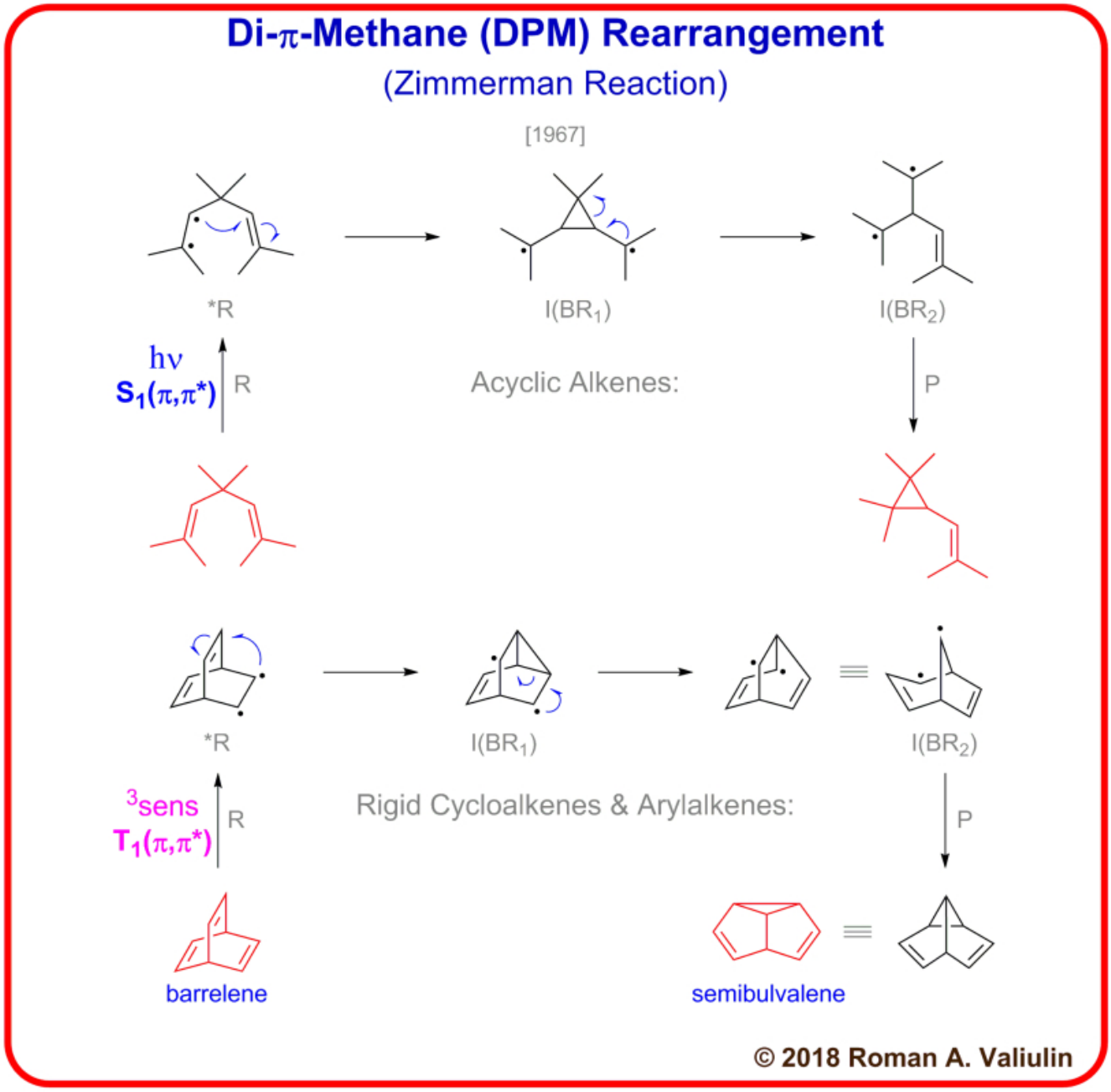
66. Chichibabin Amination 1914



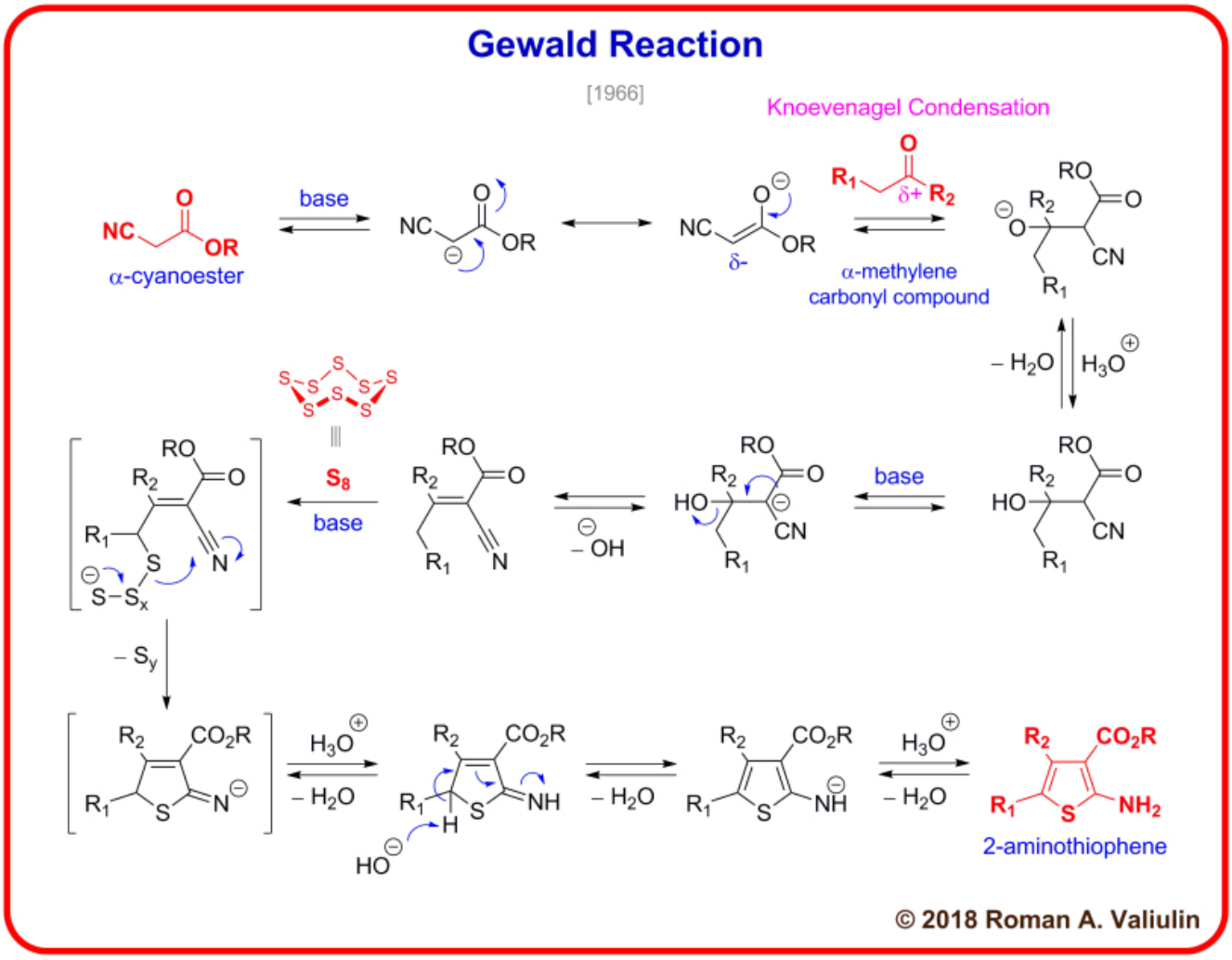
67. Criegee Oxidation 1931 – Malaprade Oxidation 1934



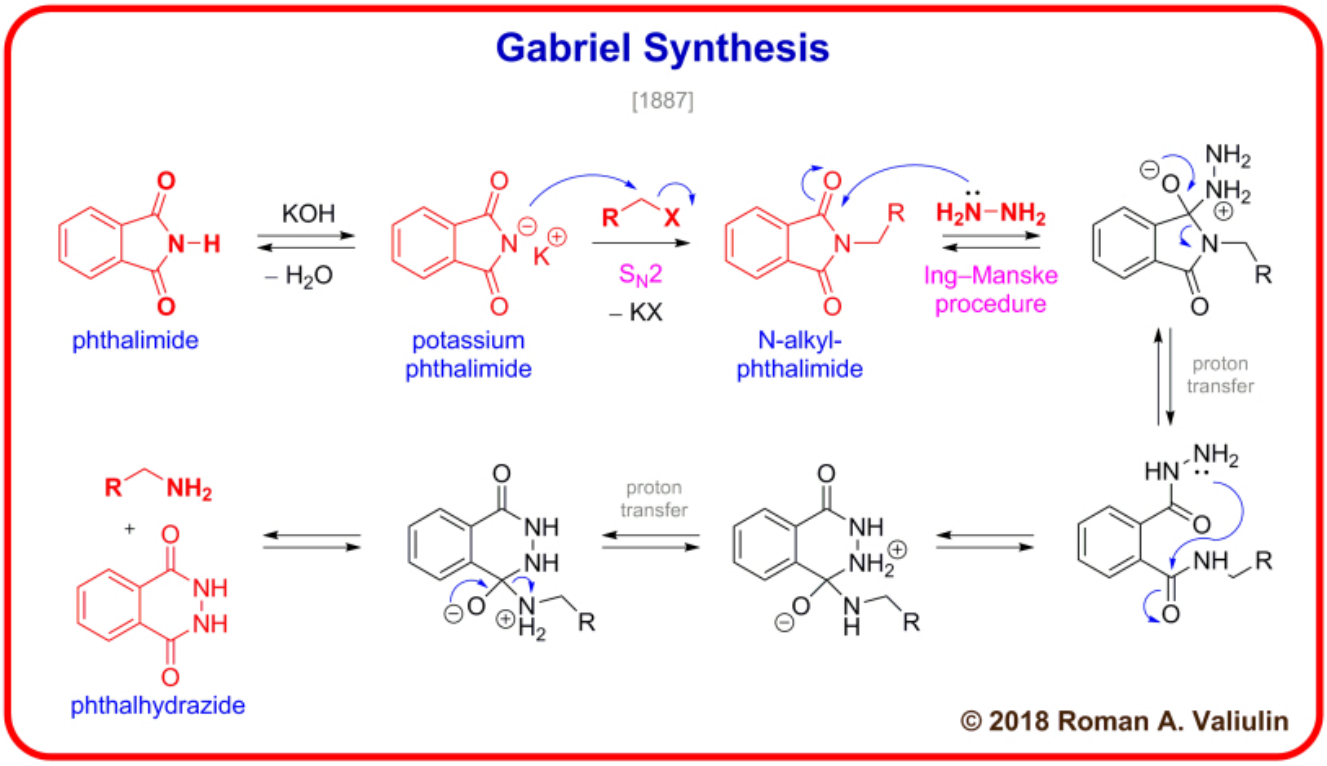
68. Di-pi-Methane (DPM) Rearrangement (Zimmerman Reaction) 1967



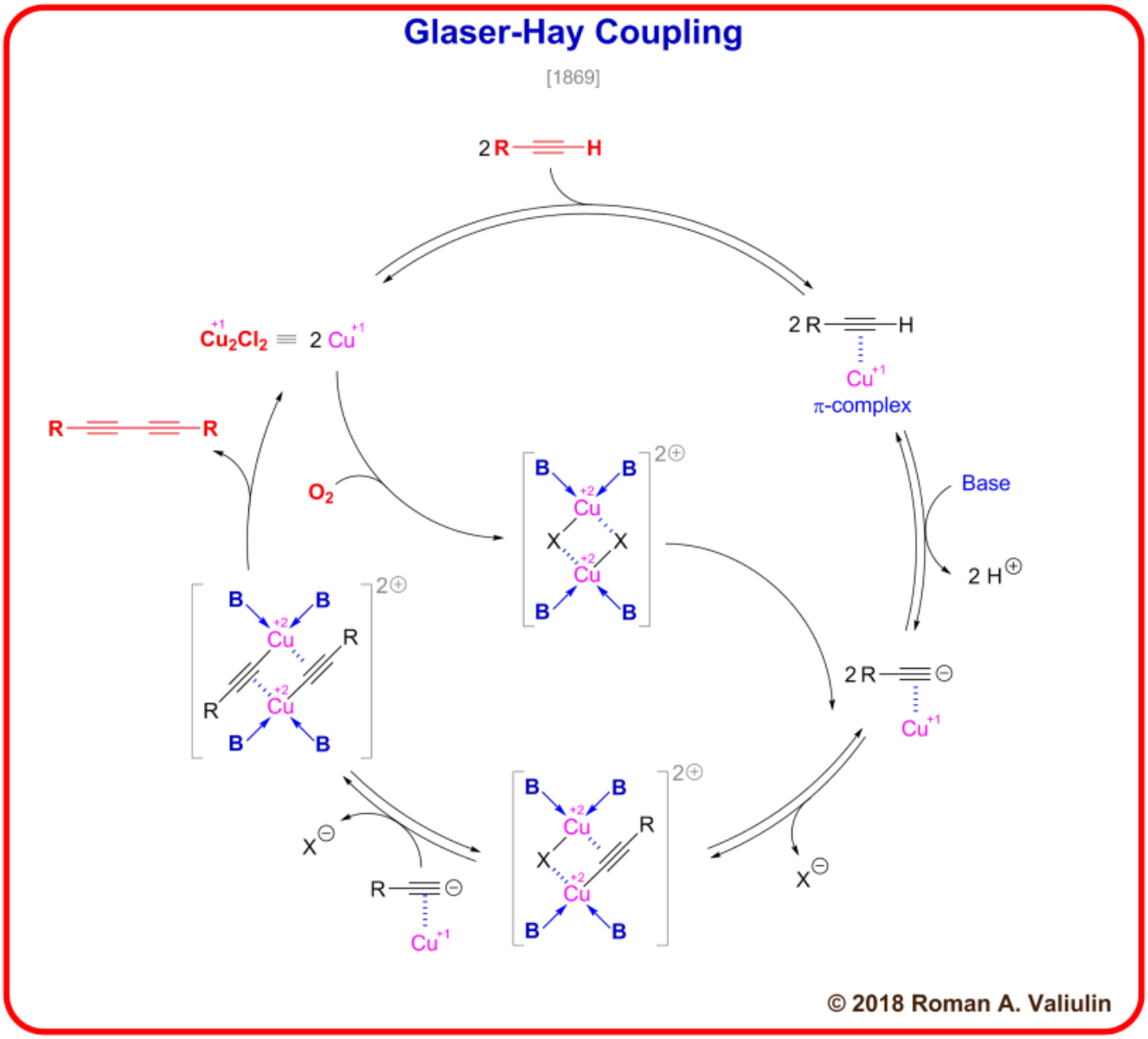
69. Gewald Reaction 1966



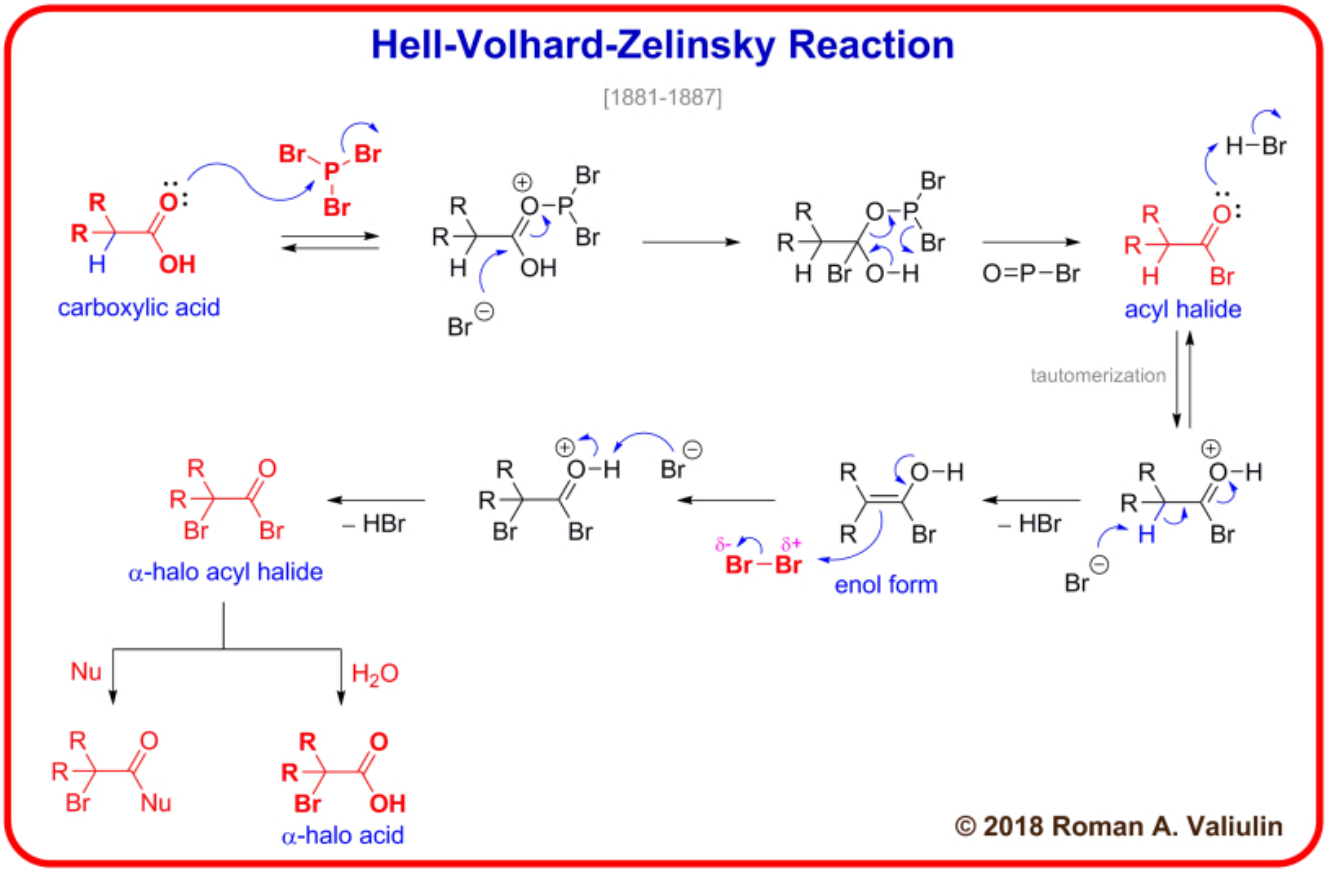
70. Gabriel Synthesis 1887



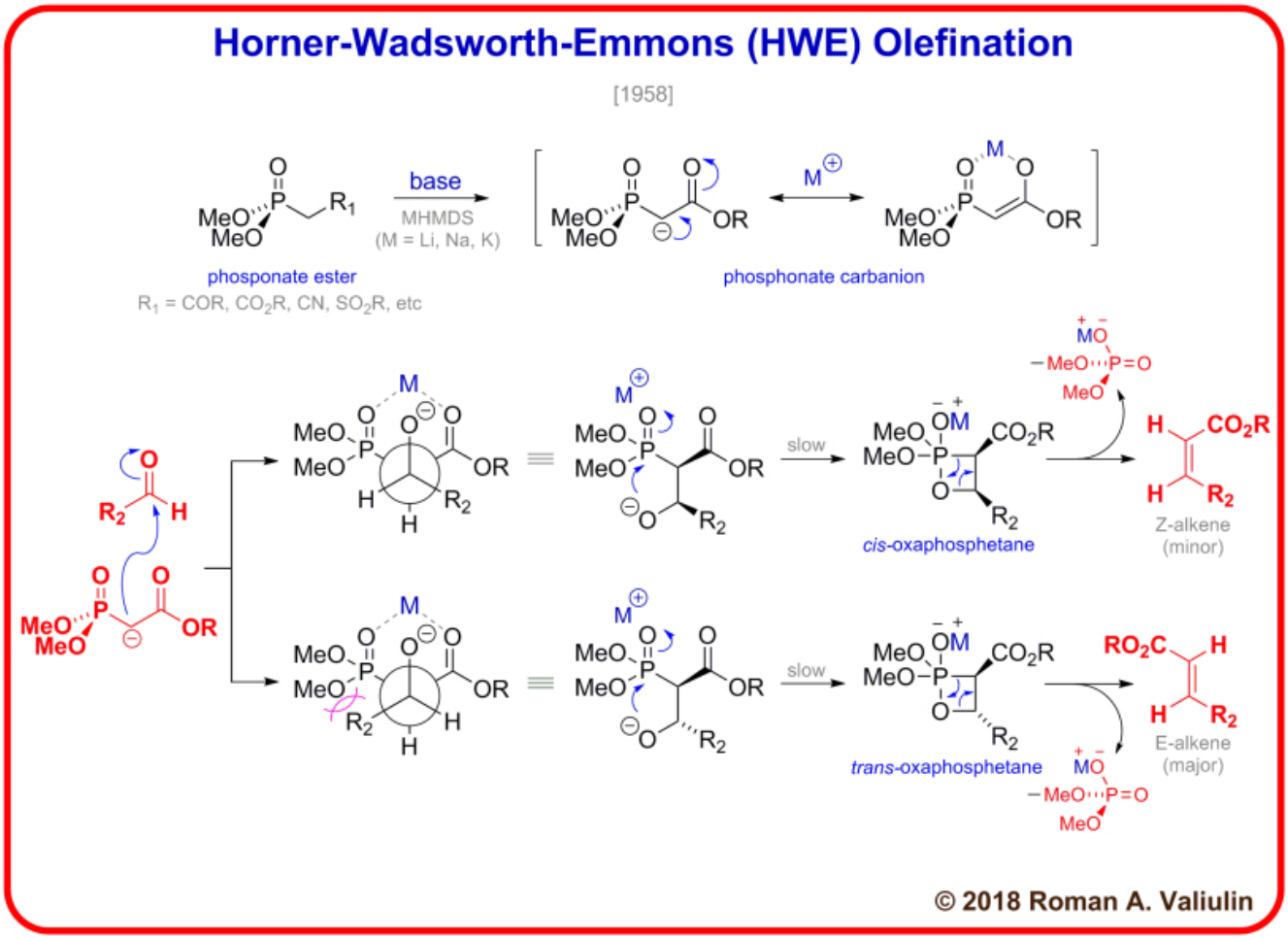
71. Glaser-Hay Coupling 1869



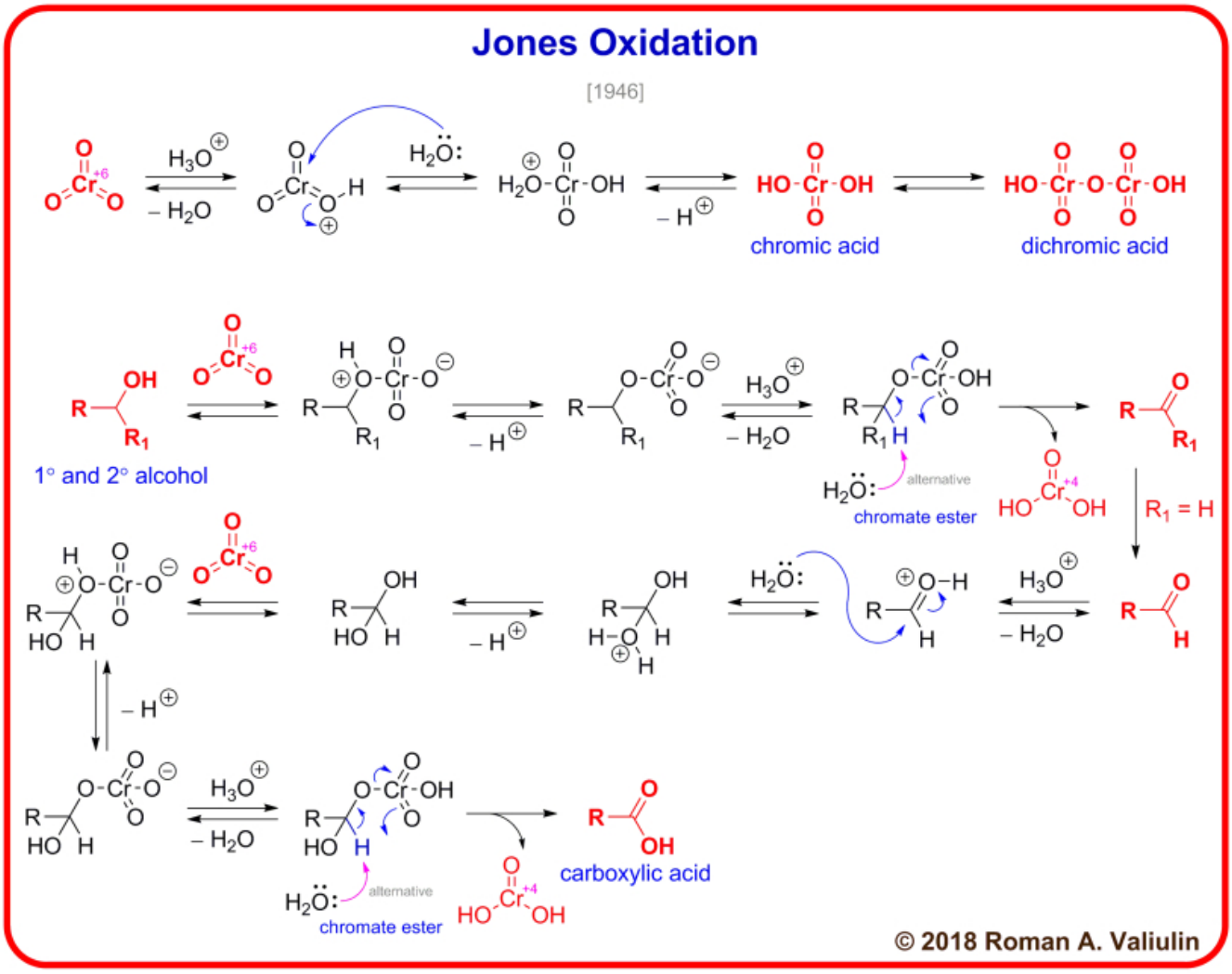
72. Hell-Volhard-Zelinsky Reaction 1881-1887



