Extra November, 2012 Date of Issue: November 1, 2012

超電導 Web21 Superconductivity

Superconductivity Web21

Published by International Superconductivity Technology Center
1-10-13 Shinonome Koto-ku, Tokyo 135-0062, Japan Tel:+81-3-3536-7283, Fax:+81-3-3536-5717

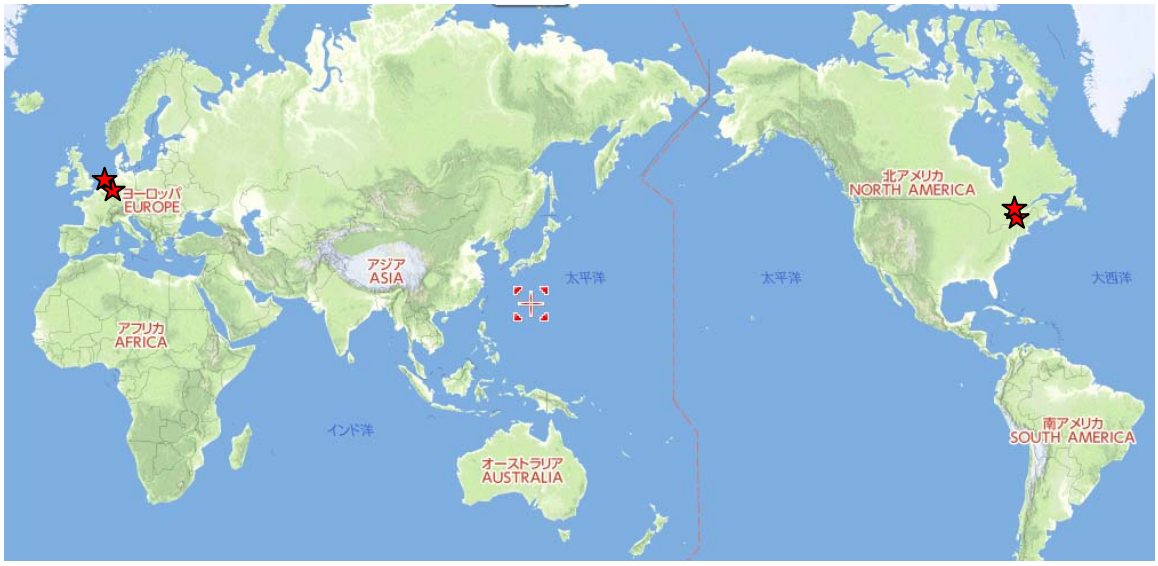
What's New in the World of Superconductivity (Sept, 2012)

초전도 뉴스 –세계의 동향–

超电导新闻 –世界的动向-

chāo diàn dǎo xīnwén - shìjiè de dòngxiàng-

Yutaka Yamada, Principal Research Fellow
Superconductivity Research Laboratory, ISTEC



★News sources and related areas in this issue

▶ Wire 선 재료 線材料 [xiàn cáiliào]

Grant from EUROTAPES Project

Bruker Energy & Supercon Technologies, Inc. (September 28 2012)

Bruker Energy & Supercon Technologies, Inc. (BEST) has announced that its wholly owned subsidiary, Bruker HTS GmbH, has received a grant valued at €2.3 million from the European Commission's

KEIRIN

This work was subsidized by JKA using promotion funds from KEIRIN RACE.

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Directorate-General for Research and Innovation under the EUROTAPES project. This project aims to further improve the performance of HTS tape by identifying the best HTS conductor design and the most efficient fabrication processes for HTS YBCO coated conductors. The EUROTAPES project is being undertaken by a consortium of 20 partners (8 industrial companies, 6 universities, 5 institutes, and 1 technological center) from 8 European countries. As the lead industrial partner in the project, Bruker HTS received the largest share of funding for the 54-month program, which began on Sept. 1, 2012. BEST will also invest significant resources (approximately €4 million) in the development and scale-up of its proprietary YBCO HTS tape, focusing on the assessment of new technologies and processes as well as the implementation and scale-up of the best layer and process combinations. The overall project has a budget of €20 million, of which €13.5 will be funding by the European Union.

Source: "BEST Announces $3 Million EUROTAPES Program Grant from European Union for Further Development and Advancement of Second Generation HTS Tapes"
Bruker Energy & Supercon Technologies, Inc. press release (September 28, 2012)
URL:
http://www.bruker.com/news-records/single-view/article/best-announces-3-million-eurotapes-program-grant-from-european-union-for-further-development-and-ad.html
Contact: Dr. Klaus Schlenga of BEST, Klaus.Schlenga@bruker-est.com

▶Accelerator 가속기 加速器 [jiāsùqì]

Contract for Turkish Accelerator

Bruker Energy & Supercon Technologies, Inc. (September 5, 2012)

RI Research Instruments GmbH, a subsidiary of Bruker Energy & Supercon Technologies, Inc., has been awarded a major contract from the Turkish Accelerator Center (TAC) valued at approximately US$ 4.8 million. The contract is for the construction of two turnkey superconducting accelerating modules based on a design developed by Helmholtz-Zentrum Dresden Rossendorf. The primary goal of the TAC project will be to establish the first accelerator-based infrared free electron laser (FEL) light source facility in Turkey, providing Turkish scientists with access to an advanced scientific research infrastructure. The start-up of the new facility is scheduled to occur in 2014.

