

Table of Contents

	Page
1.1.2 Acetylides	1
1.1.2.1 Compounds of the Type $RC\equiv CCu$	2
Preparation, Properties, and Selected Reactions	2
General Remarks about Reactions of $RC\equiv CCu$ with Proton Donors, Oxidants, Halo- gens, and CO_2	68
General Remarks about Reactions of $RC\equiv CCu$ with $R'X$ to Form $RC\equiv CR'$ and Its Ring Closure Products	71
Reactions with $R'X$ to Form $RC\equiv CR'$	75
Reactions with $R'X$ where X is Bonded to a sp^3 Carbon	75
Reactions with Acyl Halides	79
Reactions with Haloalkenes, Haloallenes, and Allenylesters	82
Reactions with Haloalkynes	85
Reactions with C_6H_5I	88
Reactions with Monosubstituted Halobenzenes	89
Reactions with Di- and Polysubstituted Halobenzenes	96
Reactions with Compounds Containing More than One Iodobenzene Moiety	100
Reactions with Iodonaphthalenes	102
Reactions with Other Carbocycles $R'X$	105
Reactions with 5-Membered Heterocycles $R'X$	106
Reactions with 6-Membered Heterocycles $R'X$	114
Reactions with Condensed Heterocycles $R'X$	115
Reactions with $R'X$, where X is Bonded to S, P, Si, or Sn	116
Reactions with $R'X$ to Form Ring Closure Products of $RC\equiv CR'$	117
Ring Closure Giving Furans	117
Ring Closure Giving Pyrroles or Thiophenes	125
Ring Closure Giving Other Heterocycles	128
Ring Closure Giving Carbocycles	131
Reactions with $R'X$ to Form the Hydrocarbons $R'H$	135
Mannich Type Reactions	135
Reactions with $R'Cu$	137
Reactions with Nitrones to Form β -Lactames	139
Reactions with Other Transition Metal Compounds	142
1.1.2.2 "Mixed Acetylides" of the Type $R^1R^2_{n-1}C\equiv CCu$	150
1.1.2.3 Complexes of $RC\equiv CCu$ with Alkali and Mg Halides	151
1.1.2.4 Complexes of $RC\equiv CCu$ with Compounds of Further Main Group Elements	156
1.1.2.5 Complexes of $RC\equiv CCu$ with Cu, Au, Zn, or Hg Compounds	175
1.1.2.6 Compounds of the Type $[RC\equiv CCuH]Li$	179
1.1.2.7 Salts of the Anions $[(RC\equiv C)_2Cu]^-$ and $[R^1C\equiv CCu^1C\equiv CR^2]^-$	181
1.1.2.8 Salts of the Anions $[(RC\equiv C)_3Cu]^{2-}$	184
1.1.2.9 Salts of the Anion $[(C_6H_5C\equiv C)_3Cu]^{3-}$	187
1.1.3 Carbonyls	188
1.1.3.1 Compounds with One CO Ligand	188
1.1.3.2 Compounds with More Than One CO Ligand	211
1.1.4 Isocyanide Compounds	214
1.1.4.1 Compounds Containing One Isocyanide Ligand	216
Compounds of the Type $RNCCuX$	216
Compounds of the Type $RNCCu^mD_nX$ Including Ionic Compounds	220

	Page
Compounds of the Type RNCCuR' and $\text{RNCCuC}\equiv\text{CR}'(^4\text{D})$	223
1.1.4.2 Compounds Containing Two Isocyanide Ligands	224
Compounds of the Type $(\text{RNC})_2\text{CuX}$ and $[(\text{RNC})_2\text{Cu}^n\text{D}_m]\text{X}$	224
Compounds of the Type $(\text{RNC})_2\text{Cu}(\text{X}-^2\text{D})$ or $(\text{RNC})_2\text{CuR}'$	228
1.1.4.3 Compounds Containing Three Isocyanide Ligands	231
1.1.4.4 Compounds Containing Four Isocyanide Ligands	233
Compounds of the Type $[(\text{RNC})_4\text{Cu}]\text{X}$	233
Compounds of the Type $[(\text{RNC})_4\text{Cu}(\text{H}_2\text{O})_2]\text{X}_2$	239
1.1.5 Compounds with Carbenes and Other Ligands Bonded by One C Atom	240
Table of Conversion Factors	248