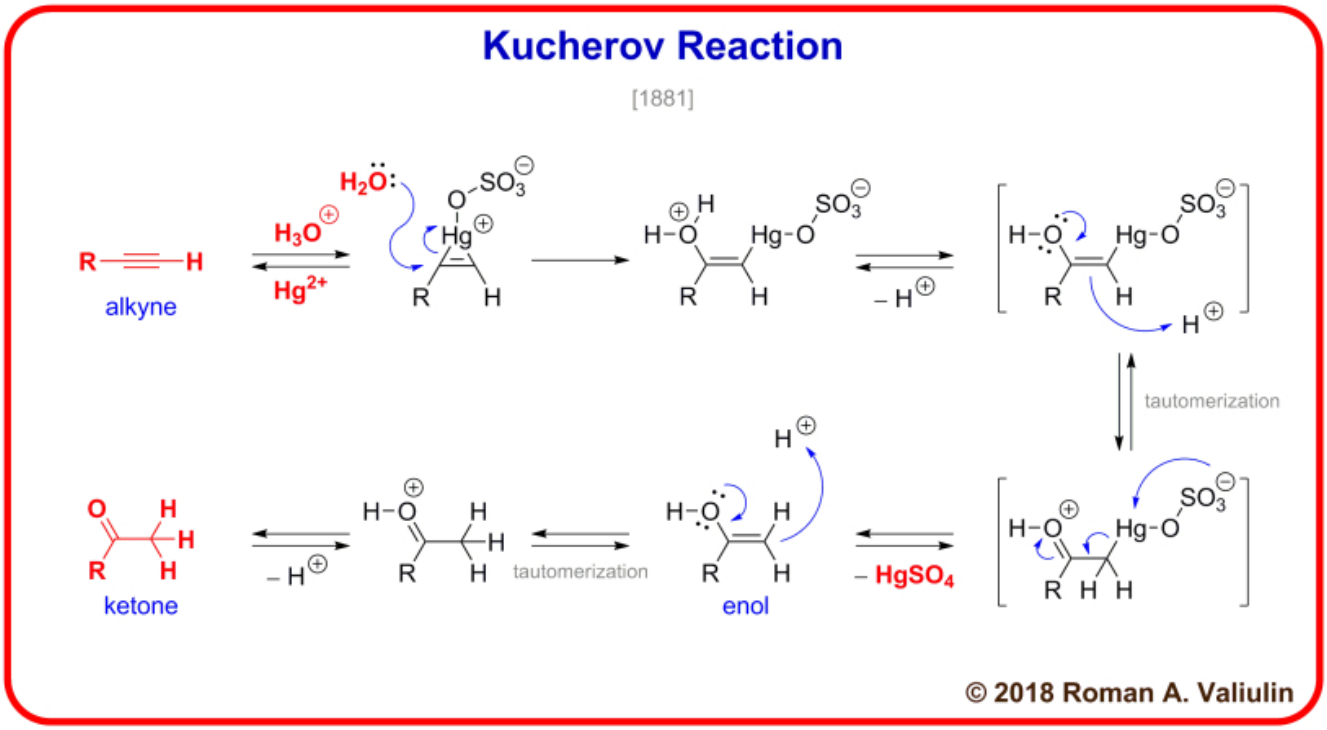
73. Horner-Wadsworth-Emmons (HWE) Olefination 1958



