

Metallogenic Epoch of China's Gold Deposits

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There are eight types of gold deposits in China, which can be divided into fourteen subtypes of gold deposits. Based on the age-dating values from ninety-six pieces of ore samples in sixty Chinese gold deposits, the metallogenic epoch of China's gold deposits constitutes the metallogenic framework, include one older epoch (2500-1800Ma) and one younger epoch (280-100Ma). The older metallogenic epoch can be divided into two stages of early Luliang (2500-2400Ma) and late Luliang (1900-1800Ma). The younger metallogenic epoch can be divided into late-Variscian-Indo-China stage (280-220Ma) and meso-late Yanshan stage (160-100Ma), especially the meso-late Yanshan stage. The regional distribution of metallogenic epoch shows regular variation, the epoch of Precambrian gold deposits gradually increases from west to east of China, while that of Phanerozoic gold deposits gradually decreases. Greenstone belt type of gold deposits is the most important one in China, which can be divided into two types of syntectonic and post-tectonic gold deposits. As to age-dating methods, the author recommends that single Uranium-bearing mineral U-Pb method is to be adopted for all the types of gold deposits, but the $^{40}\text{Ar}/^{39}\text{Ar}$, K-Ar and Rb-Sr isochron methods are only to be adopted for the Phanerozoic gold deposits.