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Smart watch to drive wireless charging adoption

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TALK TO US

India to design first 64bit RISC-V processor

India is set to develop its first 64bit microprocessor once the government's R&D division receives about $45 million funding before June. The project is the country's second attempt at designing a CPU based on the RISC-V instruction set, following the Shakti designs in the works at the Indian Institute of Technology in Madras.

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Imec, Total extend work to boost energy output of PV P panels

Imec, a nanoelectronics research centre, and Total, a global energy company, have extended their collaboration with the goal of increasing the energy output of PV panels

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Self-heating Li-ion cell eases sub-zero temperatures

Researchers from Pennsylvania State University and EC Power, State College have created what they describe as a lithium-ion battery that self-heats if the temperature is below 0°C which will help relieve winter 'range anxiety' for electric vehicle owners.

"It is a long standing problem that batteries do not perform well at sub-zero temperatures," said Chao-Yang Wang, William E. Diefenderfer chair of mechanical engineering, professor of chemical engineering and professor of materials science and engineering and director, Electrochemical Engine Centre. "This may not be an issue for phones and laptops, but is a huge barrier for electric vehicles, drones, outdoor robots and space applications."

Japan builds 4th floating solar power plant

Japan-based Kyocera TCL Solar LLC has started building what it claims as the world's largest 13.7MW floating solar power plant on the Yamakura Dam reservoir. The Public Enterprises Agency of Chiba Prefecture manages the reservoir for industrial water services.

A joint venture by Kyocera Corporation and Century Tokyo Leasing Corporation, the floating solar power plant is expected to begin operations in 2018. The plant will be comprised of about 51,000 Kyocera modules installed over a fresh water surface area of 180,000m2.

Smart watch to drive wireless charging adoption

The market for wearable technology is on a roll, earning as much as $40 billion in projected revenue by 2020. Last year, at least 23 million wireless-charging-enabled products were shipped, and 40 per cent of all wearable devices shipped will be enabled to charge wirelessly by 2020.

Smart watches are set to be the largest contributor to the wirelessly charged wearables market, accounting for almost 40 per cent of all wearable device wireless-charging receivers shipped in 2020, according to market research firm IHS.

"Smart watches are a key driver for wireless charging adoption in the wearable market, as both the Apple Watch and the Samsung Gear S2 use inductive wireless charging technology as the only method of recharging the battery," said Vicky Yussuff, wireless power analyst for IHS Technology. "By 2020, Apple and Samsung are expected to account for almost half of all smart watch shipments; significantly increasing the number of wireless charging-enabled devices available to consumers."

India to design first 64bit RISC-V processor

India is set to develop its first 64bit microprocessor once the government's R&D division receives about $45 million funding before June. The project is the country's second attempt at designing a CPU based on the RISC-V instruction set, following the Shakti designs in the works at the Indian Institute of Technology in Madras.

The projects show the increasing sophistication of India's semiconductor sector. However it's not clear if either effort will result in commercially deployed products, and both face challenges retaining skilled chip designers at a time when engineering salaries in India are rising and job hopping is common.

Imec, Total extend work to boost energy output of PV panels

Imec, a nanoelectronics research centre, and Total, a global energy company, have extended their collaboration with the goal of increasing the energy output of PV panels. Imec's industrial affiliation programme (IIAP) on next-generation crystalline silicon solar cells is a multi-partner R&D programme that is centred on further improving the conversion efficiency of silicon solar cells and modules, while reducing industrial manufacturing cost at one go.

Total joined Imec's programme on next-generation crystalline silicon solar cells in 2009, which is a multi-partner R&D programme bringing together companies along the value chain of solar cell manufacturing. Within this framework, researchers from Total collaborate with the solar R&D team at Imec, including Imec experts, solar cell manufacturers, material and equipment suppliers, and academia