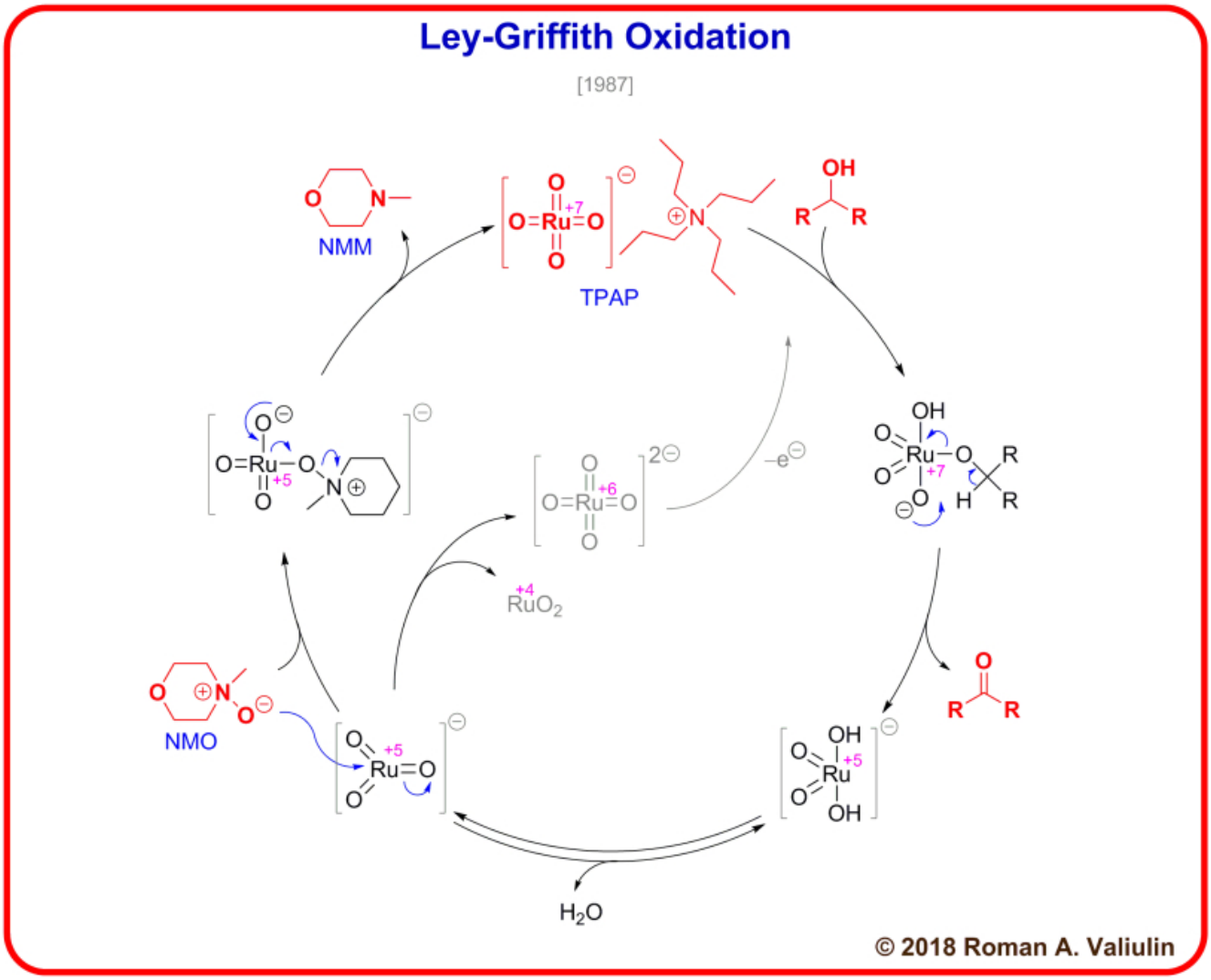
74. Jones Oxidation 1946



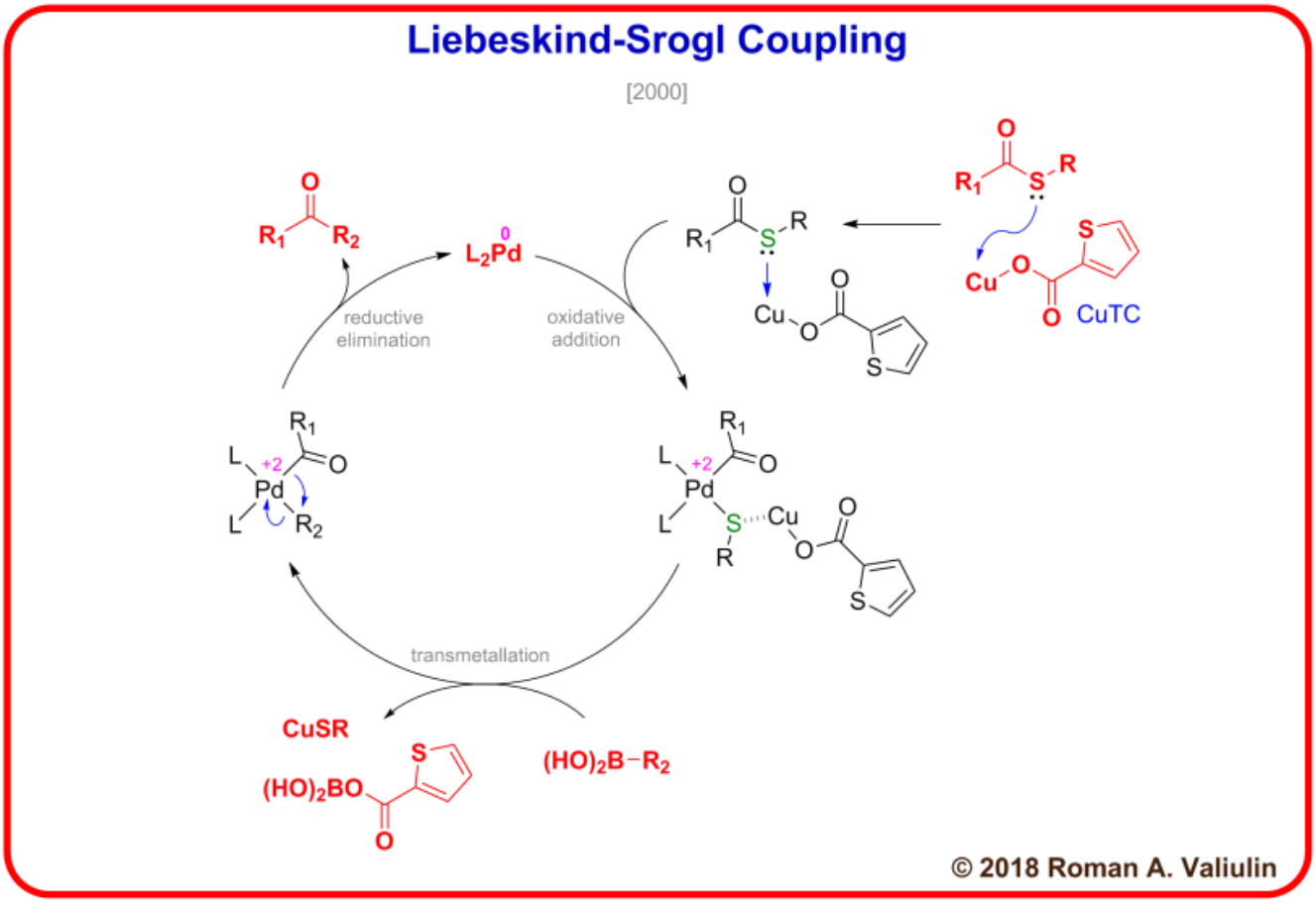
75. Kucherov Reaction 1881



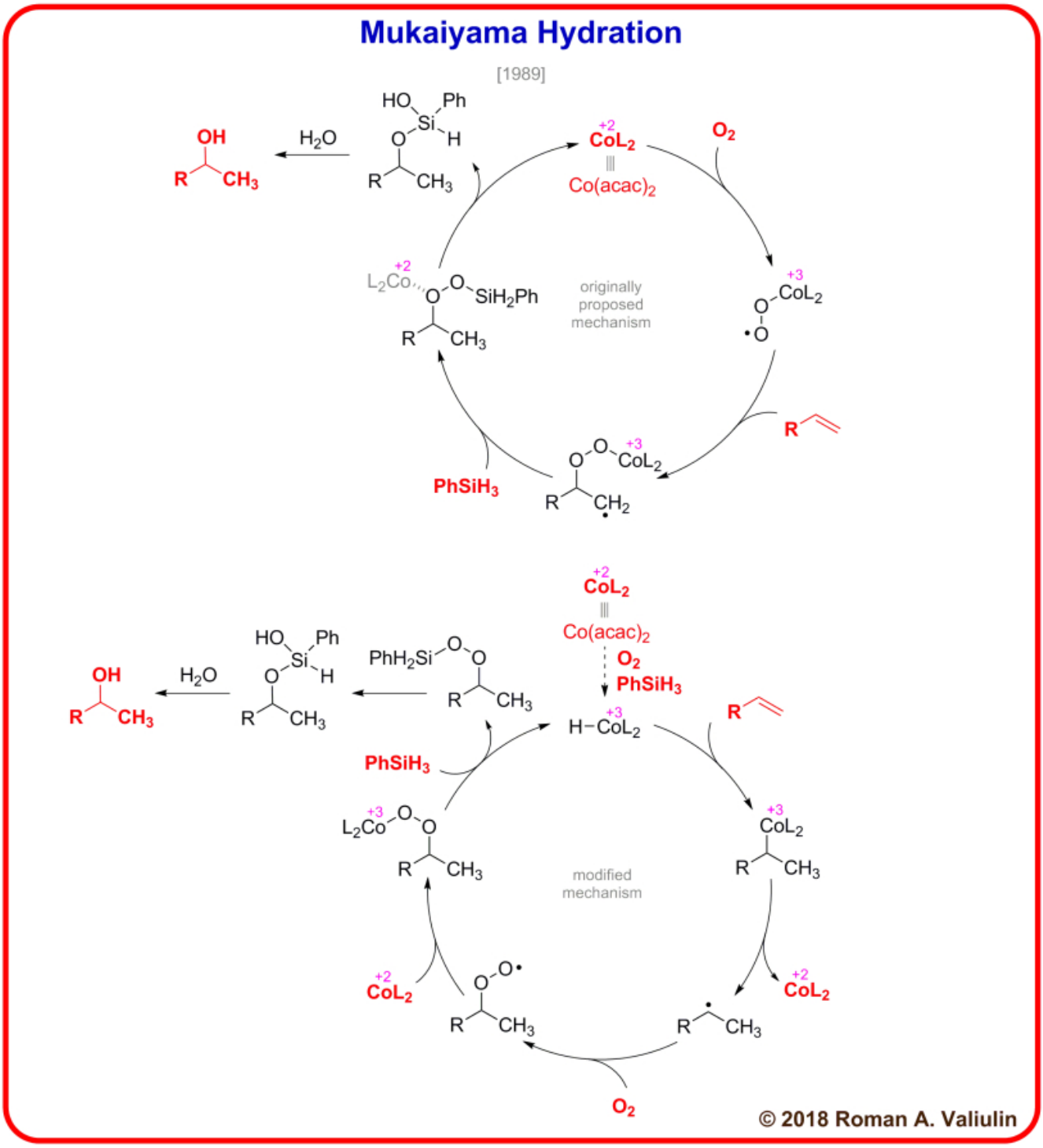
76. Ley-Griffith Oxidation 1987



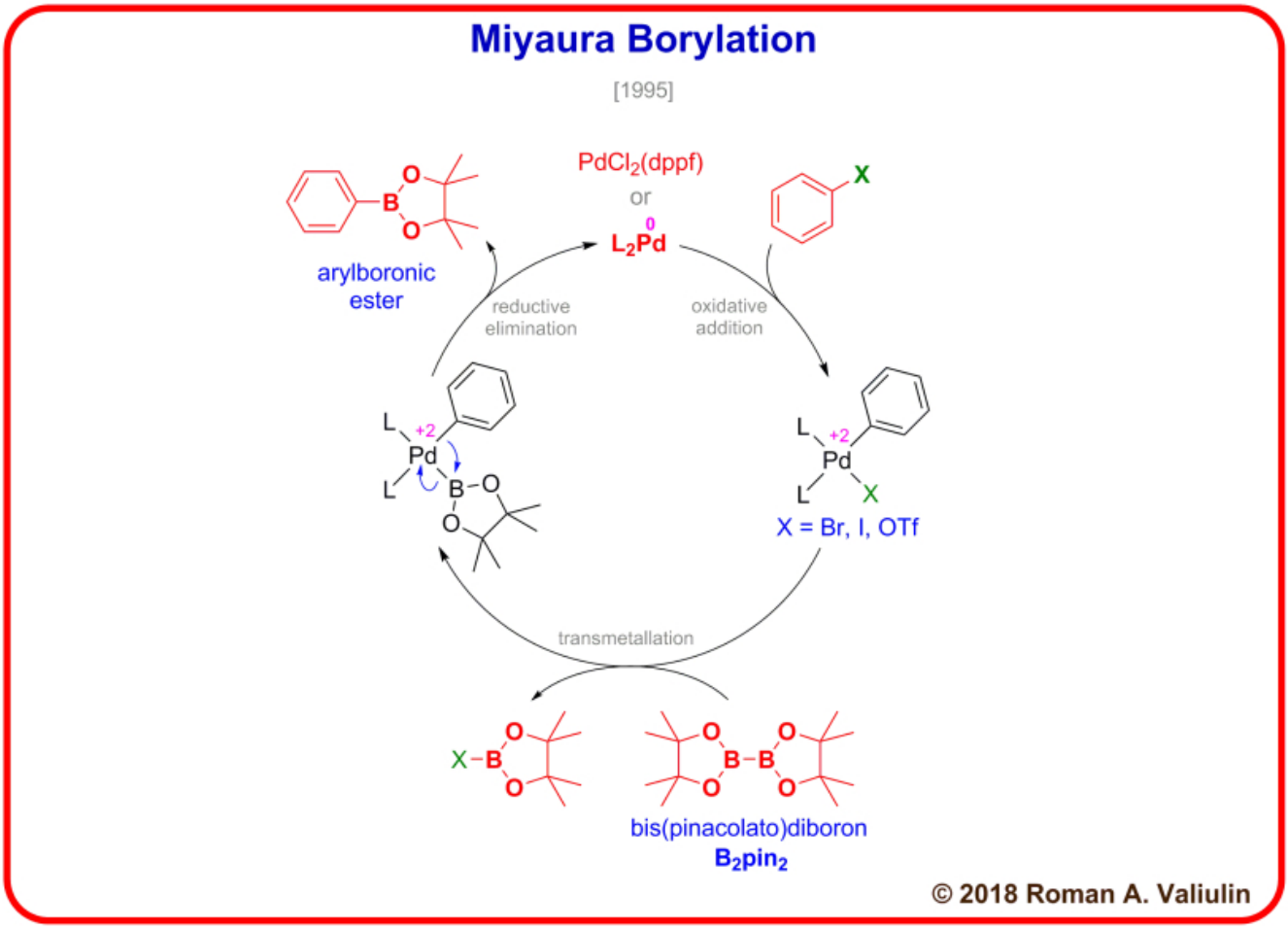
77. Liebeskind-Srogl Coupling 2000



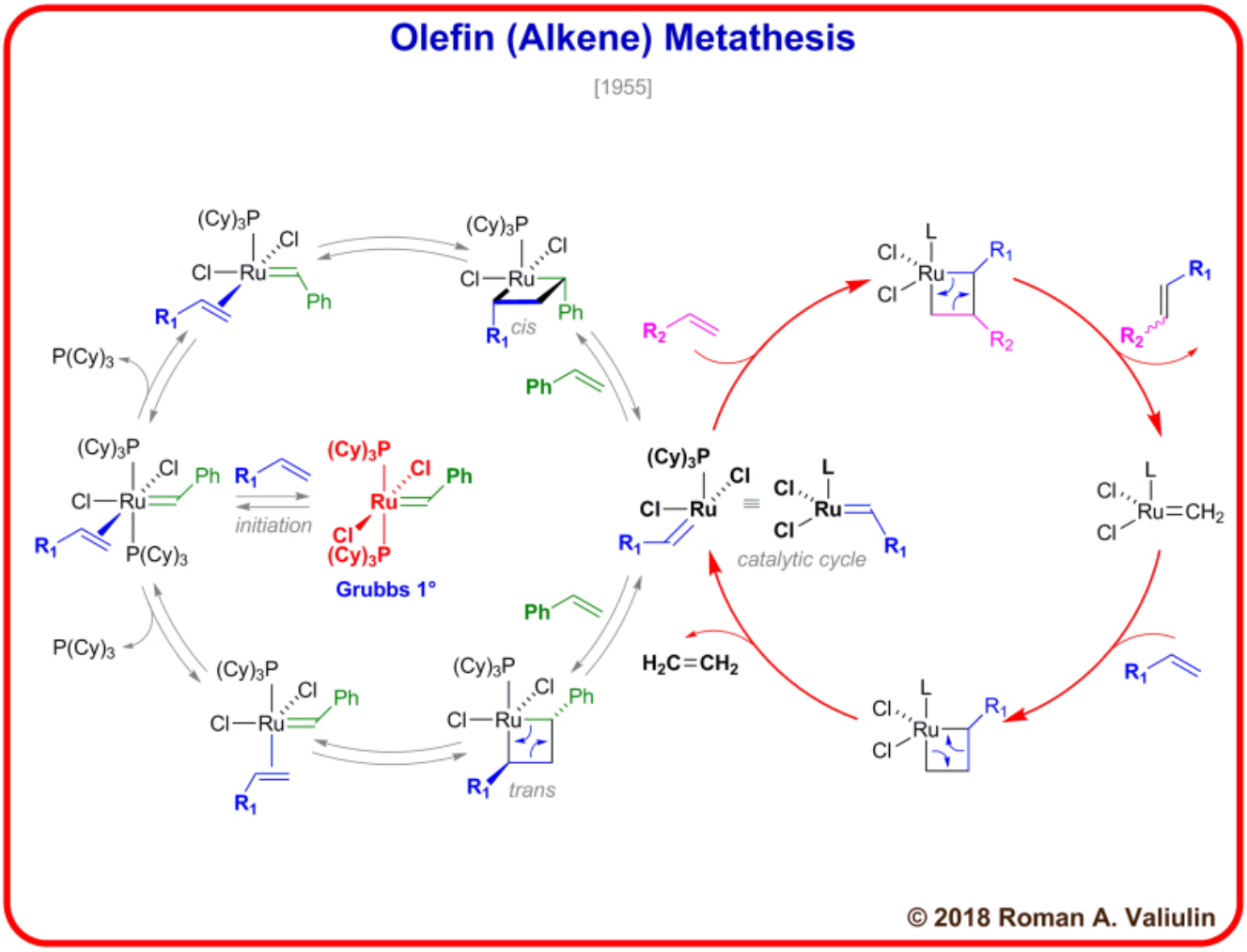
78. Mukaiyama Hydration 1989



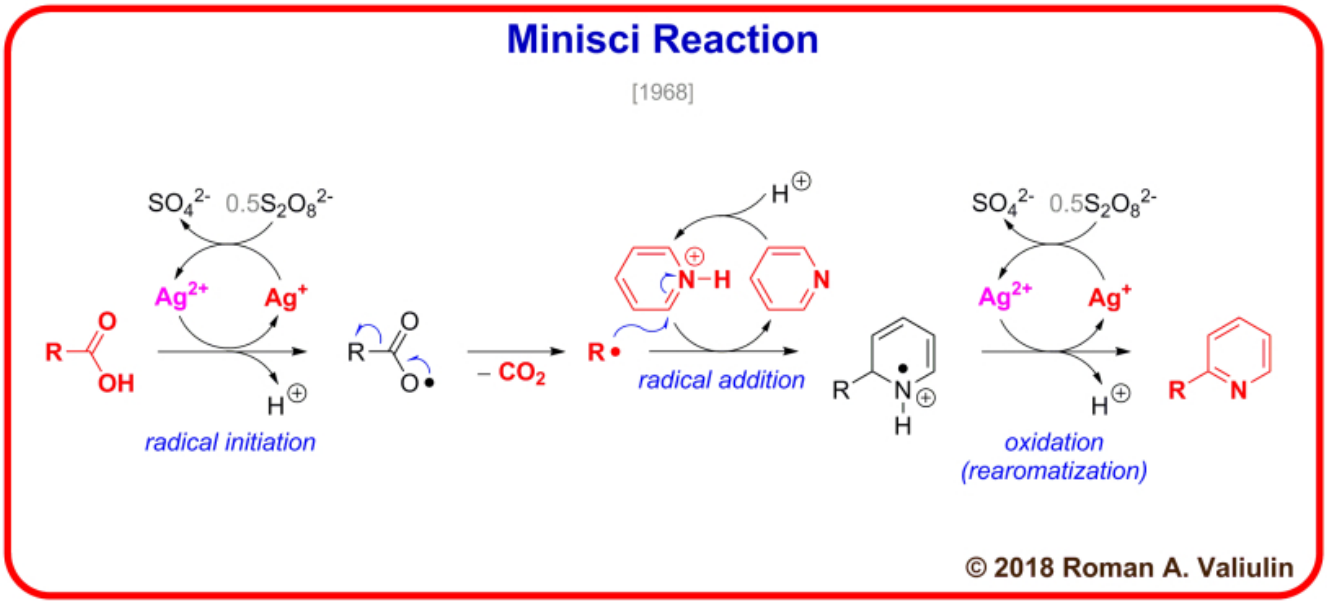
79. Miyaura Borylation 1995



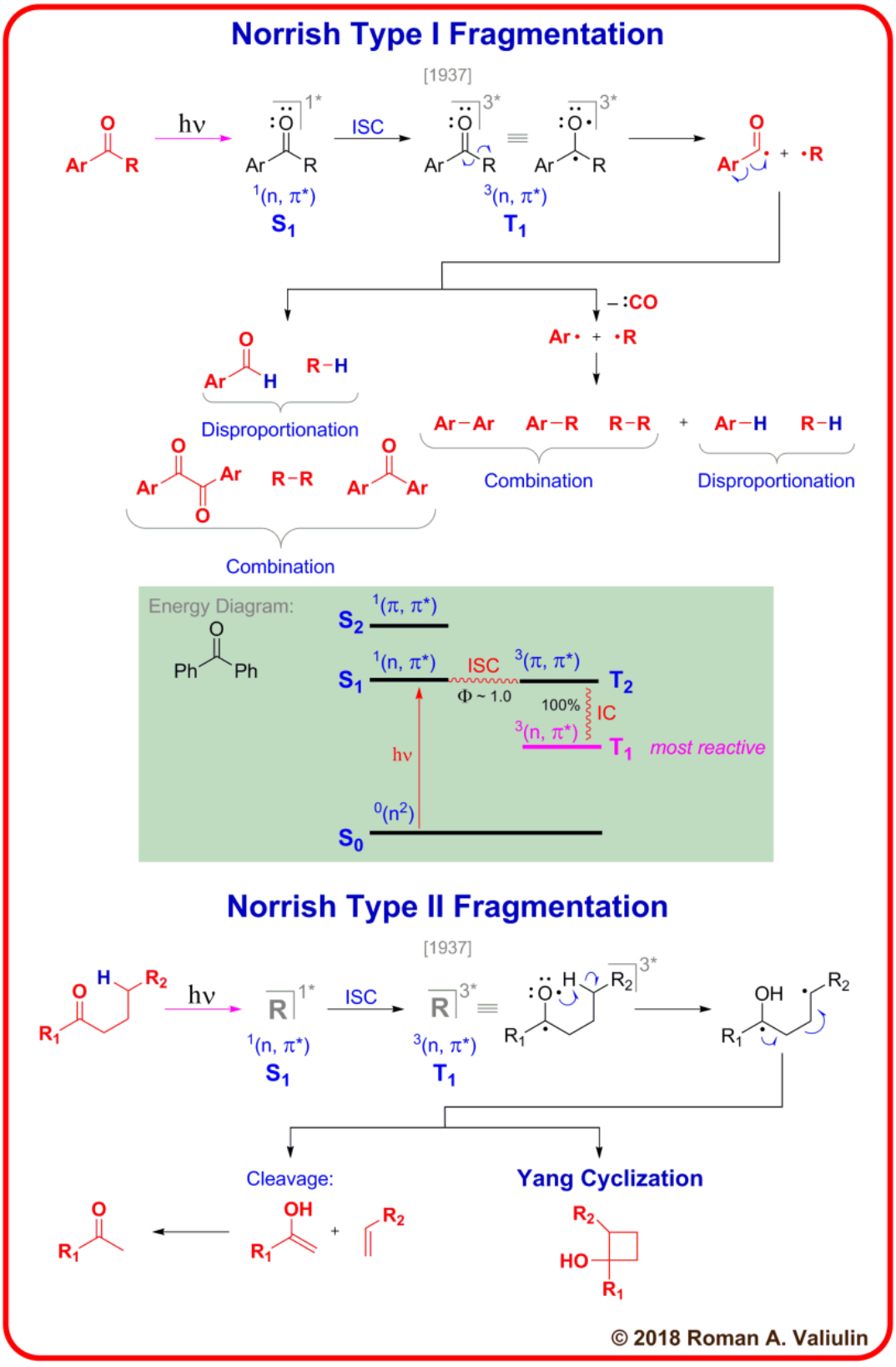
80. Olefin (Alkene) Metathesis 1955



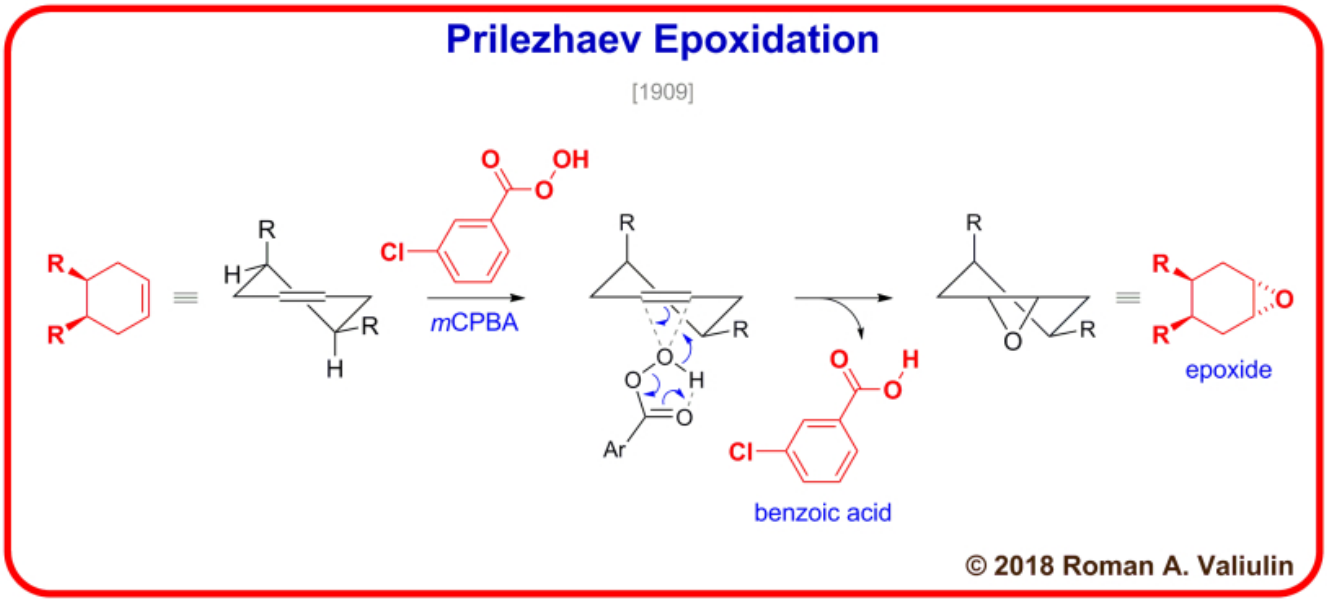
81. Minisci Reaction 1968



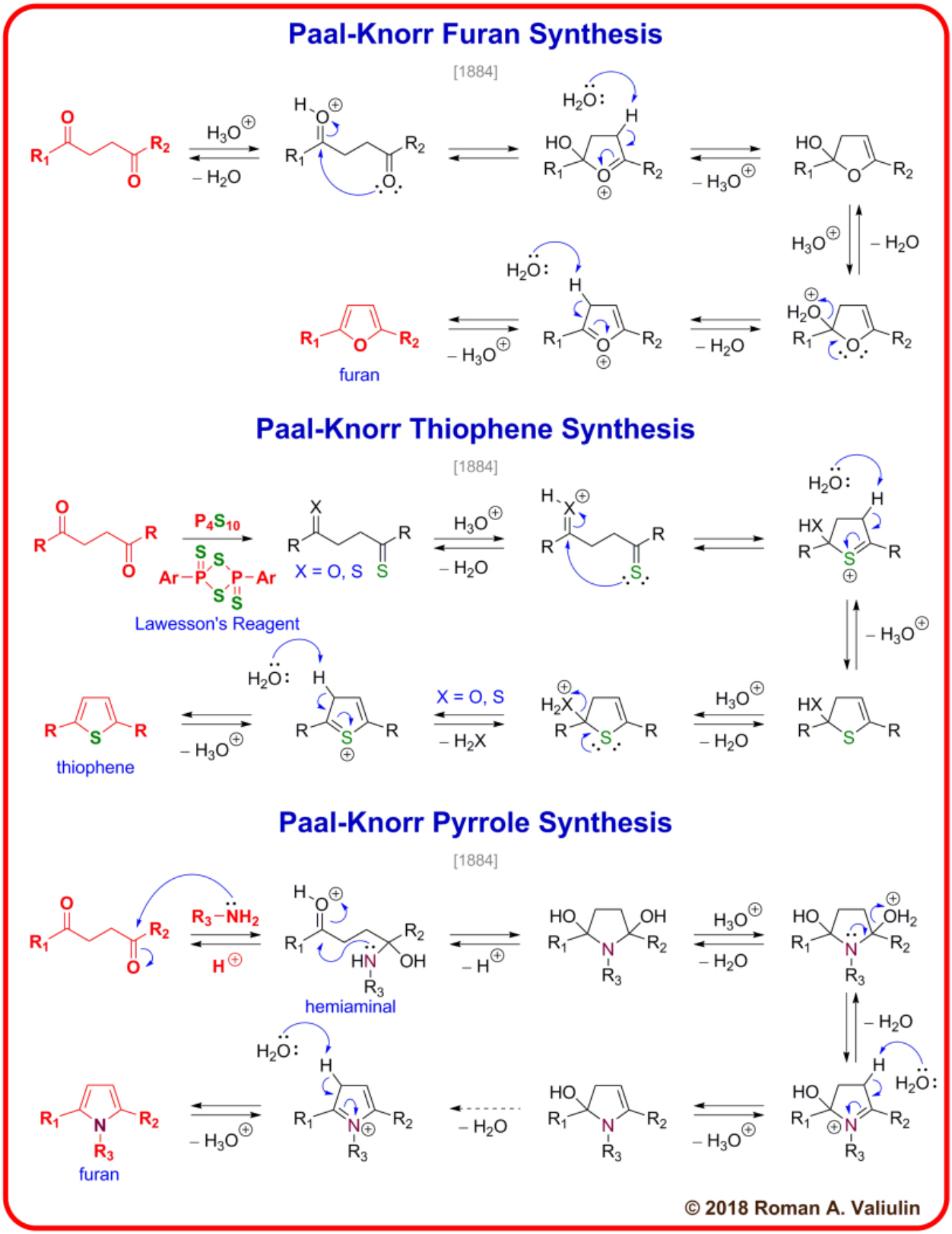
82. Norrish Type I and II Fragmentation 1937



