

# 11 Prof. Hongrui Fan



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## Education

B.A., Nanjing University, Nanjing, China, 1984

M.A. Nanjing University, Nanjing, China, 1987

Ph.D. Institute of geology and geophysics, Chinese academy of sciences, 1990

## Research Interests

Collision orogenic belt material and energy exchange

Restriction of fluid process on the shallow geological

Diagenetic mineralization geological fluid migration way and in the process of distribution;

Orogen tectonic relationship with fluid ore and ore;

Metallogenic belt evolution and fluid activity relationship of screen time;

Typical ore deposit ore-forming fluid

## Services & Awards

Board member: Ore Deposit Geology, Geological Review, Mineral Petrology Magazine, Bulletin of Mineralogy Petrology and Geochemistry

## Major Publications

Xu, W. G., Fan, H. R., Hu, F. F., Santosh, M., Yang, K. F., Lan, T. G., Wen, B. J., 2014. Gold mineralization in the Guilaizhuang deposit, southwestern Shandong Province, China: Insights from phase relations among sulfides, tellurides, selenides and oxides. *Ore Geology Reviews*, 56: 276-291.

Lan, T. G., Fan, H. R., Santosh, M., Hu, F. F., Yang, K. F., Liu, Y. S., 2014. U-Pb zircon chronology, geochemistry and isotopes of the Changyi banded iron formation in the eastern Shandong Province: Constraints on BIF genesis and implications for Paleoproterozoic tectonic evolution of the North China Craton. *Ore Geology Reviews*, 56: 472-486.

Hu, F. F., Fan, H. R., Jiang, X. H., Li, X. C., Yang, K. F., Mernagh, T., 2013. Fluid inclusions at different depths in the Sanshandao gold deposit, Jiaodong Peninsula, China. *Geofluids*. 13: 528-541.

Liu, X., Fan, H. R., Santosh, M., Hu, F. F., Yang, K. F., Wen, B. J., Yang, Y. H., Liu, Y. S., 2013. Origin of the Yinshan epithermal-porphyry Cu-Au-Pb-Zn-Ag deposit, SE China: insights from geochemistry, Sr-Nd and zircon U-Pb-Hf-O isotopes. *International Geology Review*, 55: 1835-1864.

Ma, X. D., Fan, H. R., Santosh, M., Guo, J. H., 2013. Geochemistry and zircon U-Pb chronology of charnockites in the Yinshan Block, North China Craton: tectonic evolution associated with Neoproterozoic ridge subduction. *International Geology Review*, 55: 1688-1704.

- Lan, T. G., Fan, H. R., Santosh, M., Hu, F. F., Yang, K. F., Yang, Y. H., Liu, Y. S., 2013. Crust-mantle interaction beneath the Luxi Block, eastern North China Craton: evidence from coexisting mantle- and crust-derived enclaves in a quartz monzonite pluton. *Lithos*, 177: 1-16.
- Cai, Y. C., Fan, H. R., Santosh, M., Liu, X., Hu, F. F., Yang, K. F., Lan, T. G., Yang, Y. H., Liu, Y. S., 2013. Evolution of the lithospheric mantle beneath the southeastern North China Craton: Constraints from mafic dikes in the Jiaobei terrain. *Gondwana Research*, 24: 601-621.
- Li, X. C., Fan, H. R., Santosh, M., Hu, F. F., Yang, K. F., Lan, T. G., 2013. Hydrothermal alteration associated with Mesozoic granite-hosted gold mineralization at the Sanshandao deposit, Jiaodong gold province, China. *Ore Geology Reviews*. 53: 403-421
- Liu, X., Fan, H. R., Santosh, M., Hu, F. F., Yang, K.F., Li, Q.L., Yang, Y.H., Liu, Y.S., 2012. Remelting of Neoproterozoic relict volcanic arcs in the Middle Jurassic: implication for the formation of the Dexing porphyry copper deposit, Southeastern China. *Lithos*, 150: 85-100.
- Yang, K. F., Fan, H. R., Santosh, M., Hu, F. F., Wilde, S. A., Lan, T. G., Lu, L. N., Liu, Y. S., 2012. Reactivation of the Archean lower crust: implications for zircon geochronology, elemental and Sr-Nd-Hf isotopic geochemistry of late Mesozoic granitoids from northwestern Jiaodong Terrane, the North China Craton. *Lithos*, 146-147: 112-127.
- Li, X. C., Fan, H. R., Santosh, M., Hu, F. F., Yang, K. F., Lan, T. G., Liu, Y. S., Yang, Y. H., 2012. An evolving magma chamber within extending lithosphere: An integrated geochemical, isotopic and zircon U-Pb geochronological study of the Gushan granite, eastern North China Craton. *Journal of Asian Earth Sciences*, 50: 27-43.
- Lan, T. G., Fan, H. R., Santosh, M., Hu, F. F., Yang, K. F., Yang, Y. H., Liu, Y. S., 2012. Early Jurassic high-K calc-alkaline and shoshonitic rocks from the Tongshi intrusive complex, eastern North China Craton: Implication for crust–mantle interaction and post-collisional magmatism. *Lithos*, 140-141: 183-199.
- Fan, H. R., Hu, F. F., Wilde, S. A., Yang, K. F., Jin, C. W., 2011. The Qiyugou gold-bearing breccia pipes, Xiong'er shan region, central China: fluid inclusion and stable isotope evidence for an origin from magmatic fluids. *International Geology Review*, 53(1): 25-45.
- Yang, K. F., Fan, H. R., Santosh, M., Hu, F. F., Wang, K. Y., 2011. Mesoproterozoic carbonatitic magmatism in the Bayan Obo deposit, Inner Mongolia, North China: Constraints for the mechanism of super accumulation of rare earth elements. *Ore Geology Reviews*, 40: 122-131.
- Yang, K. F., Fan, H. R., Santosh, M., Hu, F. F., Wang, K. Y., 2011. Mesoproterozoic mafic and carbonatitic dykes from the northern margin of the North China Craton: Implications for the final breakup of Columbia supercontinent. *Tectonophysics*, 498: 1-10
- Lan, T. G., Fan, H. R., Hu, F. F., Tomkins, A. G., Yang, K. F., Liu, Y. S., 2011. Multiple crust-mantle interactions for destruction of the North China Craton: geochemical and Sr-Nd-Pb-Hf isotopic evidence from Longbaoshan alkaline complex. *Lithos*, 122: 87-106
- Lan, T. G., Fan, H. R., Santosh, M., Hu, F. F., Yang, K. F., Yang, Y. H., Liu, Y. S., 2011. Geochemistry and Sr-Nd-Pb-Hf isotopes of the Mesozoic Dadian alkaline intrusive complex in the Sulu orogenic belt, eastern China: Implications for crust-mantle interaction. *Chemical Geology*, 285: 97-114
- Fan, H. R., Hu, F. F., Yang, K. F., Wang, K. Y., 2006. Fluid unmixing/immiscibility as an ore-forming process in the giant REE-Nb-Fe deposit, Inner Mongolian, China: evidence from

- fluid inclusions. *Journal of Geochemical Exploration*, 89: 104-107
- Fan, H. R., Xie, Y. H., Wang, K. Y., Tao, K. J., Wilde, S. A., 2004. REE daughter minerals trapped in fluid inclusions in the giant Bayan Obo REE-Nb-Fe deposit, Inner Mongolia, China. *International Geology Review*, 46(7): 638-645
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