Mesozoic metallogenesis in South China

RUIZHONG HU[1], MEIFU ZHOU[2]

[1] State Key Laboratory of Ore Deposit Geochemistry, Institute of Geochemistry, Chinese Academy of Sciences, 99 Linchengxi Road, Guanshanhu District, Guiyang,Guizhou, P.R. China. huruizhong@vip.gyig.ac.cn

[2] Department of Earth Sciences, The University of Hong Kong, Pokfulam Road ,Hong Kong, P.R. China. mfzhou@hkucc.hku.hk

The South China Craton is made up of the Yangtze and Cathaysia Blocks. Mesozoic mineral deposits in South China include world-class deposits of W, Sn and Sb and those that provide the major sources of Cu, Pb, Zn, Au, Ag, Hg and As for the entire country. These deposits can be classified into high-temperature polymetallic hydrothermal systems closely related to felsic intrusive rocks (Sn–W –Mo granites, Cu porphyries, polymetallic and Fe skarns, and polymetallic vein deposits) mainly in the Cathaysia Block and low-temperature hydrothermal systems with no direct connection to igneous activities (MVT deposits,Carlin-type Au and vein-type Sb deposits) mainly within the Yangtze Block. It was shown that the deposits related to felsic intrusive rocks formed in the Triassic (Indosinian), Jurassic–Cretaceous (Early Yanshanian), and Cretaceous (Late Yanshanian) stages, while the low-temperature deposits dominantly formed in the Triassic although some of them might be reworked in the Yanshanian. However, the low-temperature deposits might be linked to the high-temperature deposits in geodynamic settings.