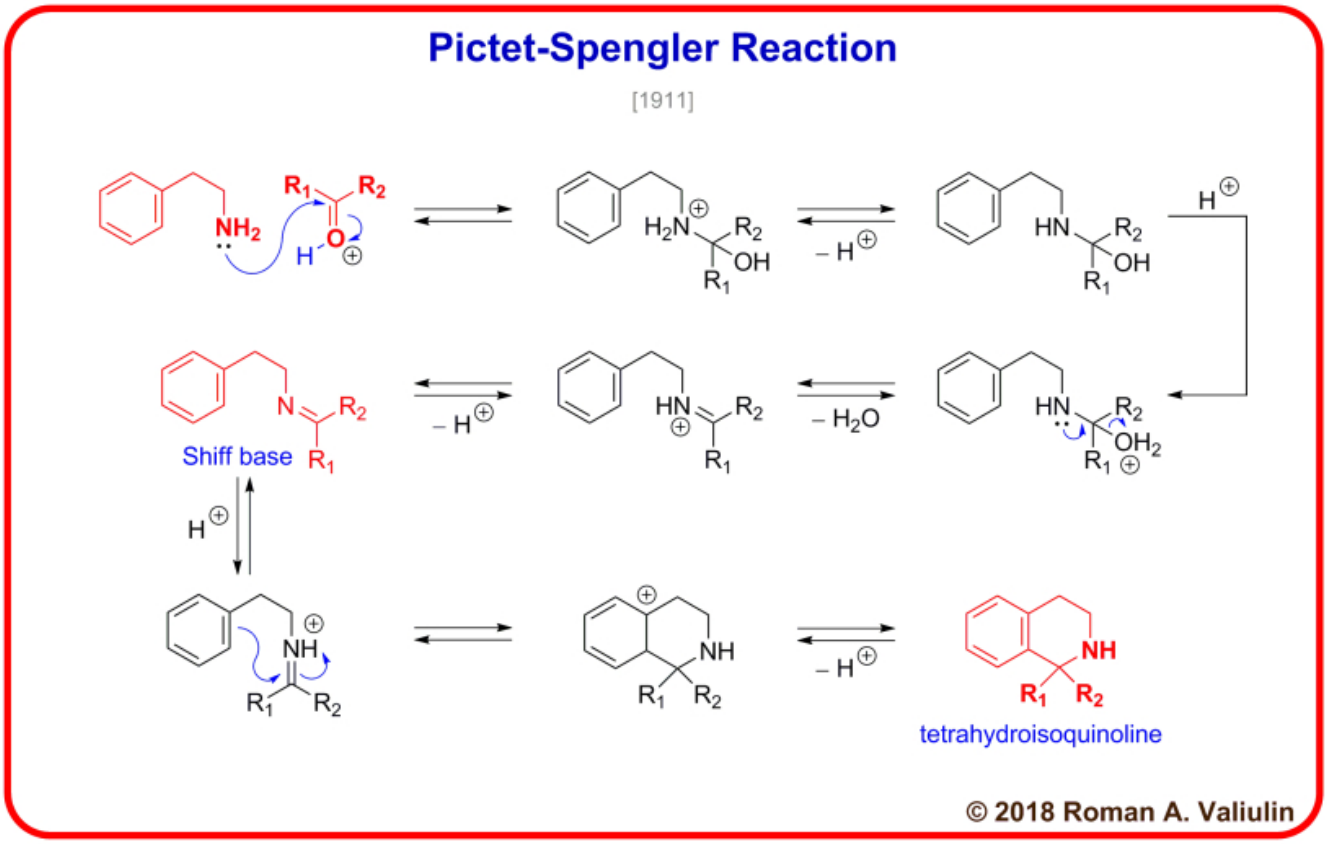
83. Prilezhaev Epoxidation 1909



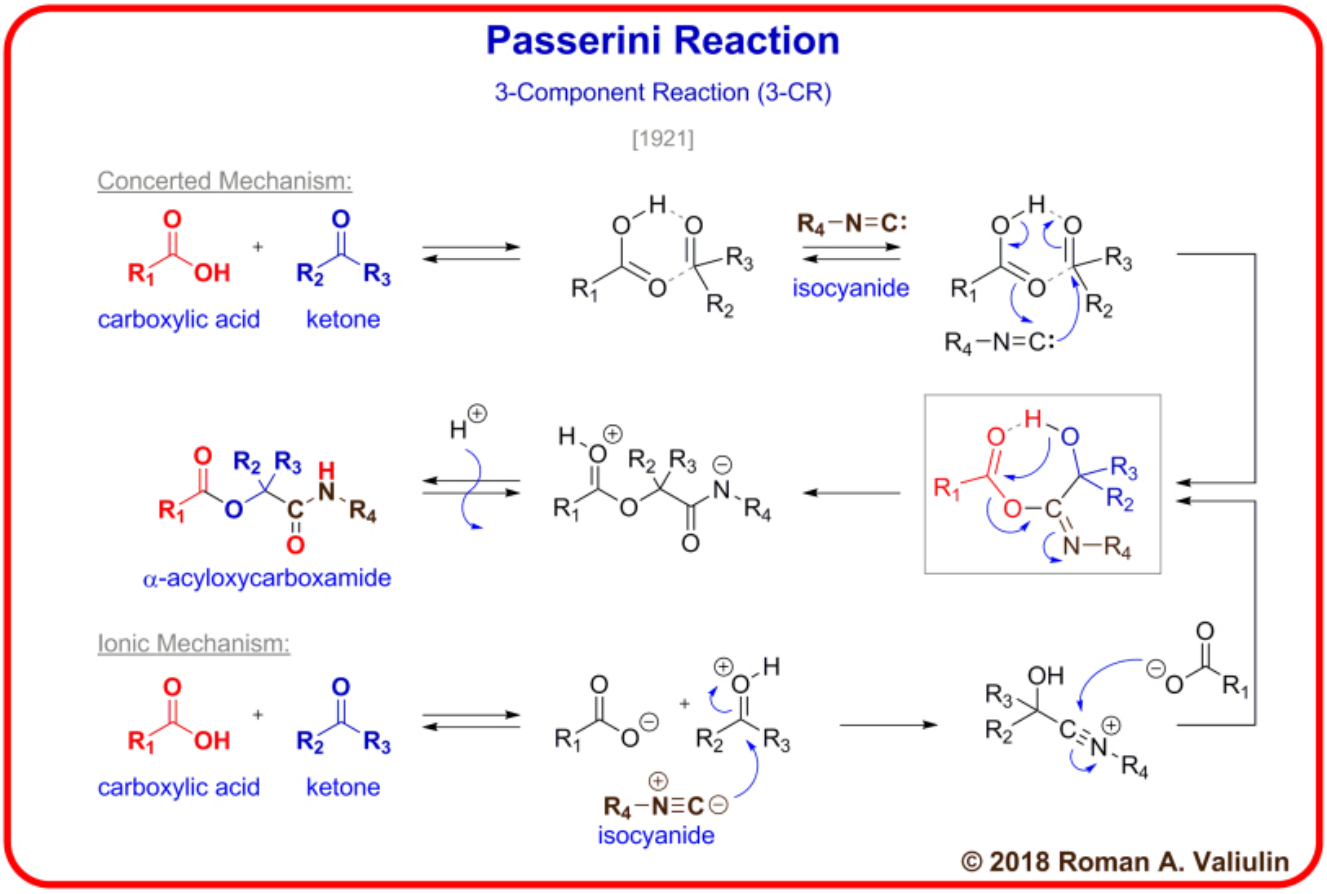
84. Paal-Knorr Syntheses 1884



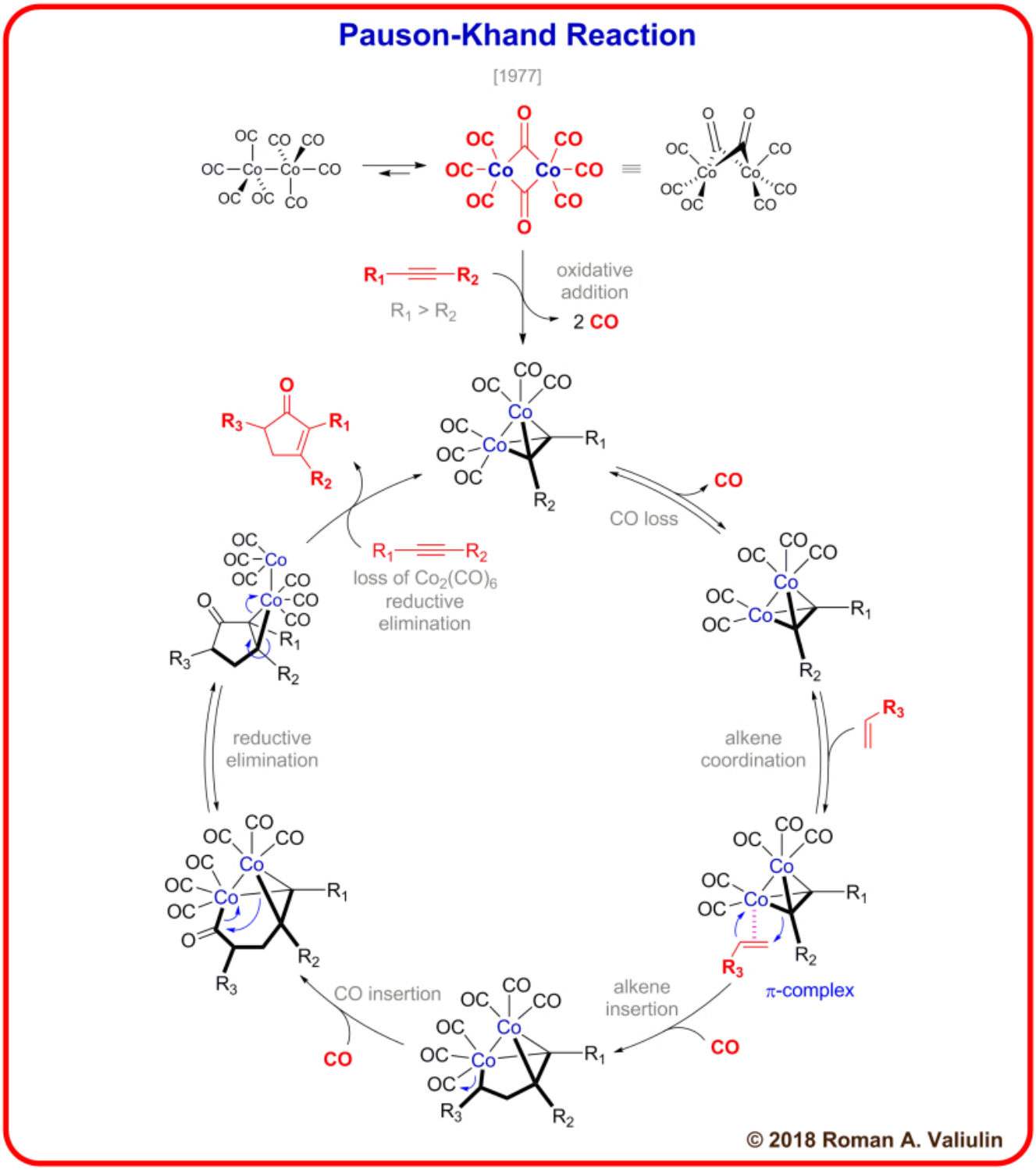
85. Pictet-Spengler Reaction 1911



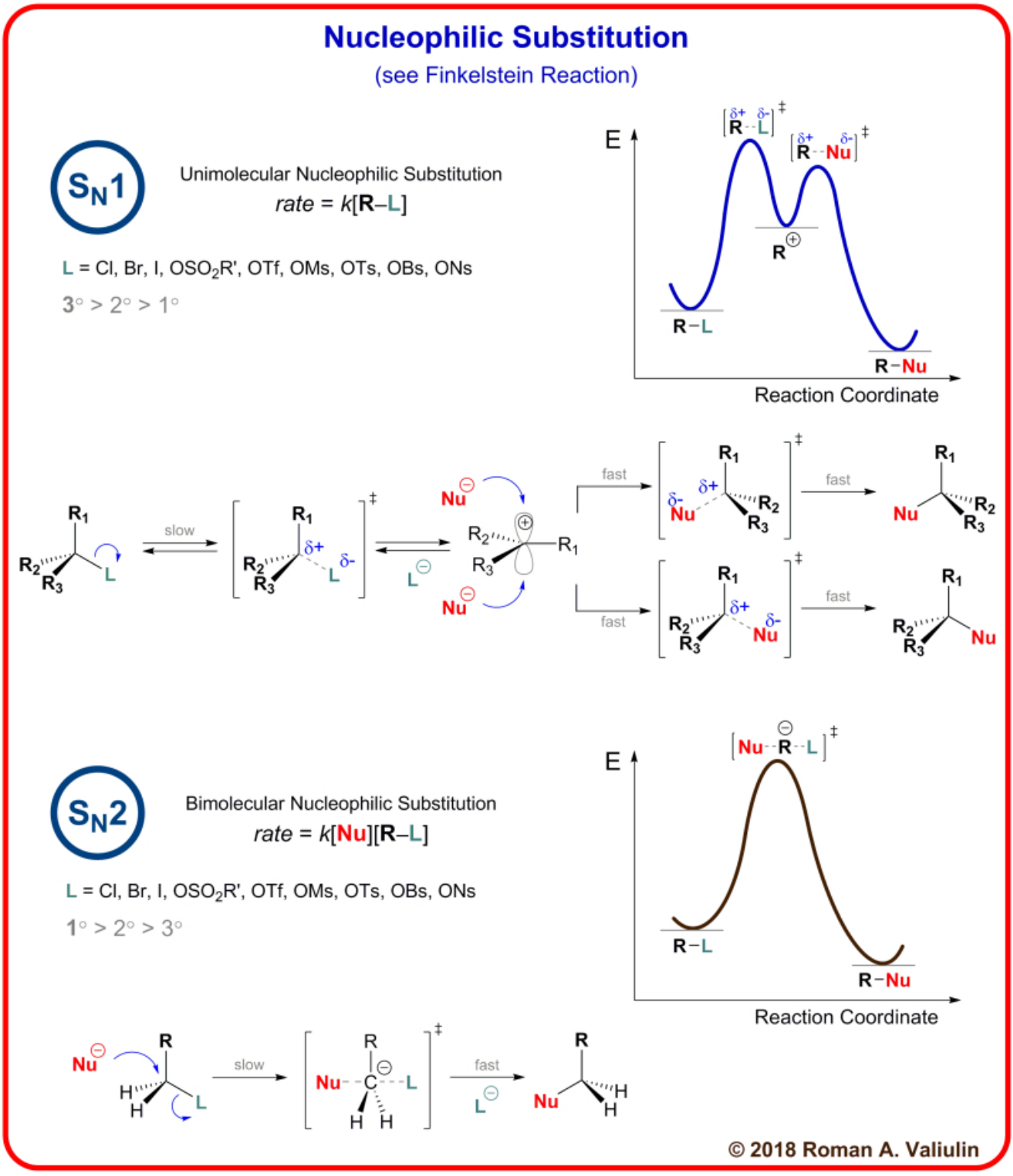
86. Passerini Three-Component Reaction 1921



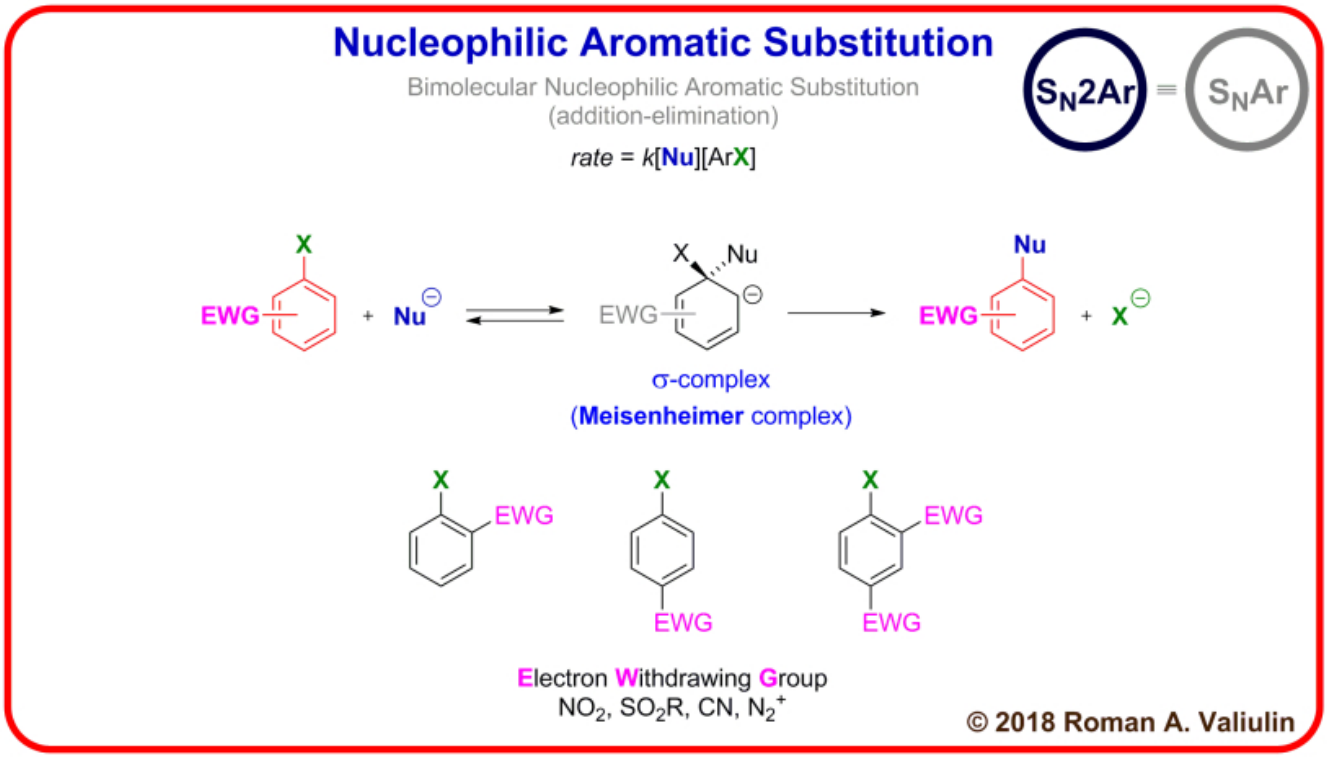
87. Pauson–Khand Reaction 1977



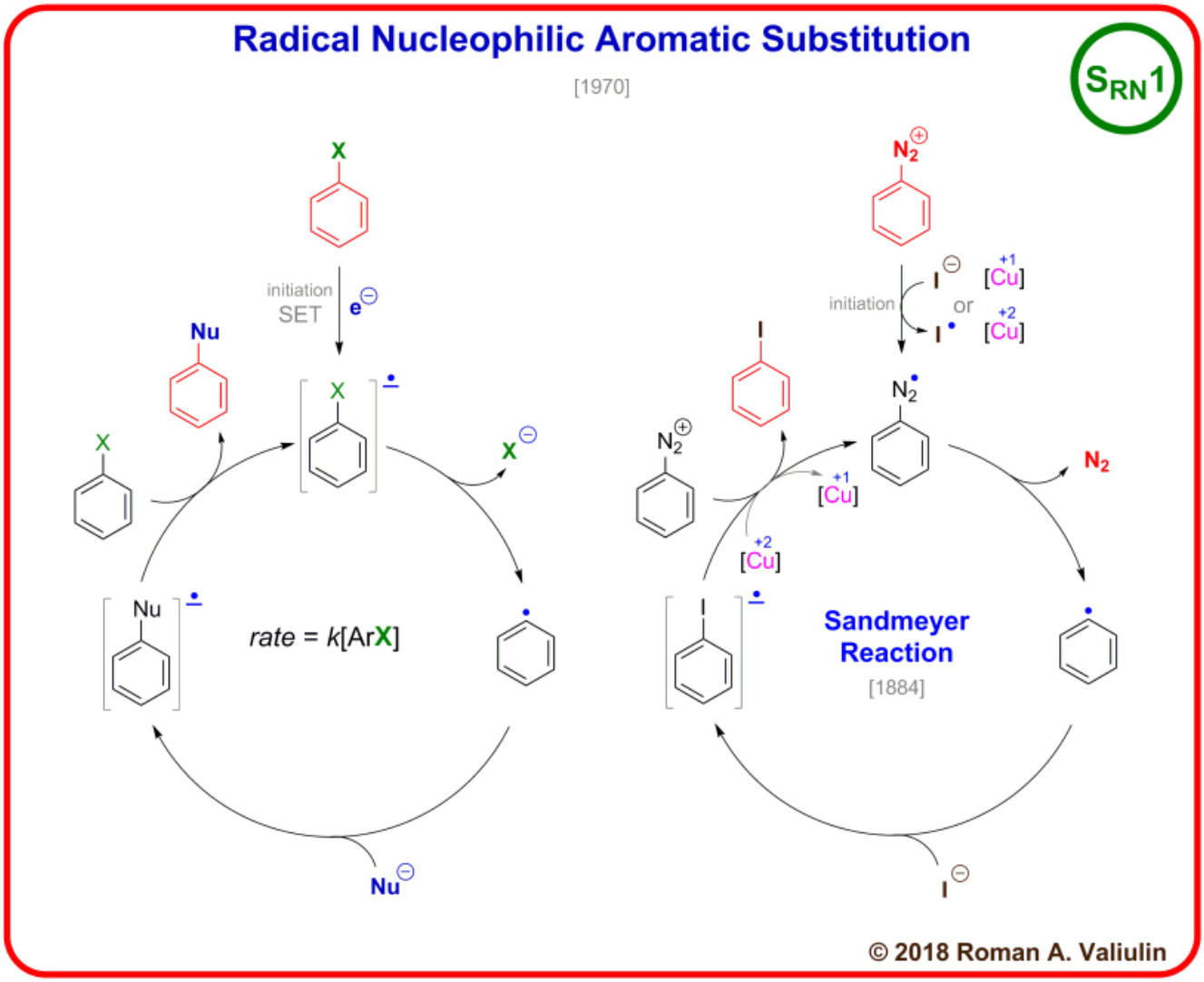
88. Nucleophilic Substitution



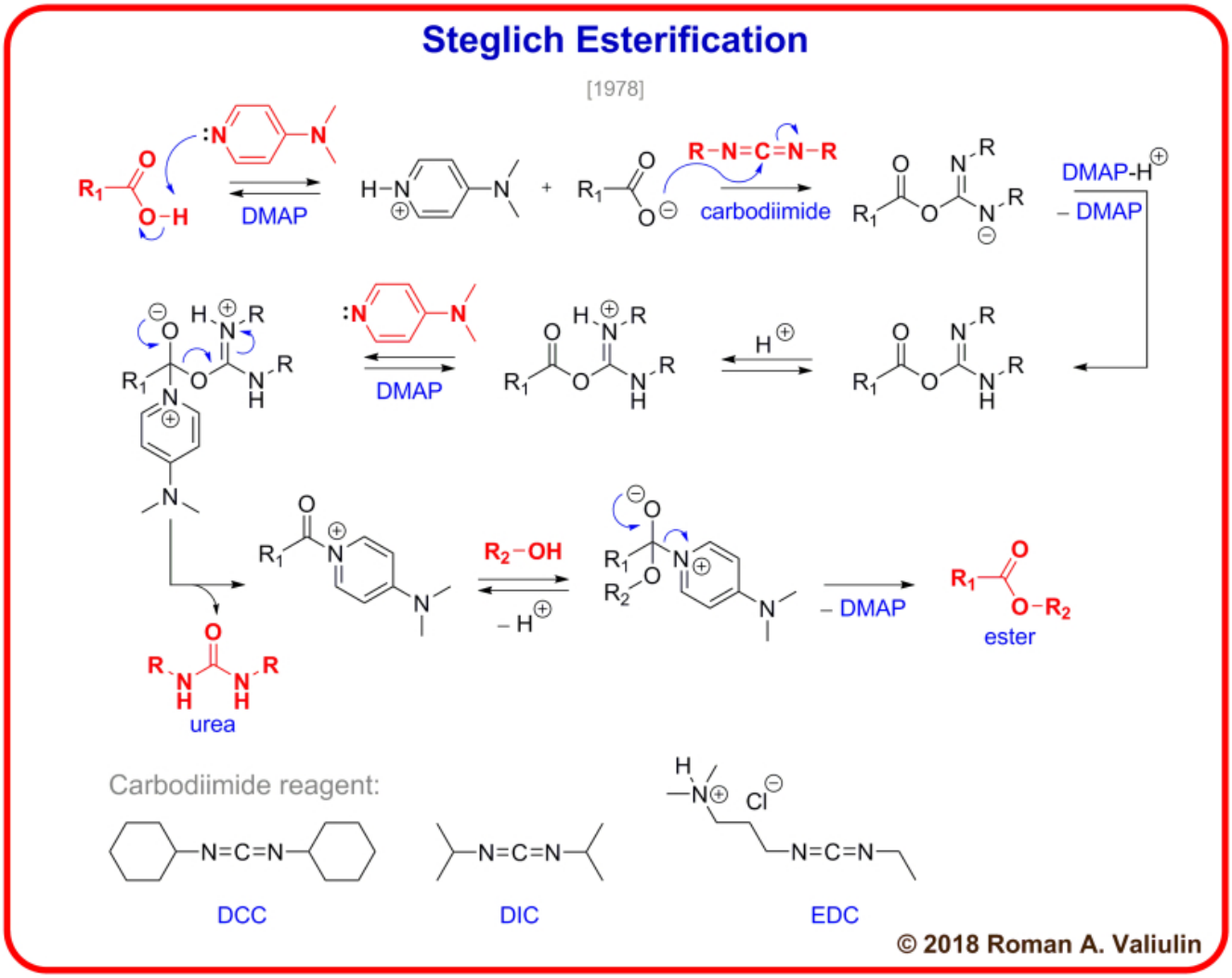
89. Nucleophilic Aromatic Substitution



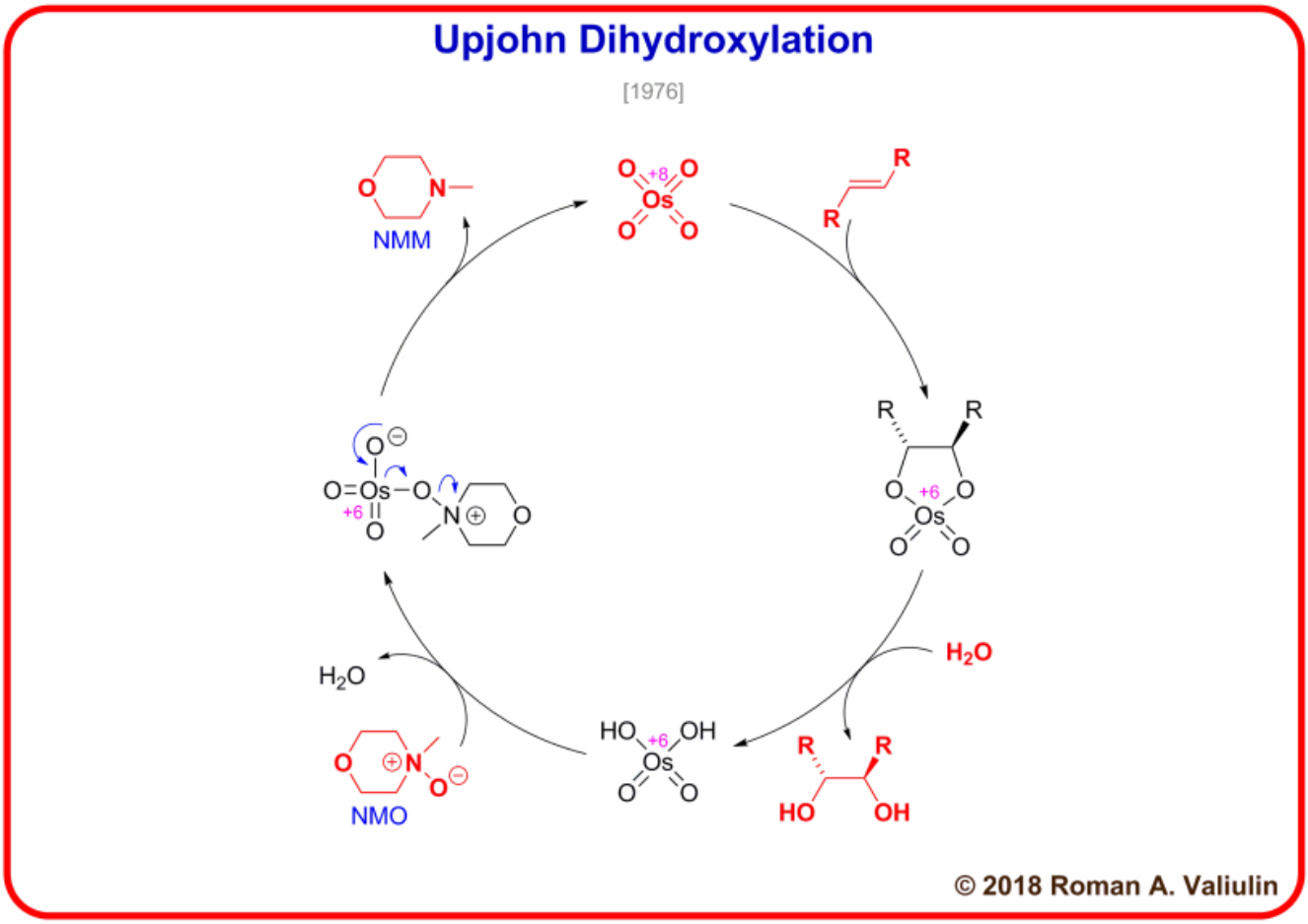
90. Radical Nucleophilic Aromatic Substitution 1970



