

# **The Study and Development of CHIM Geoelectrochemical Method for Exploration of Concealed Mineralisation in China**

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This paper briefly reviews and demonstrates the mechanism and effectiveness of a geoelectrochemical extraction technique in exploration for concealed mineralisation through regolith cover based on both experimental works and field tests of over ten years' study. This is discussed by two main aspects of the method: a) how metallic ions released from orebody by electrochemical dissolution, and b) how these ions migrated to the collector deposited as elements by electrochemical extraction under the processes of electricfield. A number of case studies have demonstrated that a few economic discoveries were founded by recognizing their geoelectrochemical extraction anomalies over the concealed orebodies. These results show that the geoelectrochemical extraction technique can detect concealed metallic mineralisation (eg., copper, lead, zinc, tin, gold, silver, arsenic and antimony) at depth of more than 500m in various landstapes and climatic environments (e.g., loess, soil, sandy dune, transported and residual overburden in arid and semi-arid regions).

## **Acknowledgement**

This work is supported Guangxi NSF (No. 2012GXNSFCA053007), 2013 Bagui Scholar Innovation Project of Guangxi Province (to Xu JF).