plant. In July 2011, it began construction of a plant that "makes use of this previously unexploited mixture as a raw material to produce such rare earths as neodymium, lanthanum, and cerium," according to the company's website.

Sizable deposits of xenotime, a phosphate mineral that contains the heavier rare earth dysprosium, have also been found in the states of Chhattisgarh and Jharkhand. Meanwhile, bastnäsite—a source of cerium—has been found in the state of West Bengal. As yet, though, the extent of India's reserves is not fully known. Of the 6500 kilometers of Indian coastline, the Geological Survey of India has only explored 2200 kilometers, according to Krishnan. He also warns that the process of starting such mining operations is likely to be slow: "From exploration until setting up an extraction plant may take more than 10 years."

Despite its latest efforts, however, India is unlikely to challenge China in its dominance over the global supply of rare earths, according to Naresh Pant, associate geology professor at the University of Delhi. "That would require at least an order of magnitude increase in production," he said. India's rare-earth reserves stand at just more than three million tons, he said, while China has more than 36 million.

At the moment, the lack of rare-earth deposits in the European Union means that it imports USD$458 million of rare earths annually from China. According to the US Department of the Interior, the United States has around 13% of global reserves of rare earths, Russia has 17%, and Australia has 1.5%, yet all these nations depend on imports, too. Complaints to the World Trade Organization have focused on the fact that China—which has around 37% of reserves and supplies around 97% of the world's rare-earth elements—is threatening businesses by restricting exports.

For India, which also relies on Chinese rare earths, restarting rare-earths processing, mining, and exploration may at least offer a ray of hope as supply shortages begin to bite.

Angela Saini

NSF and EC establish collaboration opportunities for early career scientists

The US National Science Foundation (NSF) and the European Commission (EC) signed an Implementing Arrangement to provide opportunities for NSF-funded early career scientists and engineers to pursue research collaborations with European colleagues supported through the European Research Council (ERC) awards. The agreement supports collaborations on specific projects while leveraging research funding and fostering lasting collaborations between European and US researchers.

European Commissioner for Research, Innovation and Science Máire Geoghegan-Quinn and NSF Director Subra Suresh signed the arrangement on July 13 at the European Science Open Forum in Dublin.

Brazil and China discuss 10-year cooperation plan

During the Rio+20 Summit held in June, Brazil and China signed the Ten-Year Cooperation Plan 2012–2021. In July, Brazil's Minister of Science, Technology and Innovation (MCTI), Marco Antonio Raupp, traveled to China to meet with the Chinese Ministers of Science and Technology, Wan Gang, and Industry and Information Technology, Miao Wei, and the head of the Chinese National Space Administration (CNSA), Chen Qiufa, to discuss numerous topics, including the Bi-National Center for Nanotechnology and memorandums of understanding for biotechnology and meteorology centers.

Australia's synchrotron receives renewed funding

www.synchrotron.org.au

Monash University, with the support of the Australian government's investment of AUD$30 million under Prime Minister Julia Gillard, will manage the Australian Synchrotron program. Australian universities will also invest around AUD$25 million. Announcing the funding, Science and Research Minister Senator Chris Evans said with the strong need to undertake research and development to transform industries and see them through challenges such as climate change, economic change, and skills shortages, there has never been a more vital time to invest in the facility.

"As the Australian Synchrotron can be used to study the most precise nature of any biological and industrial material, it can be used by almost any industry across a wide range of research fields," said Evans.

The AUD$30 million government investment is being provided by the Australian Research Council (AUD$25 million) and National Health and Medical Research Council (AUD$5 million). □

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