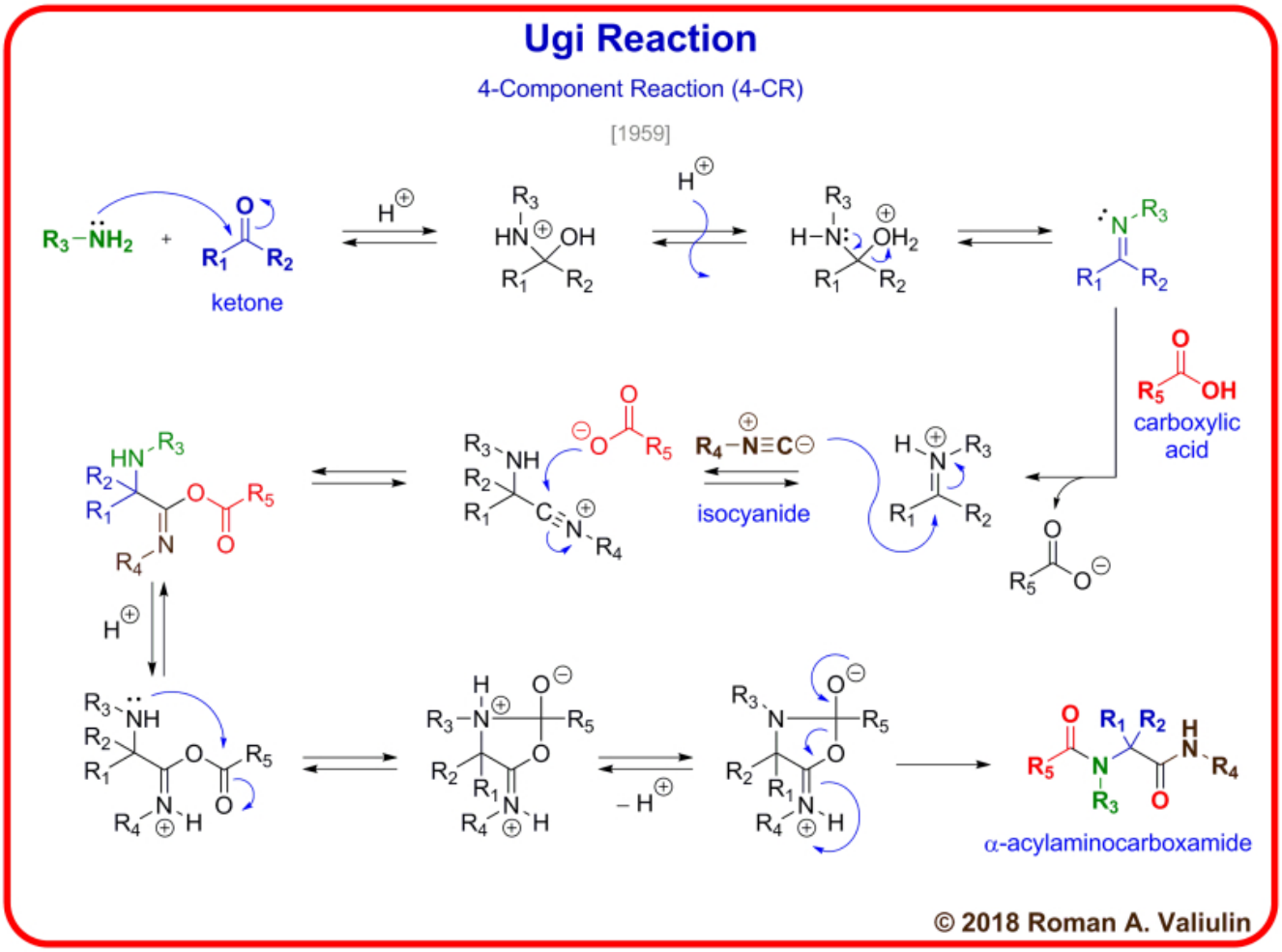
91. Steglich Esterification 1978



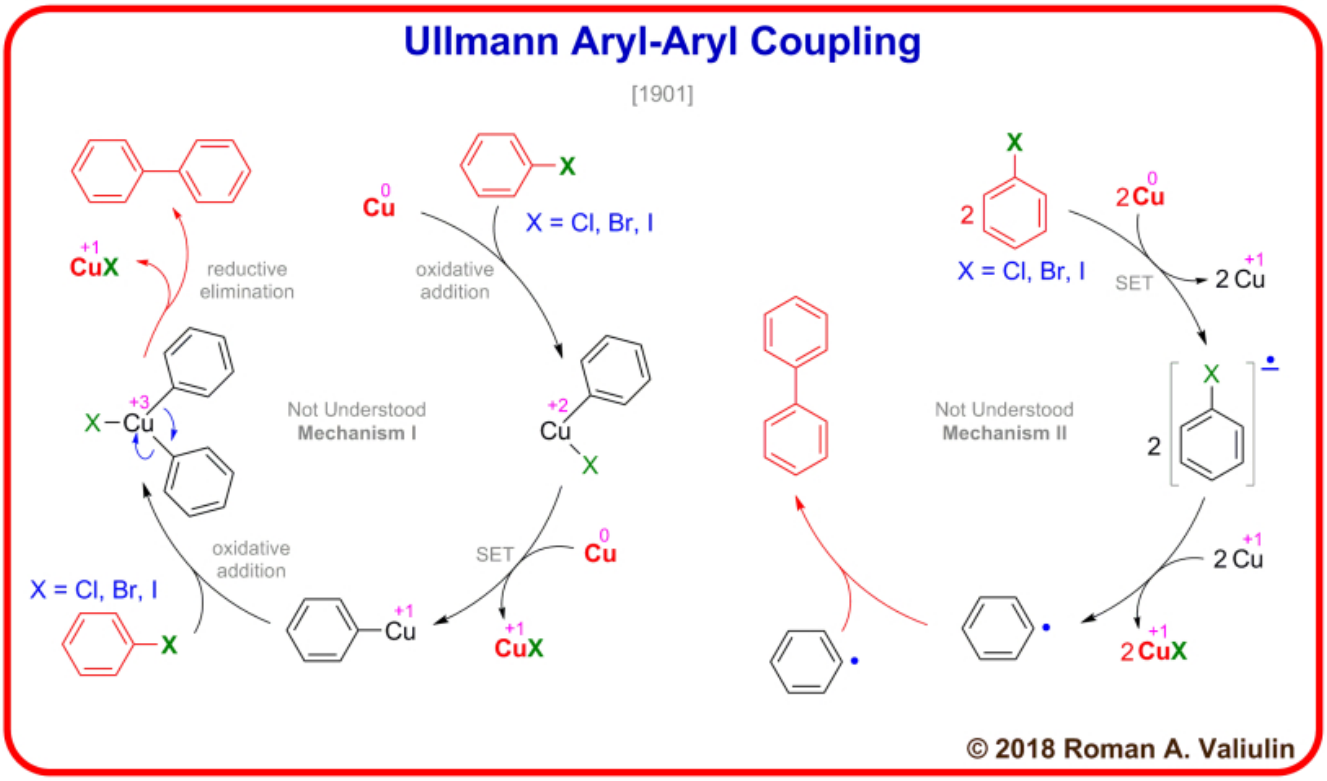
92. Upjohn Dihydroxylation 1976



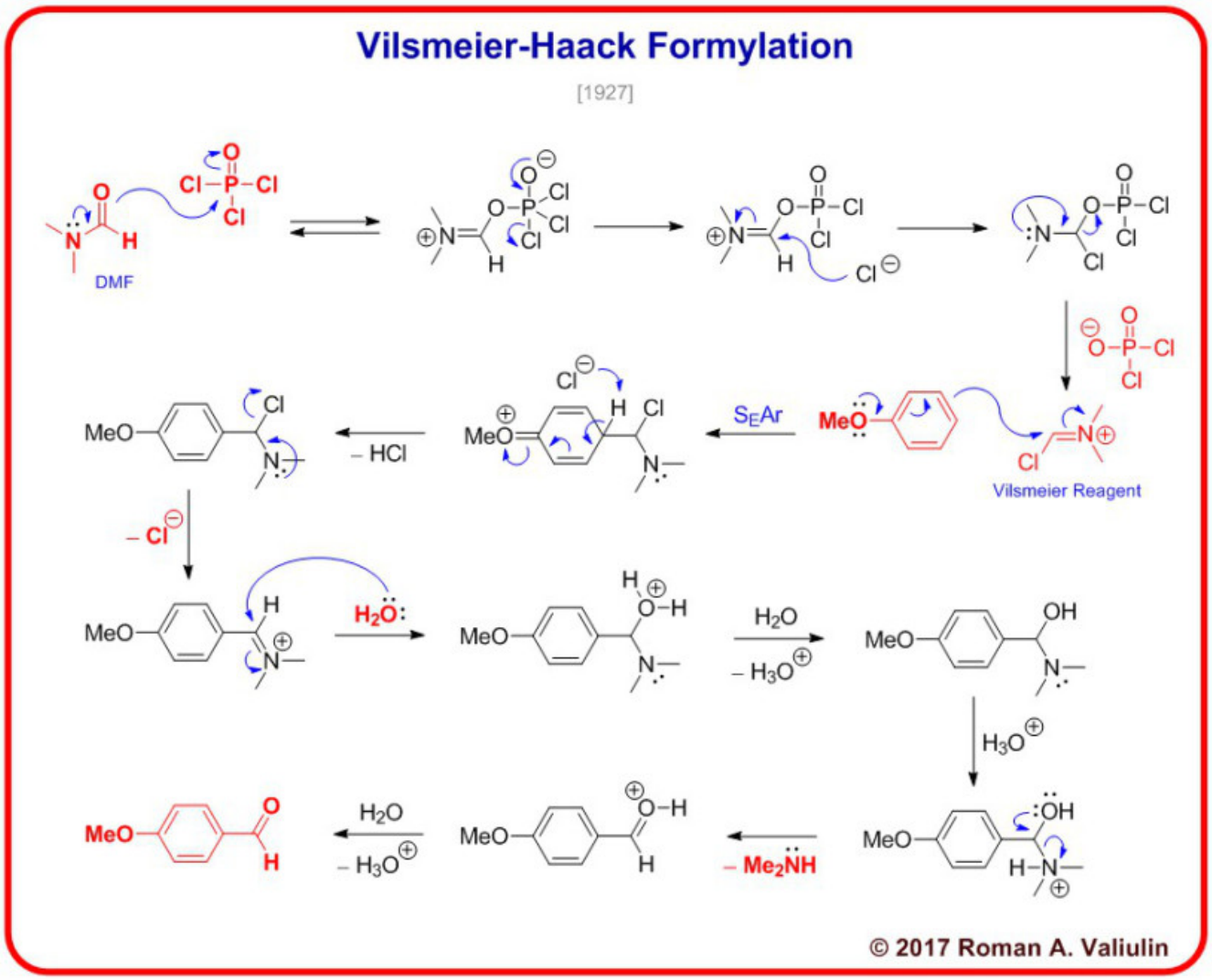
93. Ugi Reaction 1959



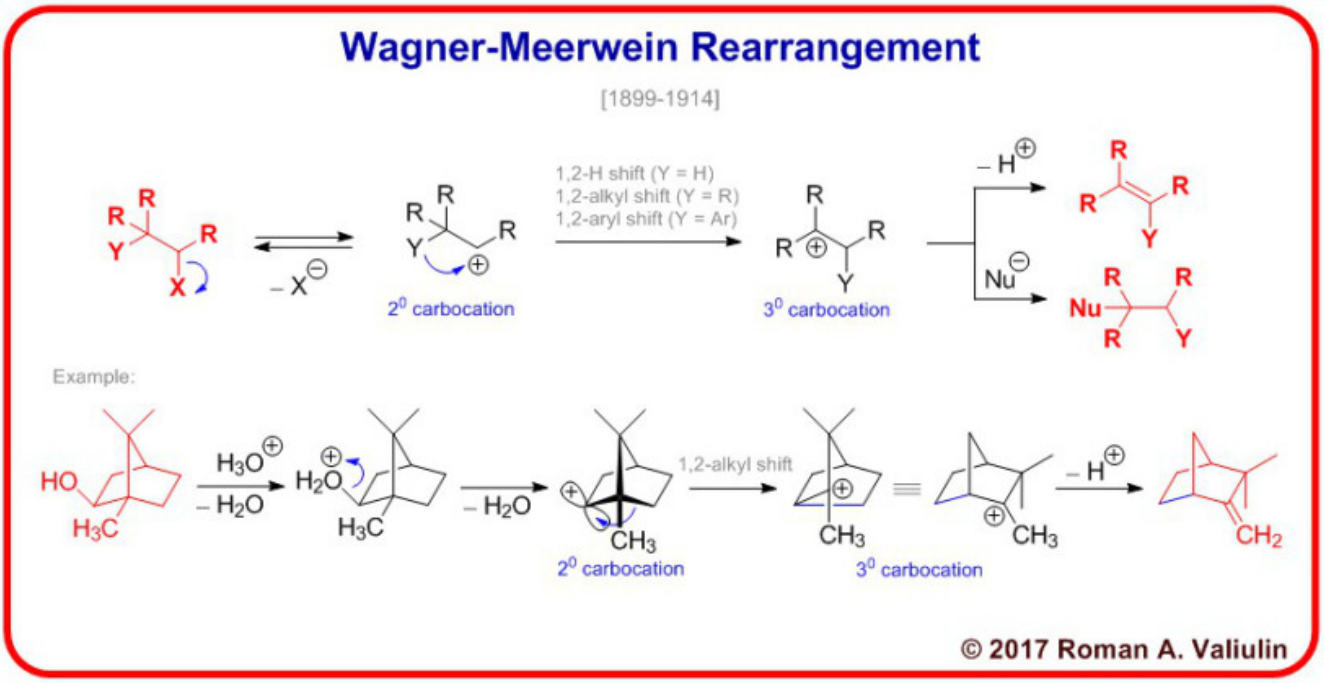
94. Ullmann Aryl-Aryl Coupling 1901



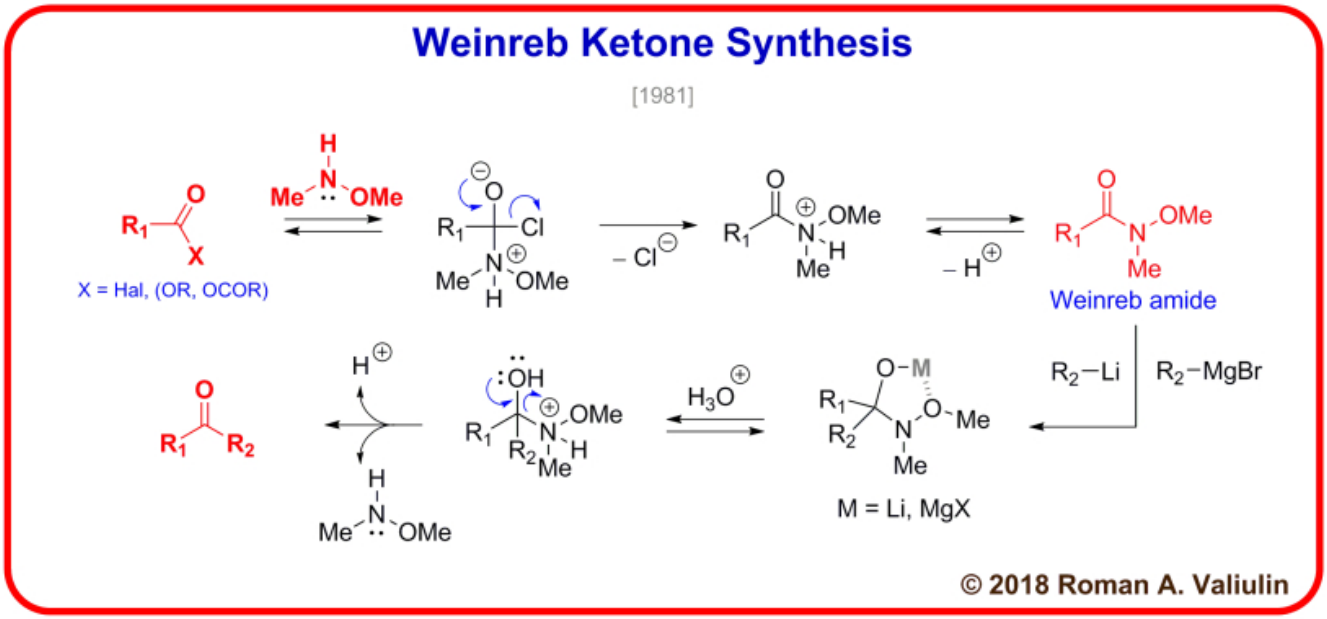
95. Vilsmeier-Haak Formylation 1927



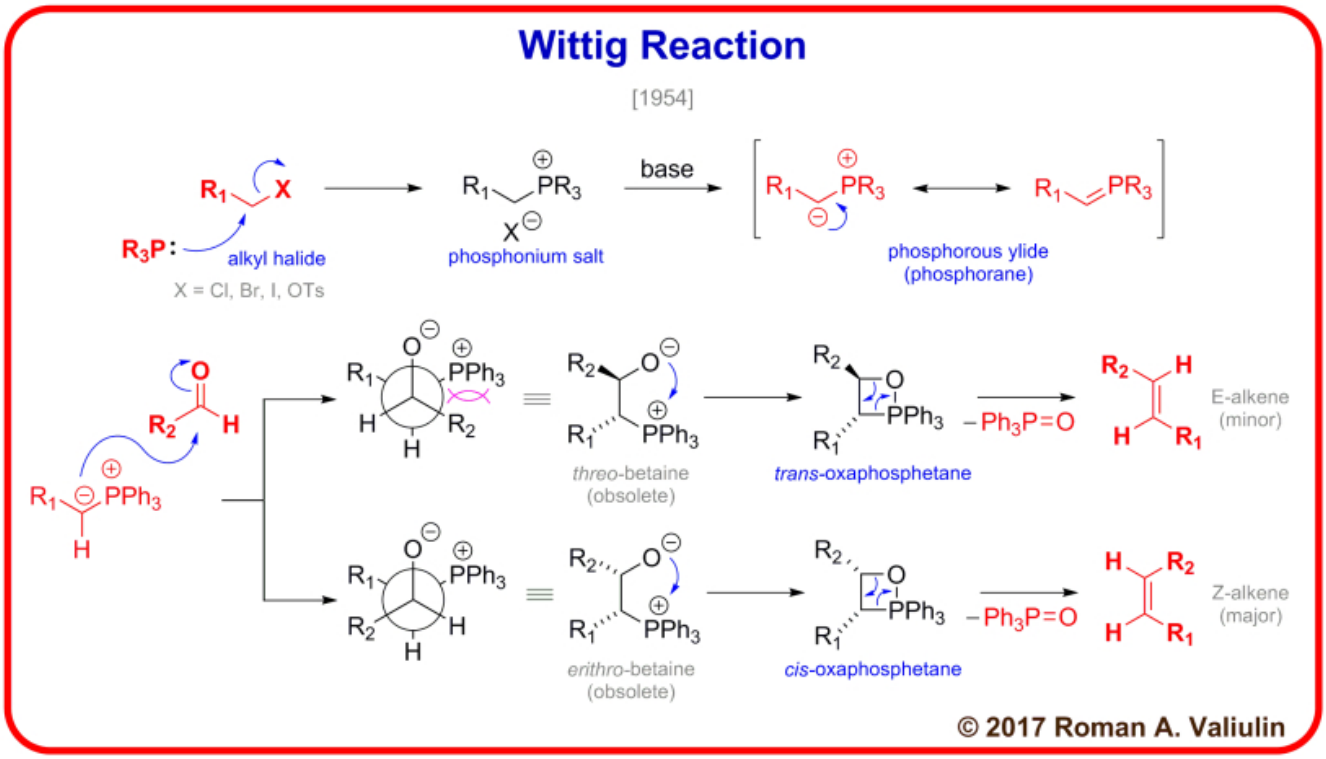
96. Wagner-Meerwein Rearrangement (1899–1914)



