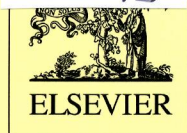


7211
0-70/g

VOLUME 53

SEPTEMBER 2013

ISSN: 0169-1368



ORE GEOLOGY REVIEWS

Journal for Comprehensive Studies of Ore Genesis and Ore Exploration

Affiliated with the International Association on the Genesis of Ore Deposits
(IAGOD)

**Editor-in-Chief
Franco Pirajno**



VOL. 53

CONTENTS

SEPTEMBER 2013

(Abstracted/indexed in: Current Contents, Mineralogical Abstracts, Geo Abstracts and Engineering Information Inc. Also covered in the abstract and citation database SciVerse Scopus®. Full text available on SciVerse ScienceDirect®.)

Review Article

New aspects and perspectives on tsavorite deposits

J. Fenevrol, G. Giuliani, D. Ohnenstetter, A.E. Fallick, J.E. Martelat, P. Monié, J. Dubessy, C. Rollion-Bard, E. Le Goff, E. Malisa, A.F.M. Rakotondrazafy, V. Pardieu, T. Kahn, D. Ichang'i, E. Venance, N.R. Voarintsoa, M.M. Ranatsenho, C. Simonet, E. Omito, C. Nyamai and M. Saul

1

Research Articles

The mineral chemistry, near-infrared, and mid-infrared reflectance spectroscopy of phengite from the Olympic Dam IOCG deposit, South Australia

M.C. Tappert, B. Rivard, D. Giles, R. Tappert and A. Mauger

26

Re–Os pseudo-isochron of disseminated ore from the Kalatongke Cu–Ni sulfide deposit, Xinjiang, Northwest China: Implications for Re–Os dating of magmatic Cu–Ni sulfide deposits

W.J. Qu, J.F. Chen, L.B. Wang, C. Li and A.D. Du

39

The origin of the world class tin-polymetallic deposits in the Gejiu district, SW China: Constraints from metal zoning characteristics and ⁴⁰Ar–³⁹Ar geochronology

Y. Cheng, J. Mao, Z. Chang and F. Pirajno

50

Mineralogy, geochemistry and origin of Mn in the high-Mn iron ores, Bahariya Oasis, Egypt

H.M. Baioumy, M.Z. Khedr and A.H. Ahmed

63

Constraints of C–O–S–Pb isotope compositions and Rb–Sr isotopic age on the origin of the Tianqiao carbonate-hosted Pb–Zn deposit, SW China

J. Zhou, Z. Huang, M. Zhou, X. Li and Z. Jin

77

A multi-sensor logger for rock cores: Methodology and preliminary results from the Matagami mining camp, Canada

P.-S. Ross, A. Bourke and B. Fresia

93

500 Million years of rift- and unconformity-related Mn mineralization in the Middle East: A geodynamic and sequence stratigraphical approach to the recycling of Mn

H.G. Dill, H. Pöllmann and A. Techmer

112

Geological mapping of the Francistown area in northeastern Botswana by surface temperature and spectral emissivity information derived from Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) thermal infrared data

T. Yajima and Y. Yamaguchi

134

The "coal–bauxite–iron" structure in the ore-bearing rock series as a prospecting indicator for southeastern Guizhou bauxite mines

Z. Zhang, L. Zhou, Y. Li, C. Wu and C. Zheng

145

(contents continued on inside backcover)

Available online at www.sciencedirect.com

SciVerse ScienceDirect

Important Note to Authors

Online submission is now available for this journal: to submit your article online, go to <http://ees.elsevier.com/orgeo>. Instructions on how to submit a manuscript to the journal can be found in the Guide for Authors on the journal homepage at <http://www.elsevier.com/locate/oregeorev>.



