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RESEARCH FELLOW QIAN YAQIAN
(1941－)

Research Fellow Qian Yaqian, an isotope geochemist, was born in 1941 in Shanghai. After she graduated from the Chemistry Department of East China Teachers University in 1963, she was assigned to work in Yichang Institute of geology and Mineral Resources. Then, she was transferred to Nanjing Institute of Geology and Mineral Resources in 1984, engaging in research on isotope geochemistry. Now she is a member of Commission on Isotope of Geological Society of China and a member of Editorial Board in 《Volcanology & Mineral Resources》.

She has been studying on isotope geochemistry for more than thirty－five years . She engaged experimental study on isotope geochronology in the 1960s. She took charge of researching on analytic method for rocks and minerals in 1970s. She began to study on isotope hydrogen and

oxygen in the contry in late 1970s. She successfully completed many research projects, for example; "Application of Ion-Selective Electrode in Determination for Rocks and Minerals", "Application of Sealed Melting Sample in Analysis for Rock and Mineral", "Determination of Deuterium in Natural Water and Mineral Inclusion by Metal Zn", "Determination of D/H Ratio in OH－Bearing Minerals by the Method of External Heat Plus Flux". Among them, the latter two were first successed at home, instead of the tranditional method of using U and high－frequency melting sample technique. They were highly appraised by the colleagues for having high precision, low cost and no environmental pollution. The methods were popularized round the country as they took good effect in economics and society.

Research Feollow Qian has been probing into essence of science and scaling new heights in science and technology. Supported by the National Natural Science Foundation of China from 1986, she has been involving in the projects "Experiment Study of Hydrogen Isotope Fractionation Between Hydroxyl Mineral and Water", "Kinetics of Hydrogen and Oxygen Isotope Exchange in Mineralization", of which studies are regarded as the noticeable front subjects in the international science, especially study on exchange kinetics, which began in the 1980s abroad. The research is difficult in technology, compared with common subject study. Under the condition incomparable with the foreigns', it was impossible to use the foreign experimental technology, Research Fellow Qian designed a new technology which made data precision higher than foreigners'. The first hand data are recognized by the academic circle at home and abroad . She first published hydrogen isotope equilibrium fractionation equation and isotope exchange kinetics parameters for ilvaite-water and tourmeline-water systems and explained the exchange mechanism of hydrogen isotope and relation beween closure temperature and cooling rate in the world. Under the condition of laboratory at home, she made the reseach results arrive at advanced level, part of which reached world's top level, filling in the gaps of hydrogen isotope research at home and writing down the basic parameter determined by chinese geochemist in the international data base. She made a breakthrough in the basic studying domain. Some these are collected in the world abstracts and data base, as well as input SCI system. The research results——35 papers are printed in the first class magazines at home and abroad, such as in "Science in China", "Chinese Science Bulletin", "Geochimica at Cosmochimica Acta"and so on.

As she made great contribution to isotope study, she got the second award once and fourth award three times from the Ministry of Geology and Mineral Resources of China.

Although she won honour in isotope geochemistry, she is never satisfied with the achievements she has made. She pays close attention to the recent development in isotopic geochemistry, aiming at world front subject—studying on isotope exchange kinetics. She is doing her best to make new contribution to catch up with and even surpass world's advanced level.

(by Hu Qing)