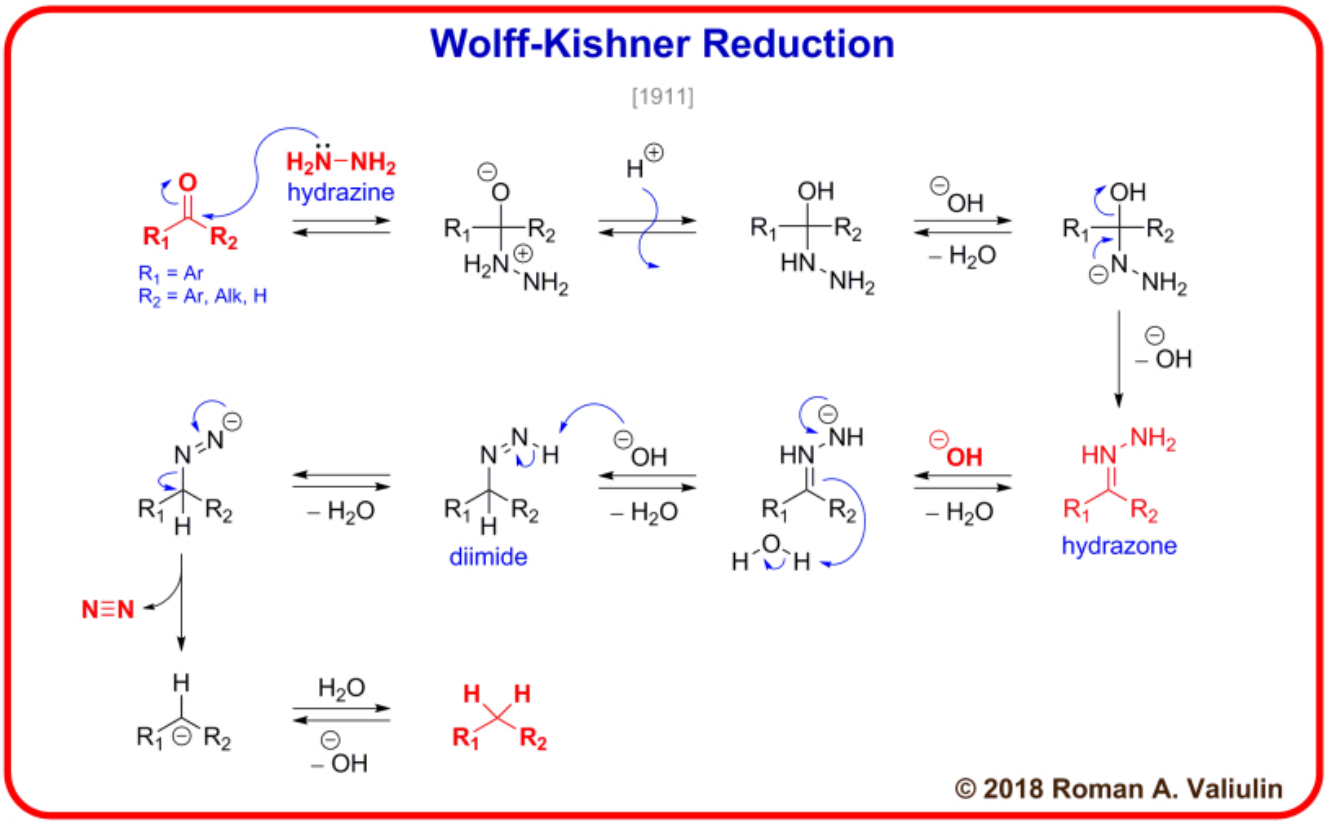
97. Weinreb Ketone Synthesis 1981



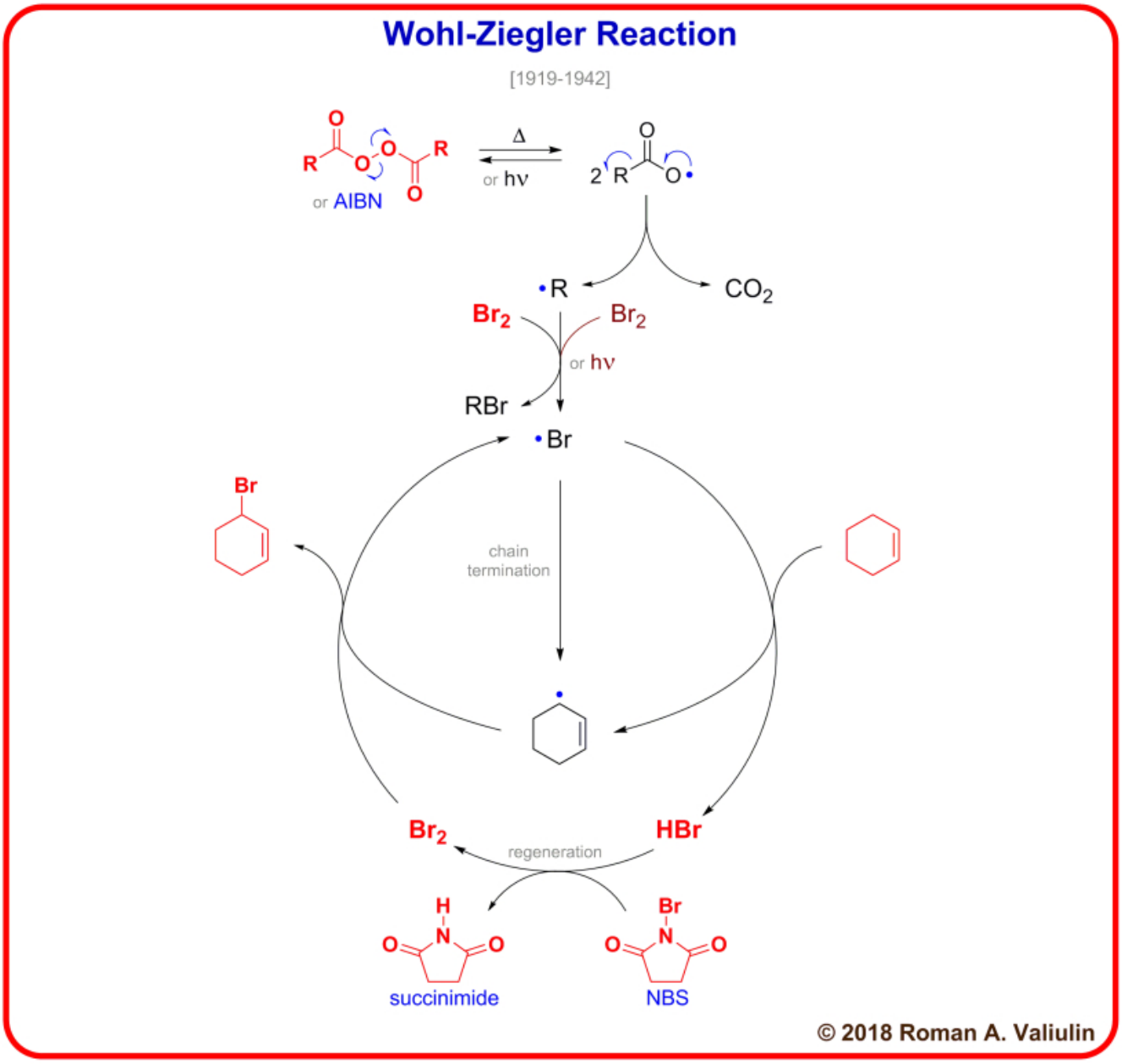
98. Wittig Reaction 1954



99. Wolff-Kishner Reduction 1911

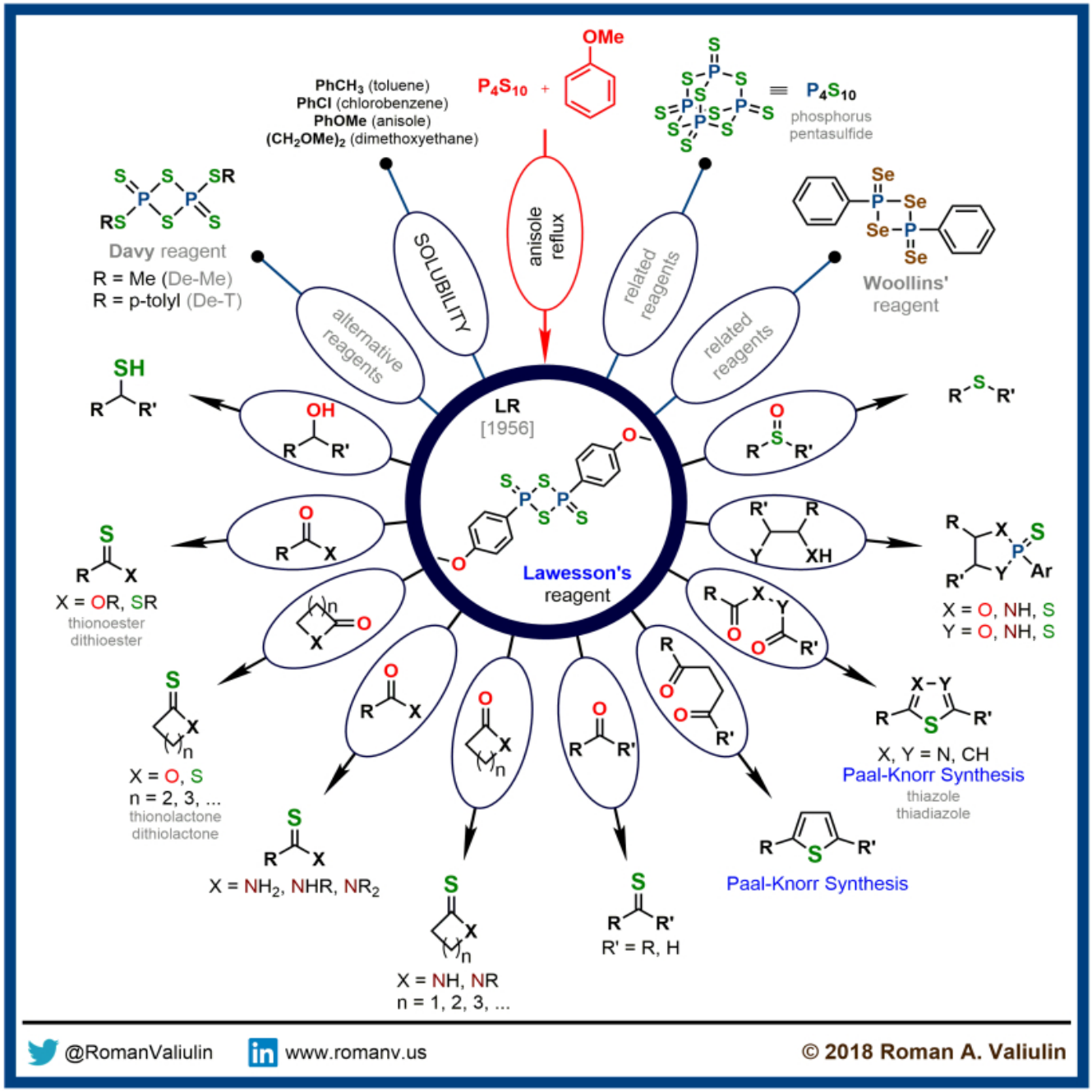


100. Wohl-Ziegler Reaction (1919–1942)

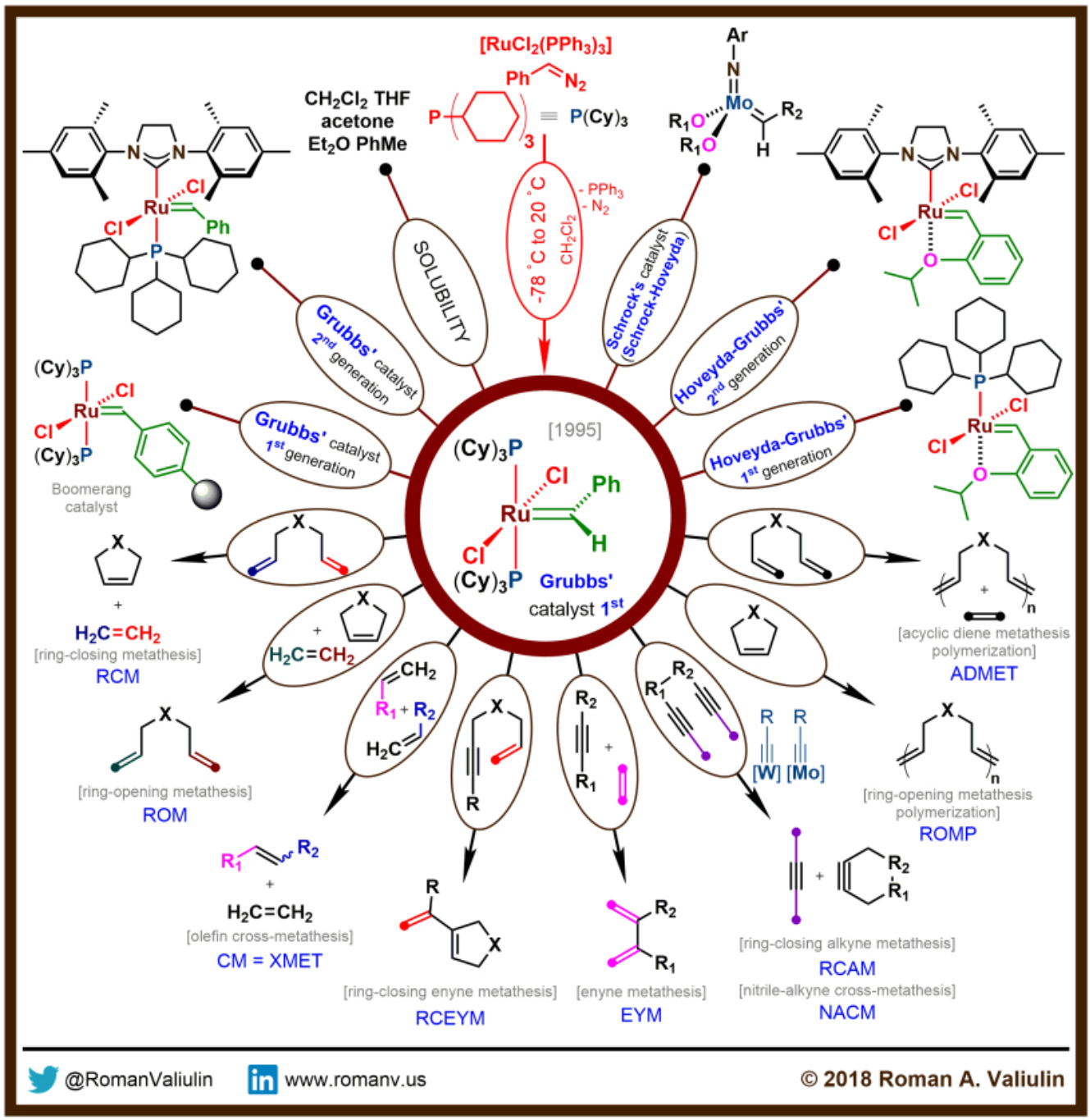


II. 100 Must Know Reagents

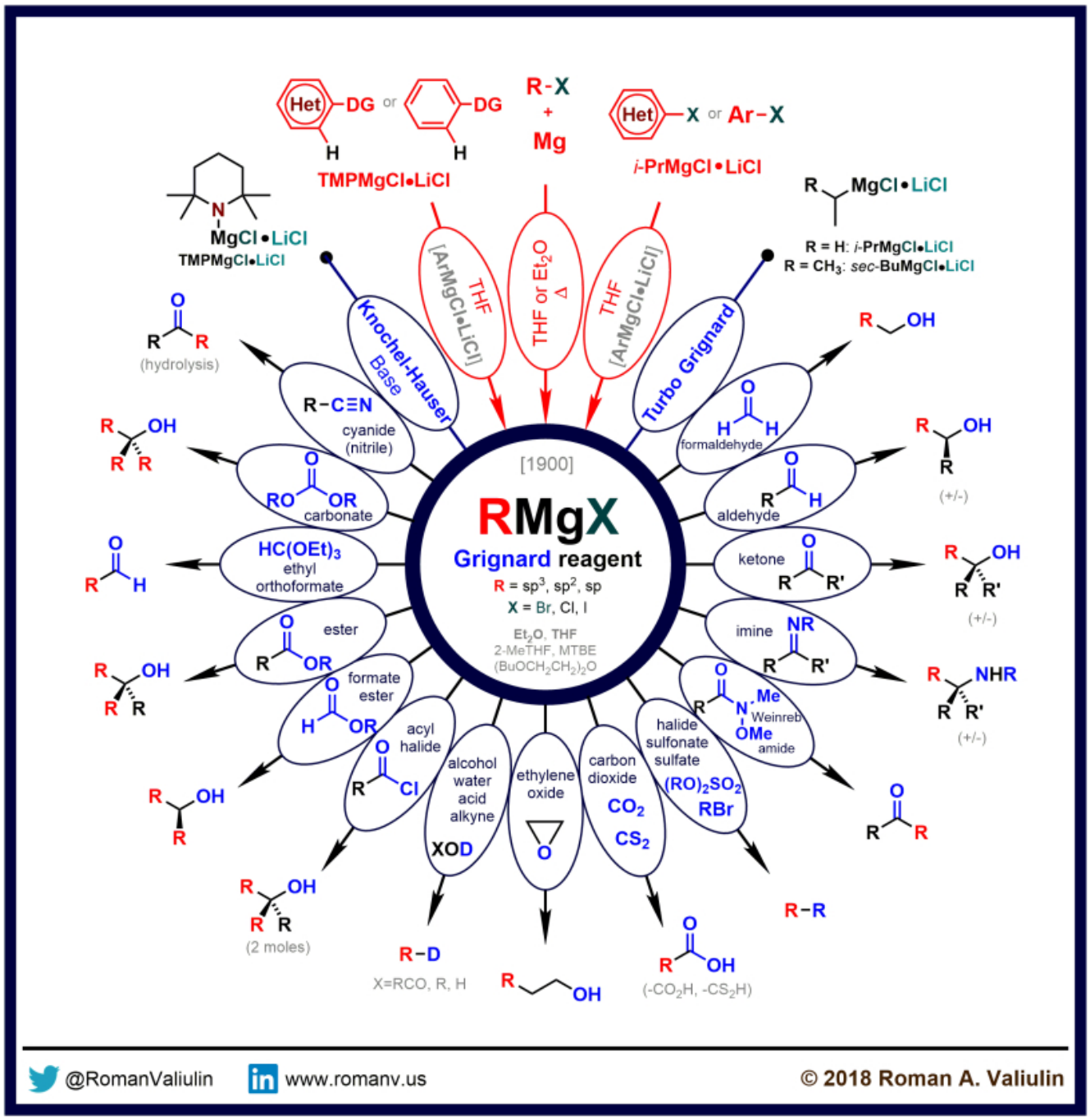
1. Lawesson's Reagent 1956



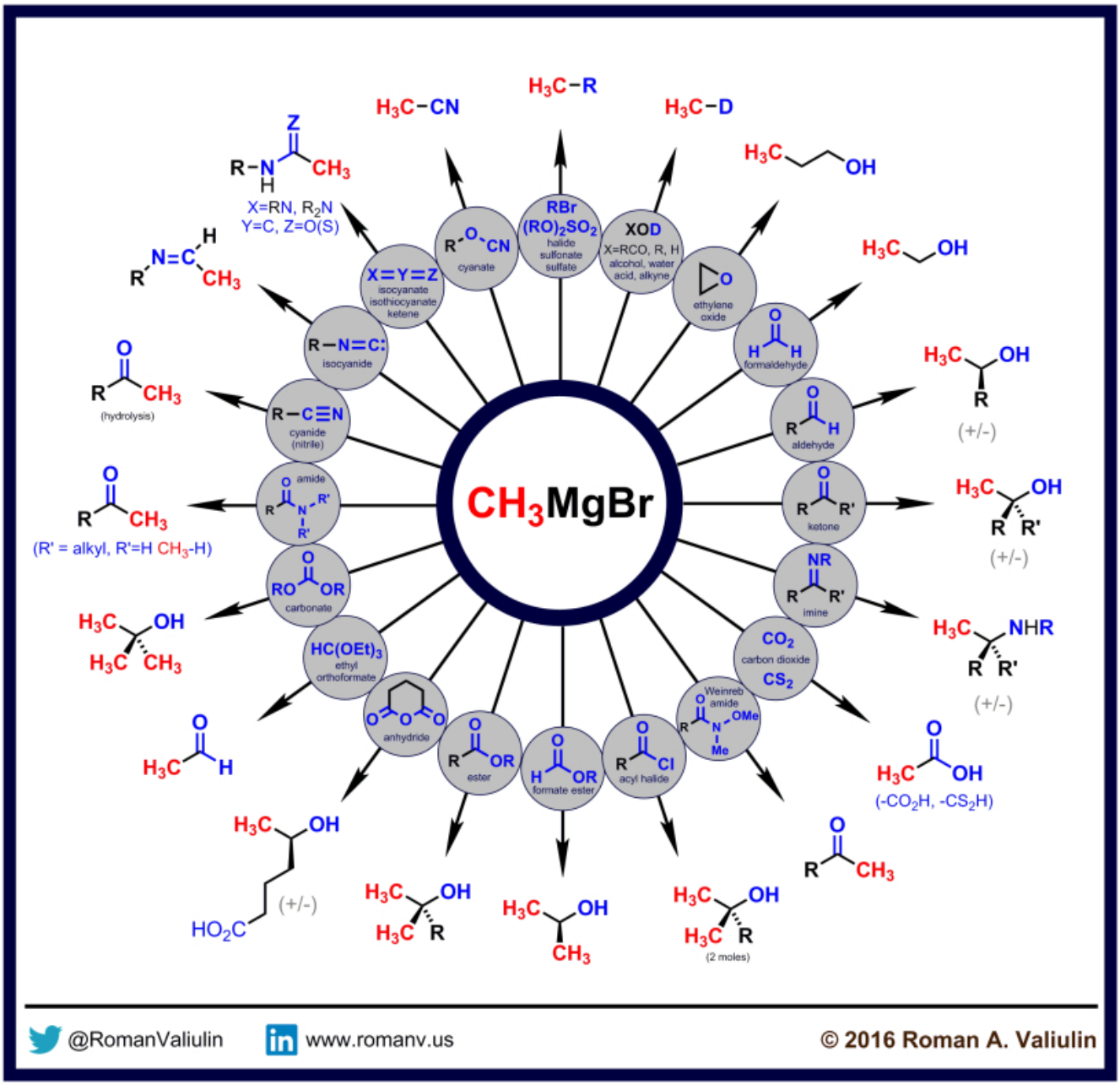
2. Grubbs' Catalyst First Generation 1995