Source: "Research Instruments GmbH Awarded Contract for Superconducting Accelerating Modules from Turkey"
Bruker Energy & Supercon Technologies, Inc. press release (September 5, 2012)
URL:
http://www.bruker.com/news-records/single-view/article/research-instruments-gmbh-awarded-contract-for-superconducting-accelerating-modules-from-turkey.html
Contact: Hanspeter Vogel of RI, Hanspeter.Vogel@research-instruments.de

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$5.5 million Contract for Beamline

Bruker Energy & Supercon Technologies, Inc. (October 2, 2012)

Bruker Energy & Supercon Technologies, Inc. (BEST) has received three contracts valued at $5.5 million from the Brookhaven National Laboratory (BNL) for beamline components for the National Synchrotron Light Source (NSLS-II), a new state-of-the-art, medium-energy electron storage ring. The beamline components will be used for Coherent Hard X-ray (CHX) Scattering, Submicron Resolution X-ray (SRX) Spectroscopy, and Inelastic X-ray Scattering (IXS). The NSLS-II, which is being funded by the U.S. Department of Energy's Office of Science, is scheduled to begin operations in 2015.

In addition, BEST has also received four other contracts for beamline experimental stations from customers in Korea, Taiwan, China, and the United Kingdom, with a total value of approximately $6 million. The stations will be used for a scanning transmission X-ray microscope (STXM) endstation at the Pohang Accelerator Laboratory in South Korea, a high-end STXM endstation for the Diamond Light Source in the United Kingdom, three protein crystallography (PX) endstations for the Shanghai Institute of Applied Physics, Chinese Academy of Sciences, and two PX microdiffactometers for the National Synchrotron Radiation Research Center in Taiwan.

Source: "BEST Awarded Multiple Contracts Worth over $11 Million from Brookhaven National Lab and Global Beamline Customers"
Bruker Energy & Supercon Technologies, Inc. press release (October 2, 2012)
URL:
http://www.bruker.com/news-records/single-view/article/best-awarded-multiple-contracts-worth-over-11-million-from-brookhaven-national-lab-and-global-beaml.html
Contact: Dr. Hans-Udo Klein of BEST, udo.klein@bruker-asc.com

▶Electronics 엘렉트로닉스 电子应用［diànzǐyè yìngyòng]

Grant for MRI Application

HYPRES, Inc. (September 13, 2012)

HYPRES has received a $145, 821 Small Business Innovation Research (SBIR) Grant through the U.S. Department of Health and Human Services to develop a retrofit module for MRI systems that will utilize superconductor digital circuits to provide higher resolutions and faster scan times than those currently possibly using traditional MRI electronics. In this Phase I project, HYPRES will develop and produce a new, high dynamic range MRI digitizing module that will be applicable to all types of open and closed MRI systems. This digitizer module will feature HYPRES' patented Digital-RF™ analog-to-digital converter technology packaged in a compact, cryogen-free cooling system. Richard Hitt, Chief Executive Officer of HYPRES, commented, "We're excited to take a leading role in the development of a new generation of high-performance MRI systems. The unparalleled speed of our digital superconductor circuits and sensitivity of our sensors lets us tackle the most demanding challenges with innovative, high-performance

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solutions previously not thought possible."

Source: "Gillibrand, Lowey Announce $146K Federal Grant for HYPRES to significantly Improve the Performance of MRI Systems"
Hypres, Inc. press release (September 13, 2012)
URL:
http://www.hypres.com/newsroom/gillibrand-lowey-announce-146k-federal-grant-for-hypres-to-significantly-improve-the-performance-of-mri-systems/
Contact: technology@hypres.com

Management and Finance 경영정보 经营信息[jīngyíng xìnxī]

Won the 2012 R&D 100 Award

SuperPower (September 7, 2012)

SuperPower Inc., a subsidiary of Furukawa Electric Co., Ltd., together with Oak Ridge National Laboratory and the University of Houston have won the 2012 R&D 100 Award from R&D Magazine (a U.S. science and technology magazine) for the development of "Highest Pinning Force, High-Temperature Superconducting Wires with double-Perovskite, Tantalate, Nano-Pinning Centers," a rare-earth-based superconducting wire that is ideal for operation in high magnetic field. The annual R&D 100 Award is given to the 100 most promising research and development achievements introduced to global markets over the past year. SuperPower and its collaborators won the award for their practical application of rare-earth-based superconducting wire, the pinning function of which has been improved by evenly dispersing nanostructure oxides in the superconducting layer, thereby allowing the wire to carry higher currents in high magnetic fields. Such wire is essential for superconducting devices such as superconducting magnetic energy storage (SMES) systems for electricity storage, wind power generators, MRI, and clinical accelerators.

Source: "SuperPower wins 2012 R&D 100 Award with University of Houston and Oak Ridge National Laboratory for practical application of superconducting wire"
SuperPower press release (September 7, 2012)
URL:
http://www.superpower-inc.com/content/superpower-wins-2012-rd100-award-uh-and-ornl-practical-application-superconducting-wire
Contact: Traute F. Lehner, tlehner@superpower-inc.com

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