Japanese scientists develop replacement for dental metal

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HONG KONG/LEIPZIG, Germany: Scientists from the Kyoto University in Japan reported to have developed a new alloy similar to palladium, a rare metal used in dental restorations. The element was produced by mixing molecules of silver and rhodium, two elements chemically close to palladium, and could be a first step in producing synthetic alternatives for other rare earths, the researchers told the Yomiuri Shimbun newspaper in Tokyo.

Palladium only naturally occurs in some parts of Russia, South Africa, Canada and the US. Besides dentistry, it is used to produce autocatalysts, jewelry and essential components for consumer electronic products, amongst other things. A 2010 report by US chemical company Johnson Matthey estimates that 5 to 6 per cent of the annual demand comes from dentistry for crowns or bridgework. With an annual demand of 8.5 tons, Japan continues to utilise the largest amount of dental palladium despite other treatment options, such as all-ceramic crowns, according to the same report.

The researchers have begun joint research projects with the Japanese industry, though they said the new alloy will be difficult to produce commercially. Metal experts, however, are sceptical towards the announcement. “It does look like they have managed to create ‘nanoparticles’—an often abused phrase—of rhodium and silver, which would normally be using traditional melting techniques,” Johnson Matthey General Manager Peter Duncan told the South African Journal Mining Weekly.

Japanese experts said that synthetic replacements for rare metals could make Japan more independent from countries like China, which currently produces over 90 per cent of rare metals in the world.

Montreal to welcome dentists from around the world

MONTREAL: Following a record-breaking attendance year in 2010, over 12,000 delegates are expected to attend the 40th annual Journées dentaires internationales du Québec (JDIQ) to be held in Montreal, Canada, from May 27 to 31, 2011. Canada’s largest annual meeting, JDIQ has grown exponentially in recent years.

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