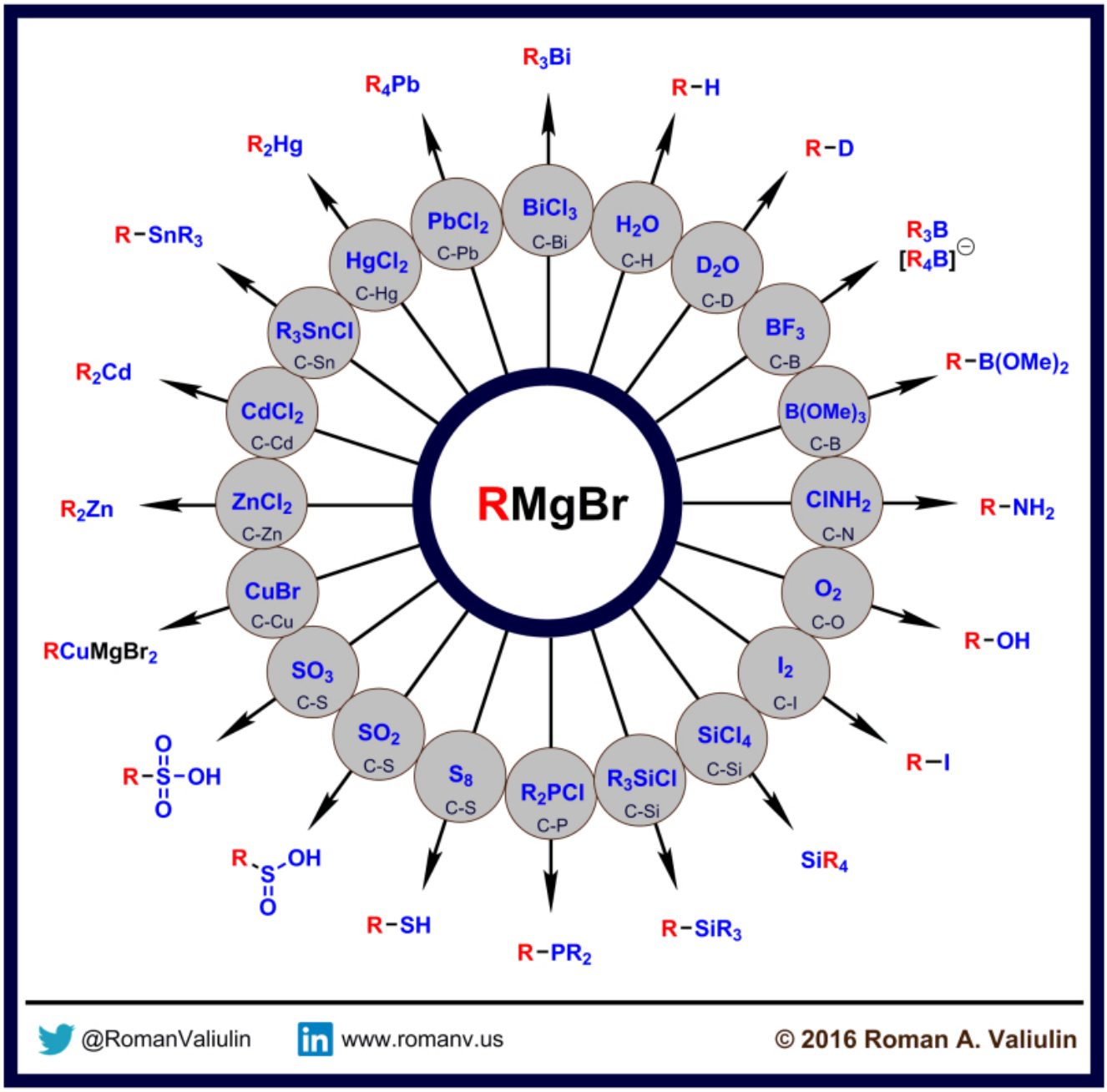
3. Grignard Reagent 1900



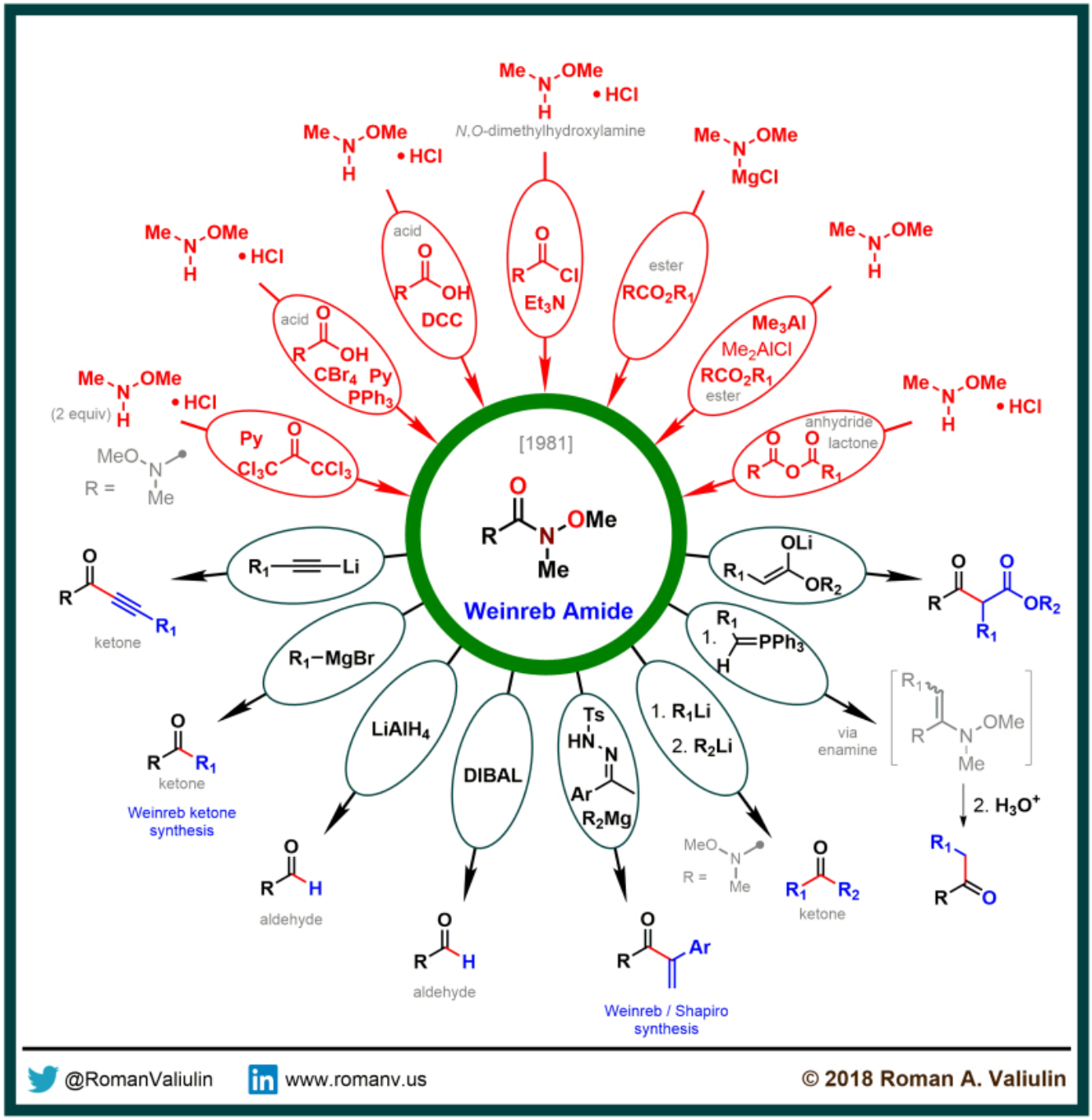
Grignard Reagent C-C Bond



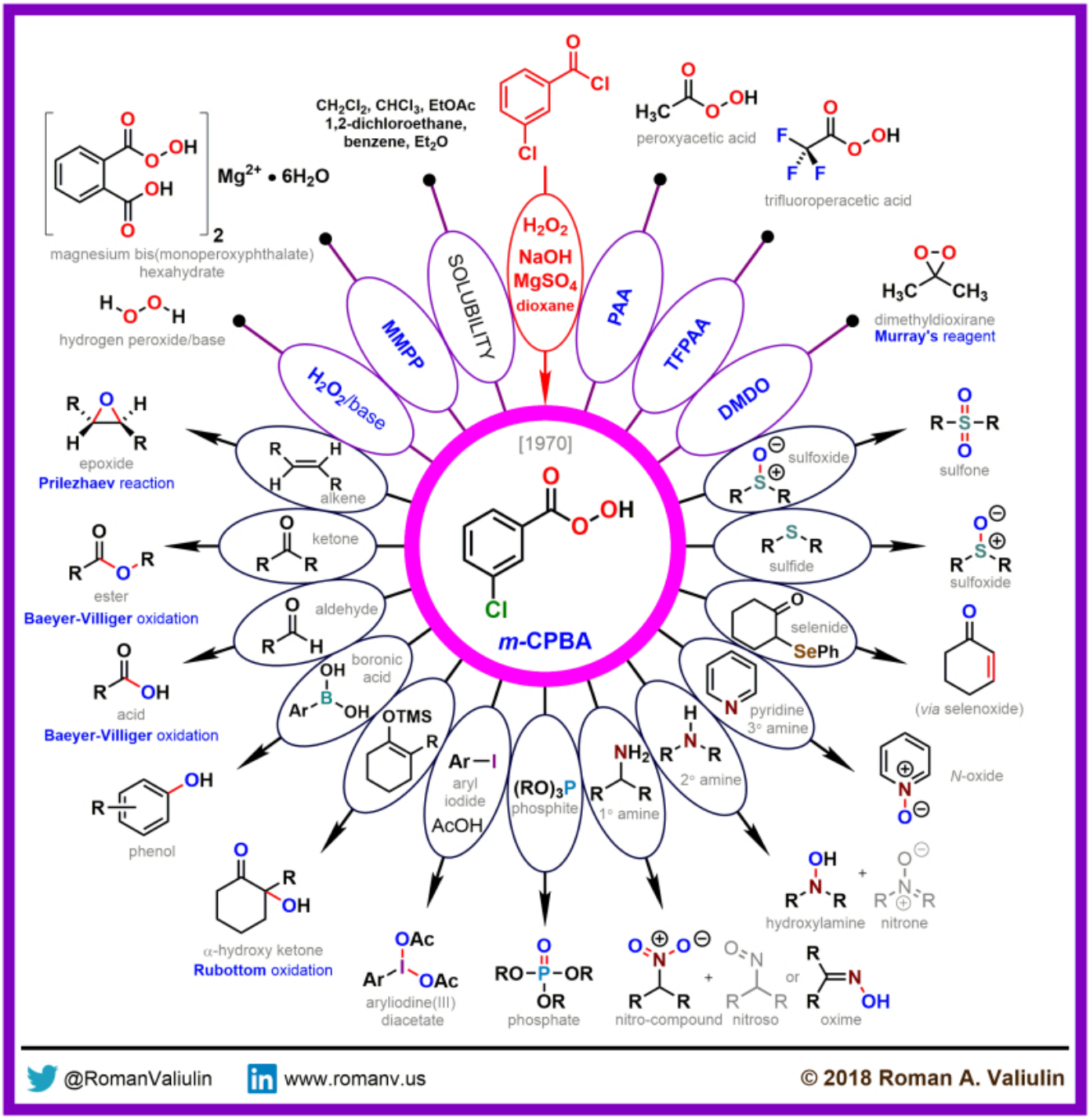
Grignard Reagent C-X Bond



4. Weinreb Amide 1981

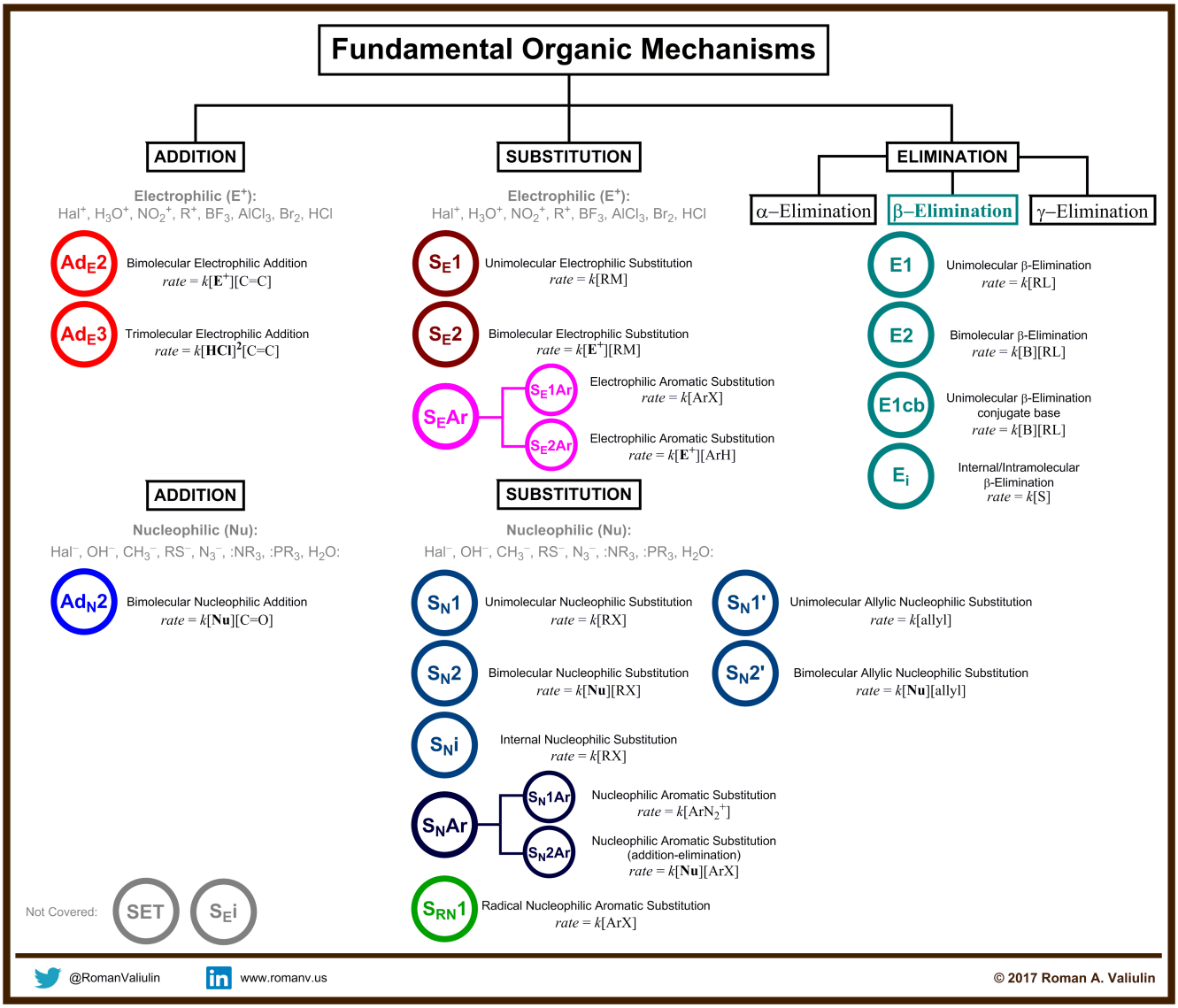


5. 3-Chloroperoxybenzoic Acid – mCPBA 1970

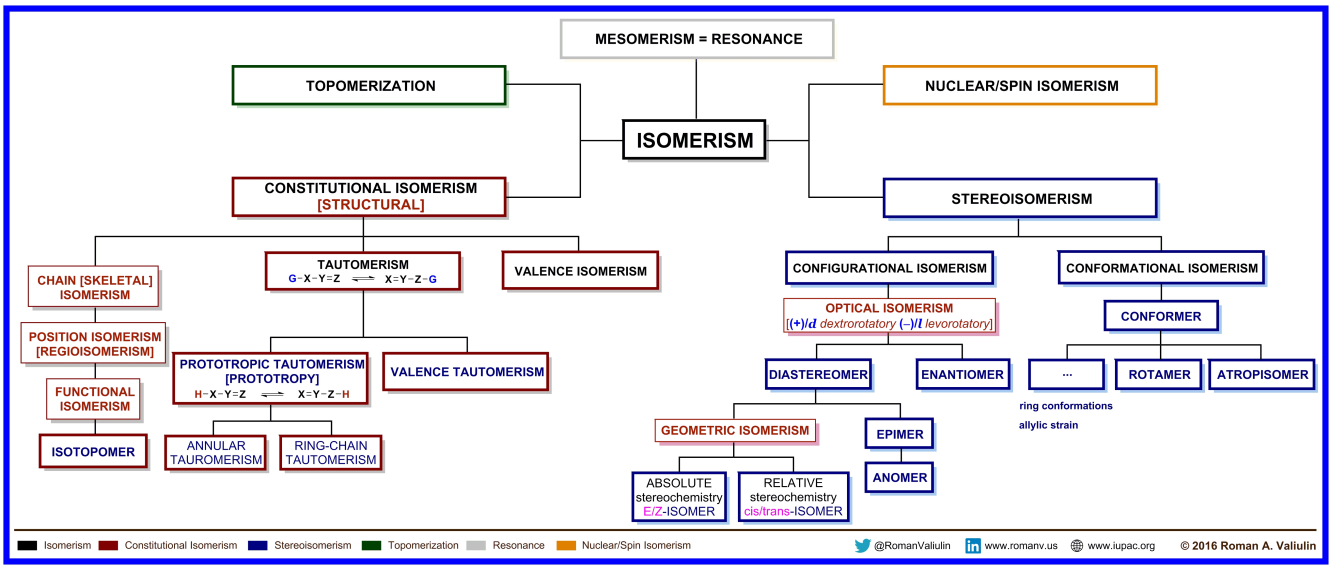


III. Misc

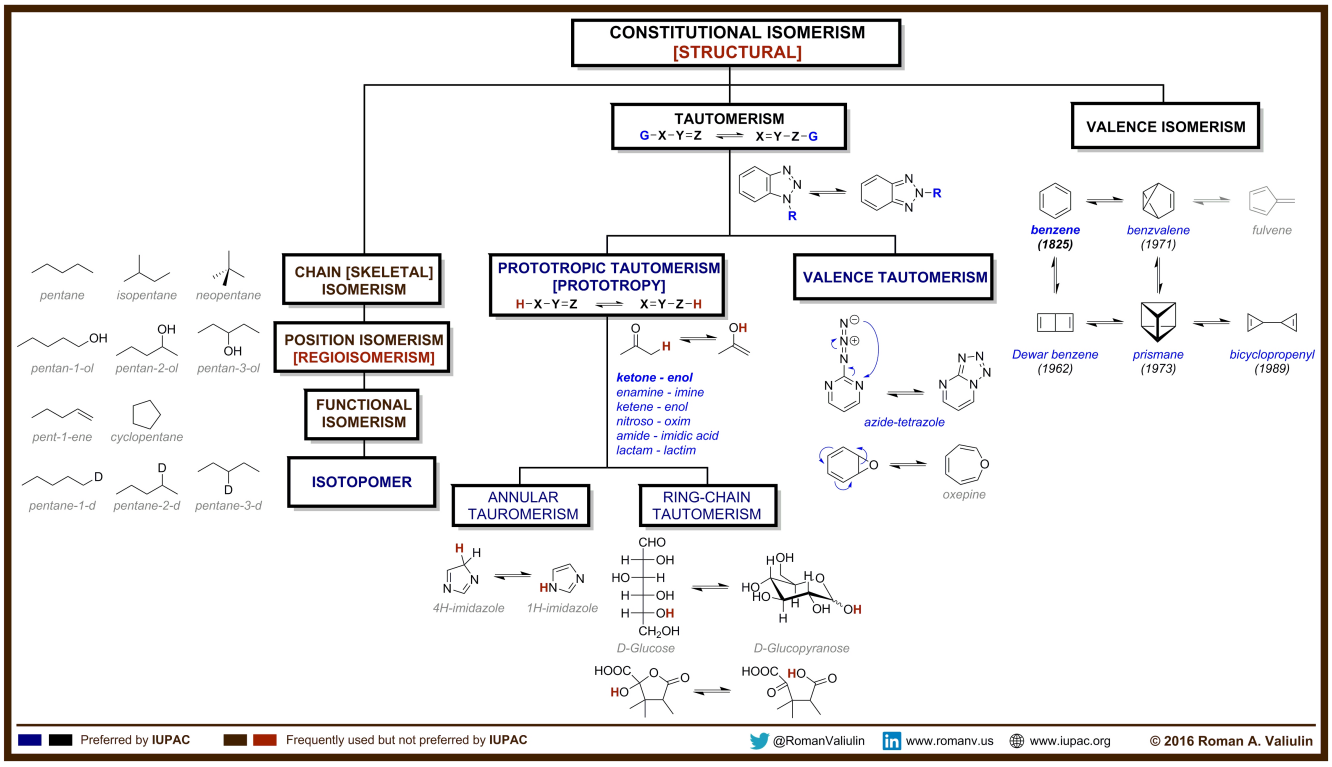
1. Fundamental Organic Mechanisms



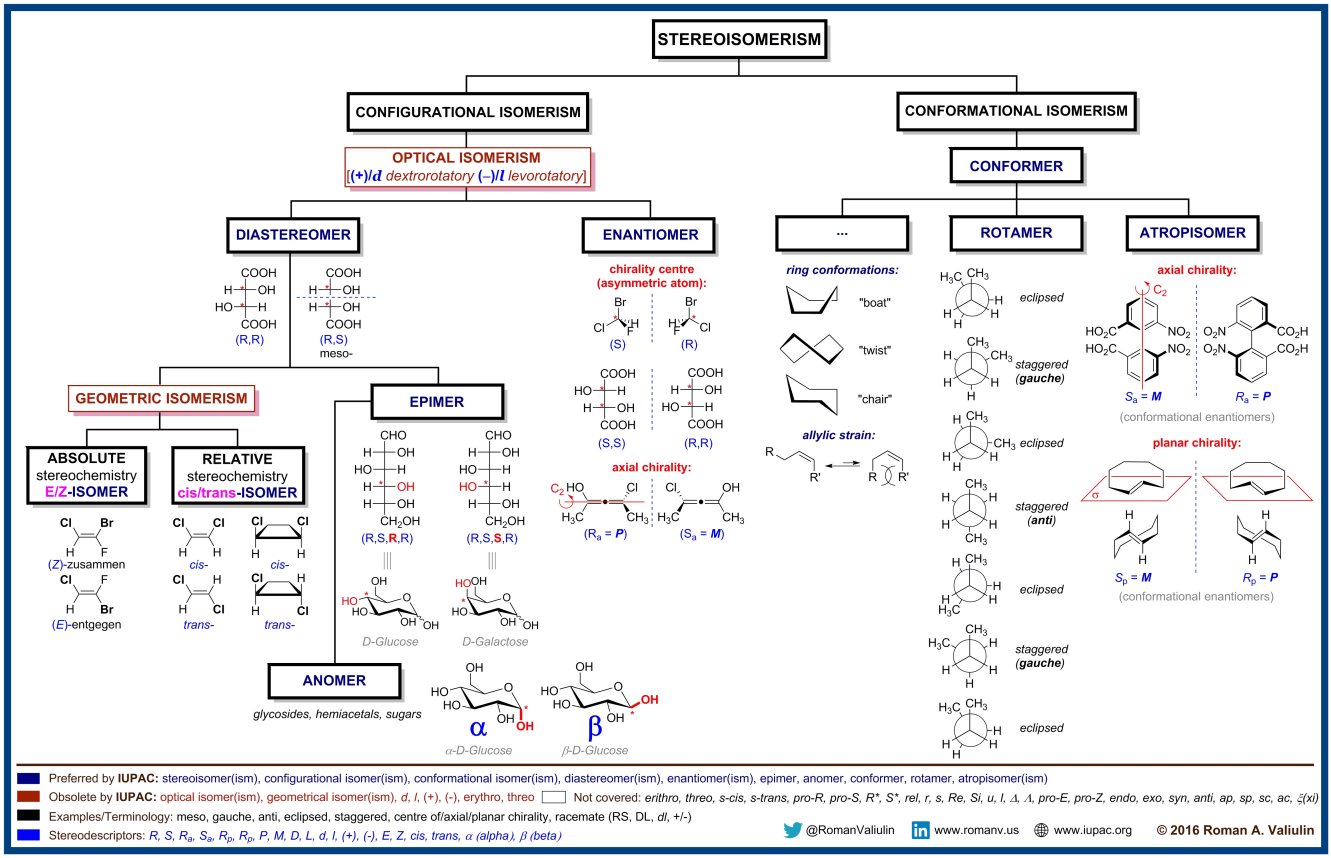
2. Isomerism



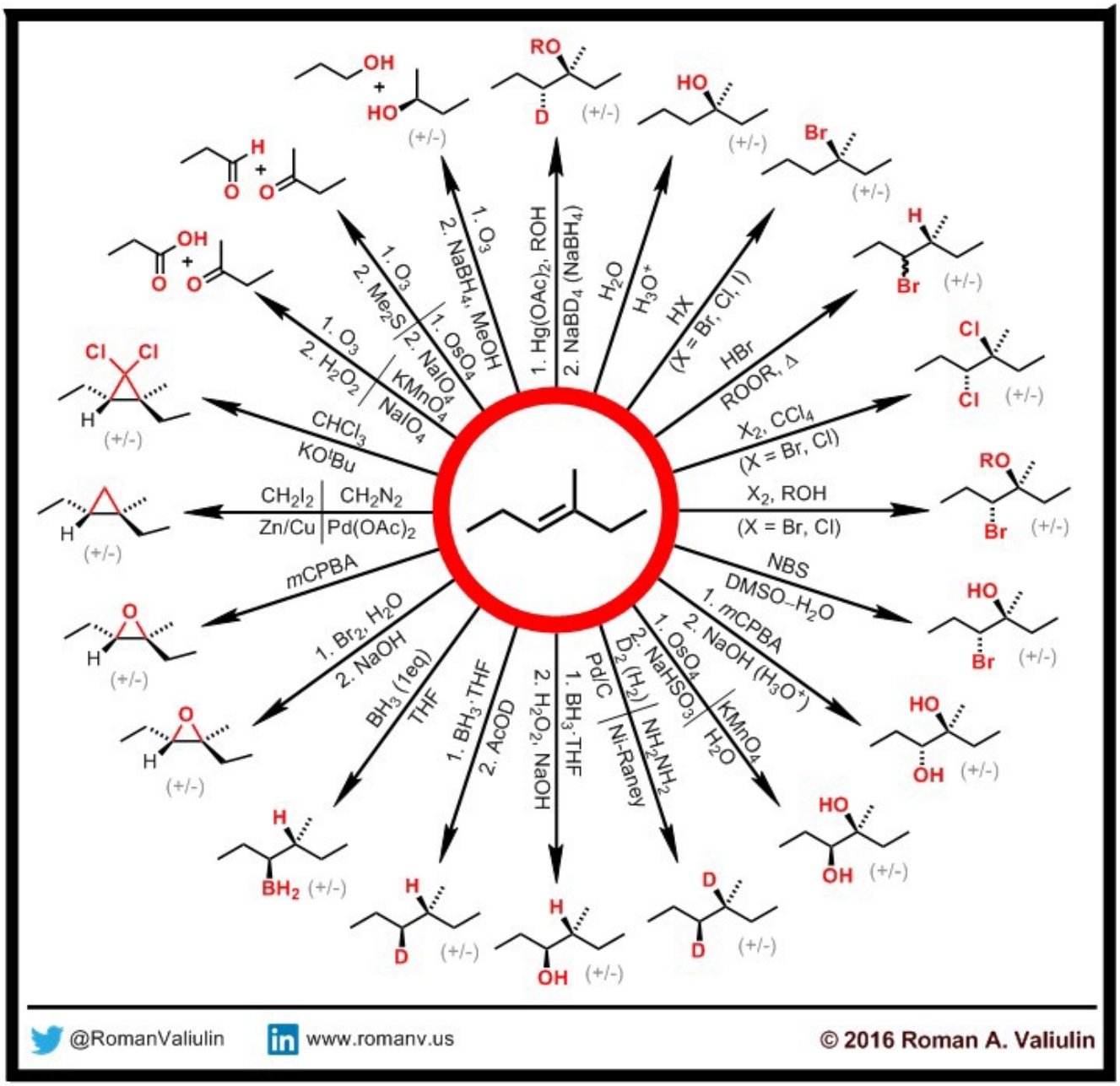
3. Constitutional Isomerism



4. Stereoisomerism



5. Alkenes


1. Hg(OAc)2, ROH
2. NaBD4 (NaBH4)
H2O
H3O+
HX
(X = Br, Cl, I)
HBr
ROOR, Δ
X2, CCl4
(X = Br, Cl)
X2, ROH
(X = Br, Cl)
NBS
DMSO–H2O
1. mCPBA
2. NaOH (H3O+)
1. OsO4
2. NaHSO3
KMnO4
H2O
Pd/C
D2 (H2)
Ni-Raney
