



Australia: Successful Antarctic Blue Whale Voyage

Acoustic technology was used, for the first time in history, to successfully find, track and study the biggest creature on Earth, the Antarctic blue whale. The 18-science team deployed passive acoustic sonobuoys west of the Ross Sea area. The acousticians made 626 hours recordings in the sample area, with 26,545 calls. The researchers were then able to triangulate the position of the whales from their vocalizations and direct the ship to the target area. The team then deployed to gather skin biopsies and photo identifications of the whales. They were even able to deploy satellite tags on two blue whales. The tags transmitted never-

before obtained data on rapid longitudinal movements during their summer feeding season and their foraging behavior. The Antarctic Blue Whales Project is a flagship program of the international Southern Ocean Research Partnership involving ten countries, Argentina, Australia, Brazil, Chile, France, Germany, NZ, Norway, South Africa and the U.S.

<http://www.antarctica.gov.au/media/news/2013/australias-successful-antarctic-blue-whale-voyage>

Japan: Wealth of Rare Earths in Pacific Seabed

A research team led by Dr. Yasuhiro Kato of the University of Tokyo, and Dr. Katsuhiko Suzuki of Japan Agency for Marine-Earth Science and Technology, detected “astronomically” high levels of rare earth deposits at the bottom of the Pacific Ocean. The deposits were found around 5.8km under the ocean surface near Minami Torishima island south-east of Tokyo. The discovery could help supply Japan with 60% of its annual needs merely with the contents of a single collection.

http://www.theregister.co.uk/2013/03/25/japan_rare_earth_discovery_bad_news_china/

<http://www.forbes.com/sites/timworstall/2013/03/25/japans-new-rare-earth-discovery-thats-chinas-monopoly-entirely-blown/>

<http://www.mining.com/japans-massive-rare-earth-discovery-threatens-chinas-supremacy-89013/>

Korea: Graphene-carbon Nanotube Element Using Wrinkled Oxidized Film

The Institute of Basic Science’s Center for Integrated Nanostructure Physics has succeeded in developing a transparent graphene-carbon nanotube electronic material using wrinkled oxidized film that can be stretched by 20%. The research team also proved that the oxidized film can be stretched in many directions. The Center Director says, “going beyond being bendable, the stretchable transparent element has opened unlimited application in displays, foldable and wearable computers, and skin-attached sensors.”

http://www.ibs.re.kr/en/news/pressRelease.jsp?mode=view&article_no=20130306234707003369&board_wrapper=%2Fen%2Fnews%2FpressRelease.jsp&pager.offset=0&board_no=35

New Zealand: \$635 Million for Energy Efficient Pacific

New Zealand and the European Union announced that \$635 million has been secured at the Pacific Energy Summit in Auckland to advance renewable energy projects across the Pacific. Pacific countries presented 79 projects, providing donors and the private sector with opportunities to identify projects for partnership and collaboration. Partners and donors have responded by

committing \$255 million in grant funding and \$380 million in concessional loans to support over 40 of the proposed projects.

<http://www.scoop.co.nz/stories/PA1303/S00447/635-million-for-an-energy-efficient-pacific.htm>

Singapore: World's First 40-60 Gbps Silicon Photonics Modulator

For the first time in history, the Institute of Microelectronics and Fujikura Ltd. (a Japanese IT company) have succeeded in producing 40-60 Gbps silicon-based optical modulators with advanced multilevel modulation formats for high speed long-haul data transmission. This breakthrough paves the way for low cost, ultra-high bandwidth and small footprint optical communications on silicon platform.

<http://www.a-star.edu.sg/?TabId=828&articleType=ArticleView&articleId=1791>

Singapore: Center of Excellence for a Greener Singapore

A*STAR and Fujitsu Limited have signed a memorandum of understanding to establish a Center of Excellence for Computational Social Science and Engineering in Singapore. The Center will leverage high performance computing-enabled R&D technologies based on real-world data to enhance Singapore's urban sustainability and create innovations in the areas such as transportation management and energy efficiency.

<http://www.a-star.edu.sg/?TabId=828&articleType=ArticleView&articleId=1790>