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| Nota di contenuto | Organometallic chemistry of B12 coenzymes -- Cobalamin- and corrinoid-dependent enzymes -- Nickel-alkyl bond formation in the active site of methyl-coenzyme M reductase -- Nickel-carbon bonds in acetyl-coenzyme a synthases/carbon monoxide dehydrogenases -- Structure and function of [NiFe]-hydro-genases -- Carbon monoxide and cyanide ligands in the active site of [FeFe]-hydrogenases -- Carbon monoxide as intrinsic ligand to iron in the active site of [Fe]-hydrogenase -- Dual role of heme as cofactor and substrate in the biosynthesis of carbon monoxide -- Copper-carbon bonds in mechanistic and structural probing of proteins as well as in situations where copper is a catalytic or receptor site -- Interaction of cyanide with enzymes containing vanadium, manganese, non-heme iron, and zinc -- Reaction mechanism of the molybdenum hydroxylase xanthine oxidoreductase: evidence against the formation of intermediates having metal-carbon bonds. |
| Sommario/riassunto | The occurrence of a wide variety of metal-carbon bonds in living organisms, ranging from bacteria to humans, is only recently recognized. Of course, the historical examples are the B12 coenzymes containing cobalt-carbon bonds, but now such bonds are also known for nickel, iron, copper, and other transition metal ions. There is no |

other comparable book; MILS-6, written by 17 experts, summarizes the most recent insights into this fascinating topic.