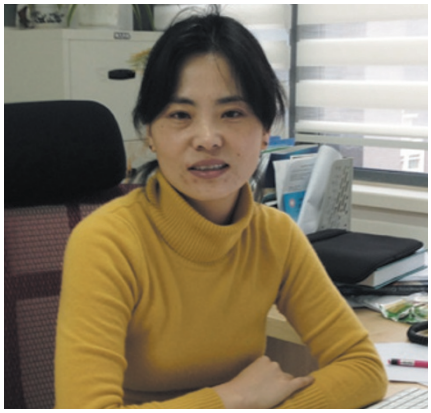
TURNING POINT
Liping Qin

In June, Liping Qin will become the first person from China to be presented with the European Association of Geochemistry's Houtermans Award, which recognizes a single exceptional contribution to geochemistry by an early-career scientist.



Why did you move to the United States?
I knew I wanted to be a scientist — I was always experimenting at home with chemistry or physics sets. I was accepted at the University of Science and Technology of China (USTC) and went to the geochemistry department. But I looked for graduate opportunities in the United States because geochemistry in China in the late 1990s was not that robust — it didn't have a big presence in the field then.

What led you to cosmic chemistry?
I decided to come to the University of Chicago in Illinois to join a project on finding geochemical markers, such as ratios of iron to manganese, that could help us to trace magma back to Earth's mantle. I also attended seminars about the cosmos and stars, and started talking to cosmic chemist Nicolas Dauphas, which led to a project using radioactive isotopes to date meteorites. I worked on a special group of meteorites made up mostly of iron, which are thought to be remnants of the cores of planetesimals, small bodies that lead to the formation of planets.

How was this a turning point in your career?
I found that the first-generation planetesimals formed within a few million years of the Solar System's birth. Before this discovery, researchers believed that these planetesimals formed later, as the Solar System developed, but our work helped to confirm the earlier timing. During that project, I found isotopic anomalies of tungsten in meteorites. I got very interested in using isotopes to understand what the stellar environment was like in the early Solar System.

Where did you set your sights for a postdoc?
My first priority was to get to the Carnegie Institution for Science in Washington DC because it gives fellows the freedom to explore any research that interests them. While I was there, I continued to work on isotopic anomalies of other elements, such as chromium and barium, to trace the early stellar environment. Working with so many great scientists helped me to understand the big questions in this field, including the age and formation of the Moon, Earth's building blocks and the timing and mechanism of water's appearance on Earth.

Where did you go next?
I chose to go to Lawrence Berkeley National Laboratory (LBNL) in California and do biogeochemistry work, studying Earth-surface processes, because I wanted to challenge myself. LBNL wanted me to apply my isotope skills to biological processes — specifically, the bioremediation of hexavalent chromium, which is a very toxic carcinogen that has contaminated aquifers. I expanded my area of expertise and my circle of collaborators. It was a good move.

Were you eager to return to China?
I knew I would go back one day, and in 2012, I had the opportunity to do so — I received a generous funding package to start my own lab at the USTC. I've continued to work on cosmo-chemistry here because it's what interests me and I'm good at it. I'm also using the same skills on some biological and environmental questions, including the use of metal isotopes to trace enzyme processes associated with metal movement.

How will the award help you professionally?
I hope that it will help to grow our research group so that my students have more opportunities and resources. I have five graduate students now. It was the right time for me to return to China to do planetary chemistry, because there is so much student interest in connection with China's plans to launch a lunar-sampling mission. My students want to study cool rocks. ■

INTERVIEW BY VIRGINIA GEWIN

EQUALITY

Mind the gender gap

A report by a UK non-profit agency says that UK businesses need more technicians, manufacturing leaders and engineers, and that more women must earn degrees in physical sciences to meet the demand. *Target 2030*, from the National Centre for Universities and Business in London, notes that just 9.5% of science and engineering professionals in the United Kingdom are women. In 2013, women represented about one-fifth of physics students at pre-university-qualification levels, and the gender gap in the subject is widening. The report notes that women with physical-sciences degrees have higher employability rates than their male counterparts, and calls for a campaign to attract more female students into the higher-education pipeline in physics, maths and related disciplines.

VISAS

Stay for a while

Some legislators in Sweden want to adopt a proposal by 1 June that would allow foreign doctoral students to remain in the country temporarily to work or to launch a company after earning their degree. Furthermore, PhD students who have studied in Sweden for at least four of the past seven years would qualify for permanent residence. Sweden's parliament has yet to vote on the legislation. Meanwhile, the European Commission and other European Union (EU) legislative bodies are considering a proposal that would allow doctoral students and researchers in non-native countries to stay in EU member states after completing their degree or research contract. Legislative action could come this autumn.

FUNDING

UK postgrad bonanza

The UK government is committing £496 million (US$820 million) towards 111 postgraduate training centres in physical sciences, maths and engineering to plug skills gaps in industry. UK chancellor George Osborne said on 19 March that the government will spend £106 million over five years on 20 new centres, to top up its earlier commitment of £390 million towards 91 centres. Industry has provided another £374 million. The Engineering and Physical Sciences Research Council is administering the funds mainly as graduate studentships.