NH2NH2
1. BH3·THF
2. H2O2, NaOH
1. BH3·THF
2. AcOD
BH3 (1eq)
THF
1. Br2, H2O
2. NaOH
mCPBA
CH2I2
Zn/Cu
CH2N2
Pd(OAc)2
CHCl3
KOtBu
1. O3
2. H2O2
KMnO4
NaIO4
1. O3
2. Me2S
1. OsO4
2. NaIO4
1. O3
2. NaBH4, MeOH
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www.romanv.us
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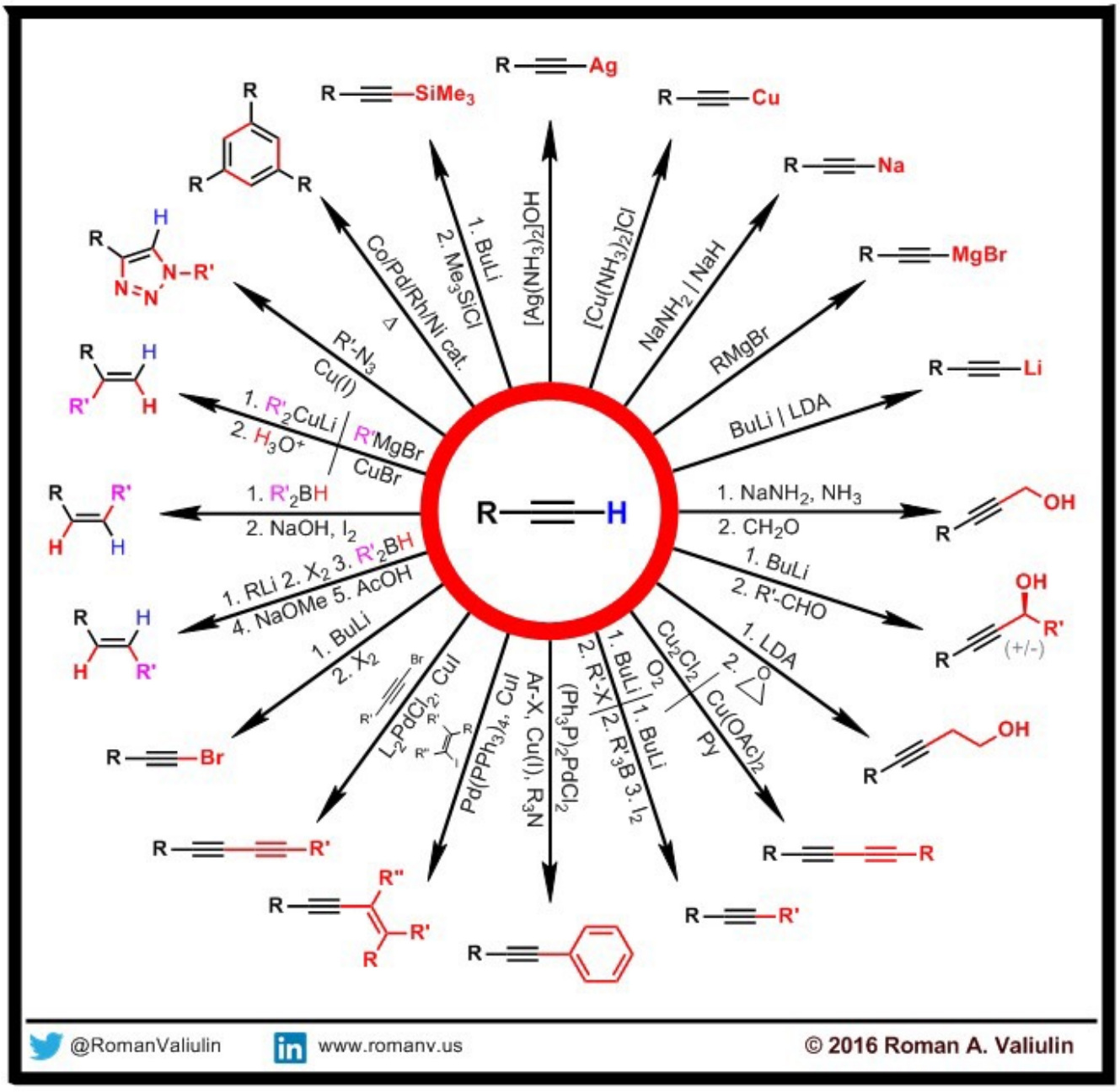
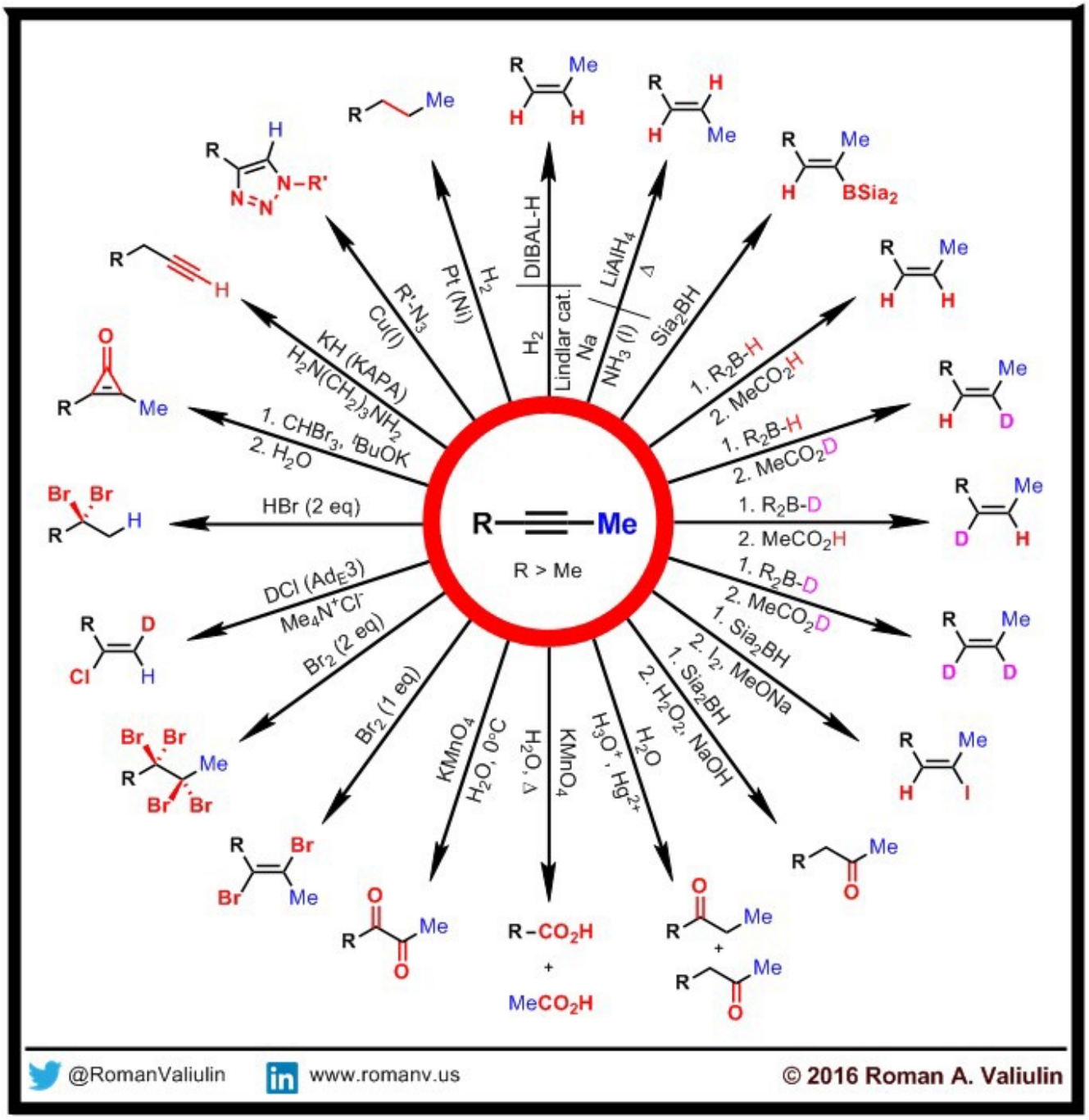
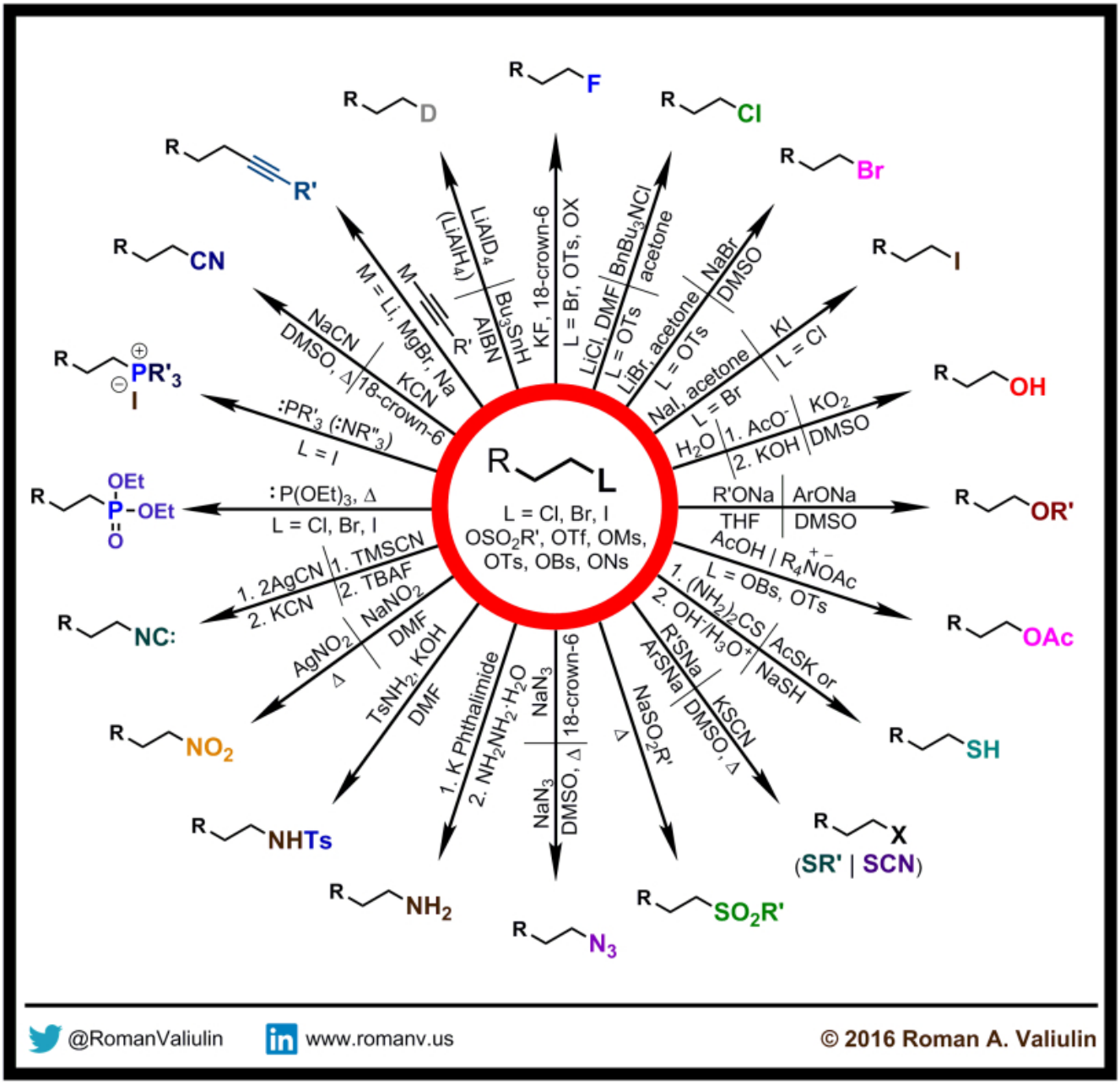
6. Terminal Alkynes



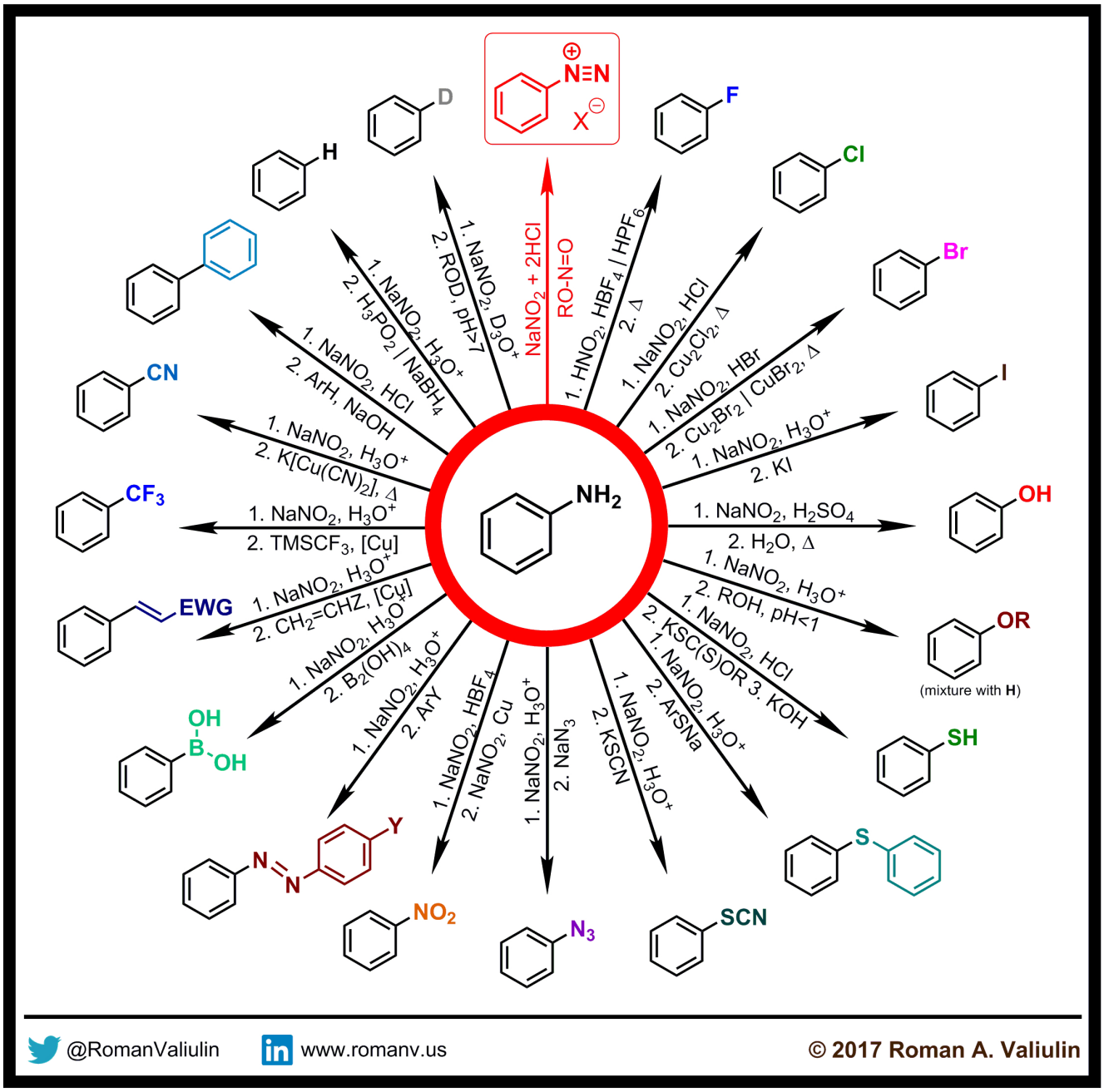
7. Internal Alkynes



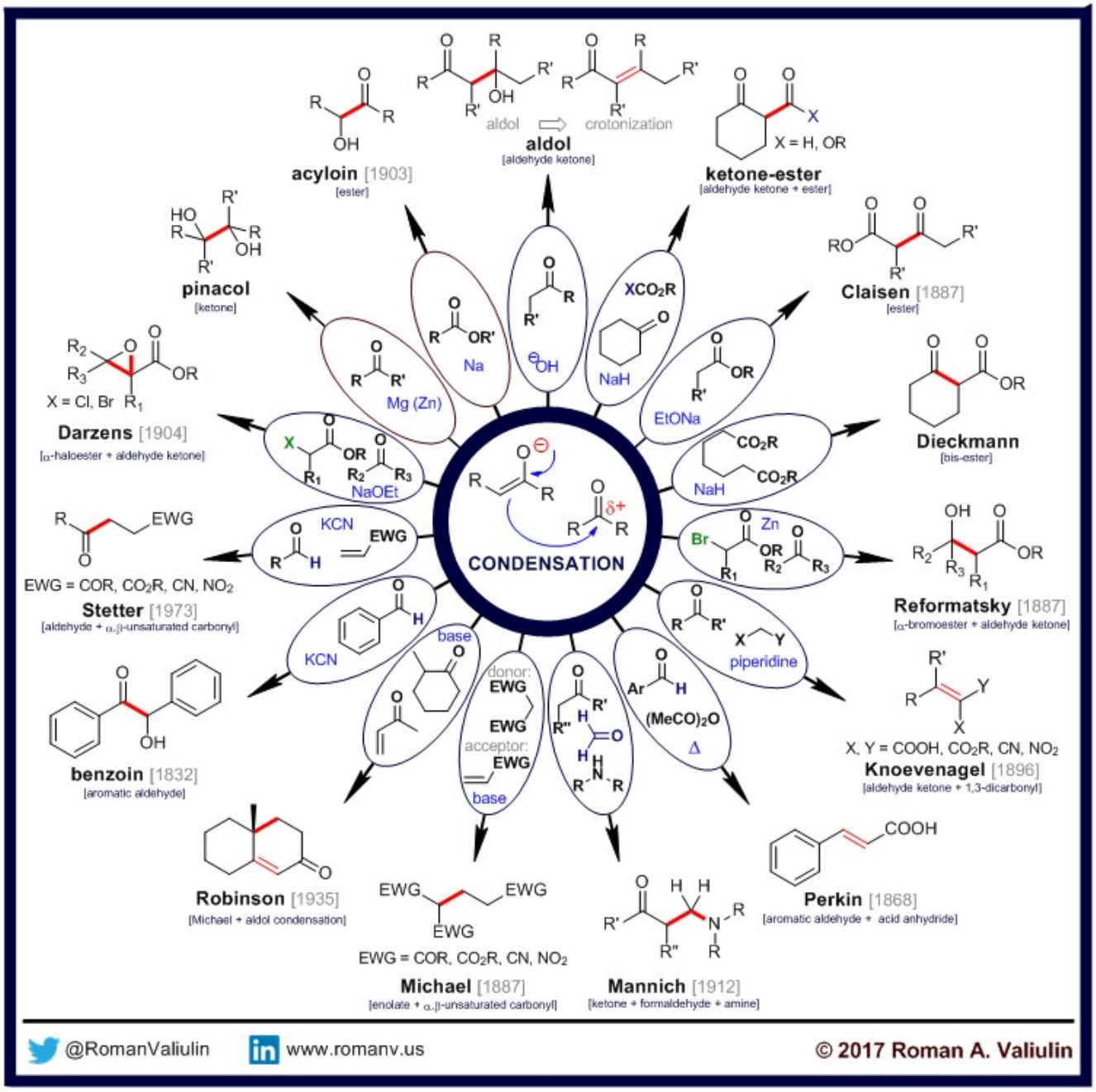
8. Nucleophylic Substitution



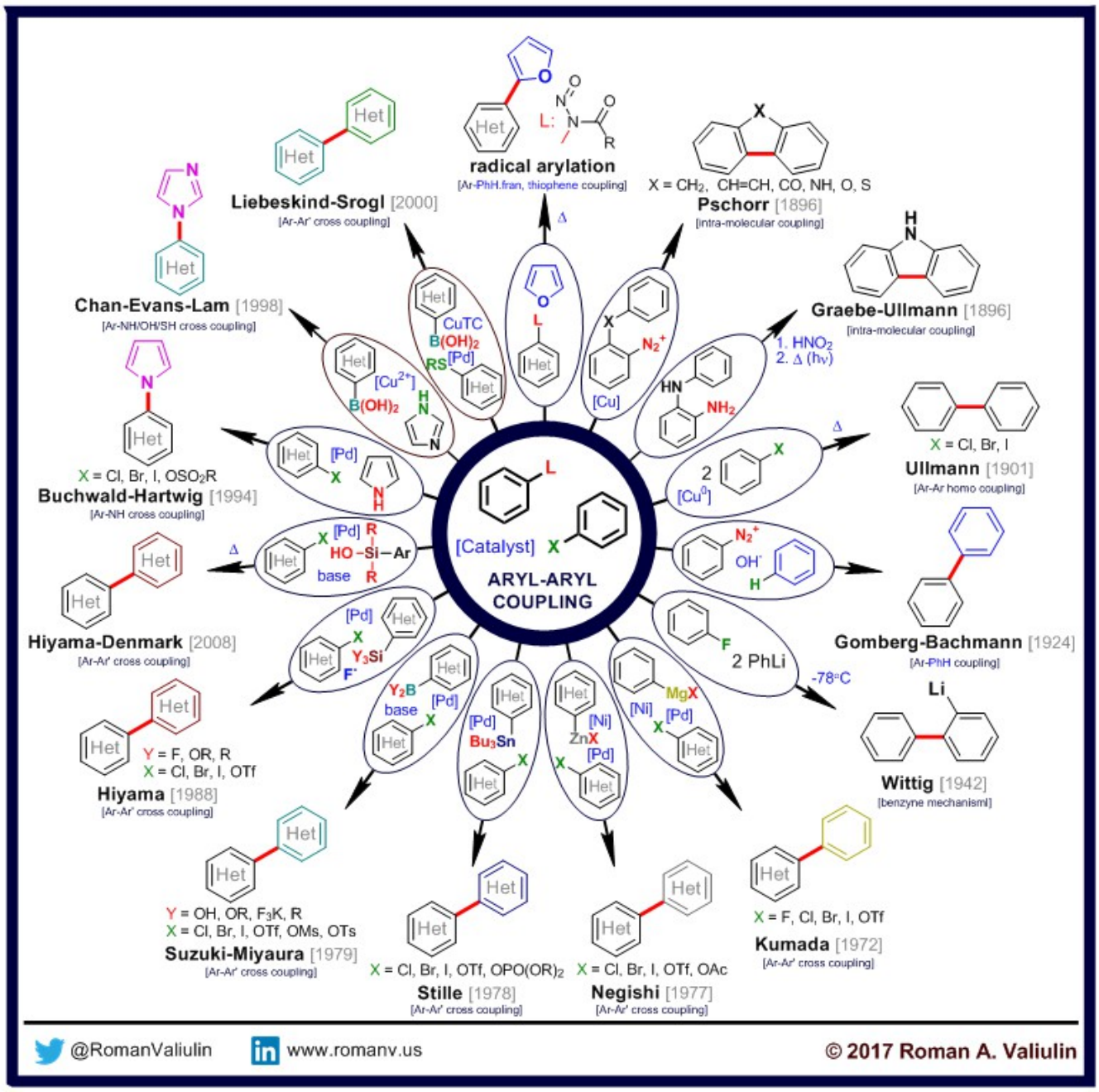
9. Diazonium Chemistry



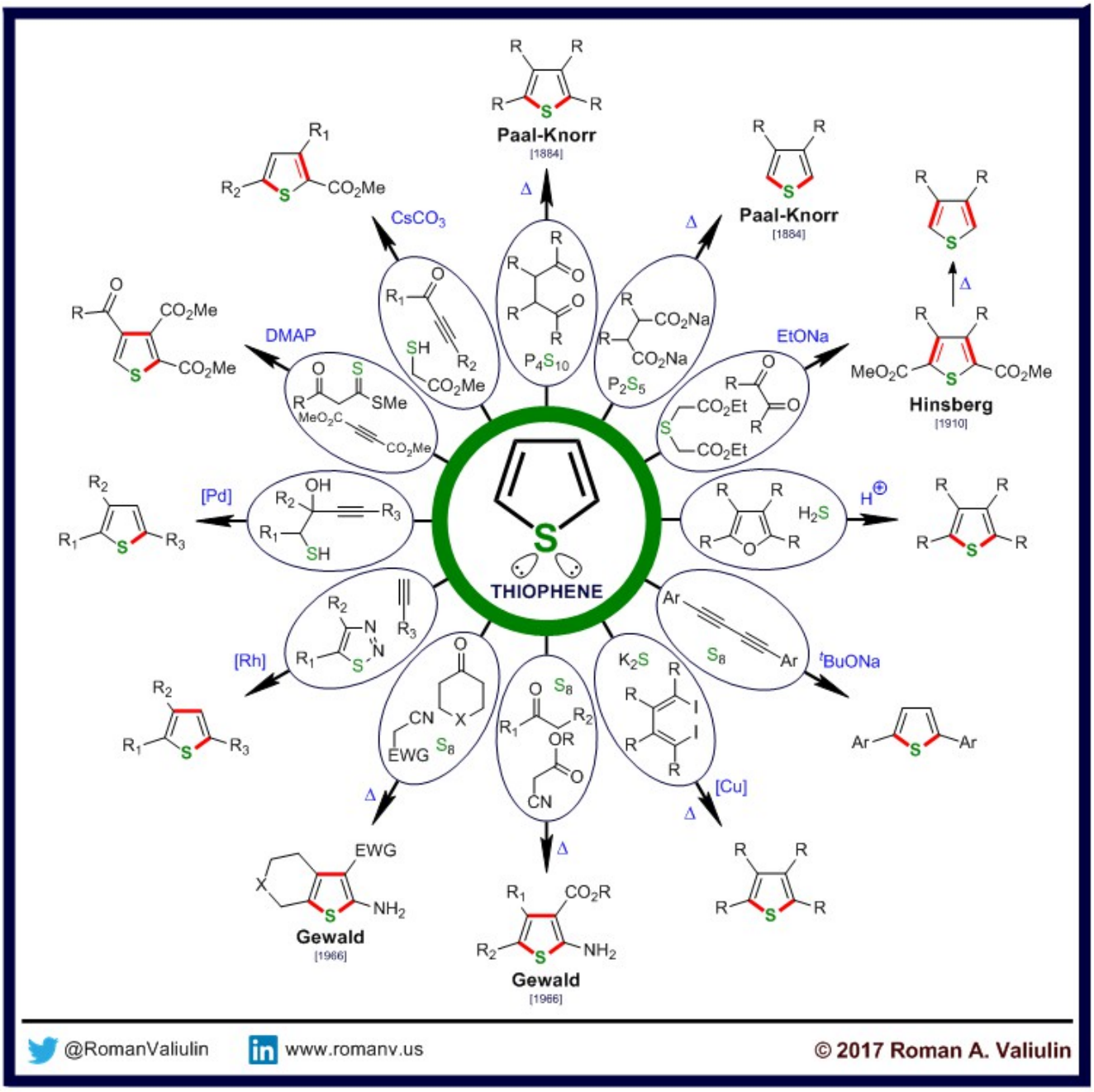
10. Condensation



11. Aryl-Aryl Coupling



12. Thiophene Synthesis A



13. Thiophene Synthesis B