(contents continued from outside back cover)

Shallow submarine epithermal Pb–Zn–Cu–Au–Ag–Te mineralization on western Milos Island, Aegean Volcanic Arc, Greece: Mineralogical, geological and geochemical constraints D. Alfieris, P. Voudouris and P.G. Spry	159
Supergene features and evolution of gossans capping massive sulphide deposits in the Iberian Pyrite Belt F. Velasco, J.M. Herrero, S. Suárez, I. Yusta, A. Alvaro and F. Tornos	181
Genetic investigation and comparison of Kartaldağ and Madendağ epithermal gold deposits in Çanakkale, NW Turkey E. Ünal İmer, N. Güleç, İ. Kuşcu and A.E. Fallick	204
Trace elements of Indium-bearing sphalerite from tin-polymetallic deposits in Bolivia, China and Japan: A femto-second LA-ICPMS study H. Murakami and S. Ishihara	223
The Hakkari nonsulfide Zn–Pb deposit in the context of other nonsulfide Zn–Pb deposits in the Tethyan Metallogenic Belt of Turkey L. Santoro, M. Boni, R. Herrington and A. Clegg	244
Mapping the 3D lithofacies architecture of a VMS ore system on a curvilinear-faulted grid: A case study from the Flin Flon mining camp, Canada E.M. Schetselaar	261
Noble metal-graphite mineralization: A comparative study of the carbonaceous granite-gneiss complex and shales of the Russian Far East A.I. Khanchuk, V.P. Nechaev, L.P. Plyusnina, N.V. Berdnikov, V.P. Molchanov and S.V. Vysotskiy	276
Geodynamic setting of the Zijinshan porphyry–epithermal Cu–Au–Mo–Ag ore system, SW Fujian Province, China: Constrains from the geochronology and geochemistry of the igneous rocks S.-H. Jiang, Q.-L. Liang, L. Bagas, S.-H. Wang, F.-J. Nie and Y.-F. Liu	287
Mineral chemical investigation on sulfide mineralization of the İstala deposit, Gümüşhane, NE-Turkey Y. Demir, İ. Uysal and M.B. Sadıklar	306
Geological characteristics and metallogenesis of the shilu Fe-ore deposit in Hainan Province, South China D. Xu, Z. Wang, J. Cai, C. Wu, N. Bakun-Czubarow, L. Wang, H. Chen, M.J. Baker and M.A. Kusiak	318
Geology, C–H–O–S–Pb isotope systematics and geochronology of the Yindongpo gold deposit, Tongbai Mountains, central China: Implication for ore genesis J. Zhang, Y.-J. Chen, F. Pirajno, J. Deng, H.-Y. Chen and C.-M. Wang	343
Strain fabric analysis applied to hydrothermal ore deposits emplaced during changing geodynamical conditions (<i>Infiernillo</i> and <i>Las Picazas</i> , San Rafael Massif, Argentina) M.S. Japas, N.A. Rubinstein and L.E. Kleiman	357
The Angouran Zn (Pb) deposit, NW Iran: Evidence for a two stage, hypogene zinc sulfide–zinc carbonate mineralization F. Daliran, K. Pride, J. Walther, Z.A. Berner and R.J. Bakker	373
Hydrothermal alteration associated with Mesozoic granite-hosted gold mineralization at the Sanshandao deposit, Jiaodong Gold Province, China X.-C. Li, H.-R. Fan, M. Santosh, F.-F. Hu, K.-F. Yang and T.-G. Lan	403
Geology and molybdenite Re–Os age of the Dahutang granite-related veinlets-disseminated tungsten ore field in the Jiangxin Province, China Z. Mao, Y. Cheng, J. Liu, S. Yuan, S. Wu, X. Xiang and X. Luo	422
Mesozoic magmatism and metallogenesis associated with the destruction of the North China Craton: Evidence from U–Pb geochronology and stable isotope geochemistry of the Mujicun porphyry Cu–Mo deposit G. Dong, M. Santosh, S. Li, J. Shen, X. Mo, S. Scott, K. Qu and X. Wang	434
The pilot knob magnetite deposit in the Proterozoic St. Francois Mountains Terrane, southeast Missouri, USA: A magmatic and hydrothermal replacement iron deposit J.L. Nold, P. Davidson and M.A. Dudley	446
Detection of hydrothermal mineralized zones associated with listwaenites in Central Oman using ASTER data S. Rajendran, S. Nasir, T.M. Kusky, A. Ghulam, S. Gabr and M.A.K. El-Ghali	470
Alteration, mineralization, and genesis of the zoned Tongshan skarn-type copper deposit, Anhui, China Z. Zhang, Y. Du and J. Zhang	489
The use of location–allocation techniques for exploration targeting of high place-value industrial minerals: A market-based prospectivity study of the Spanish gypsum resources J.I. Escavy and M.J. Herrero	504