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24 July 2017

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Wireless charging tech may soon power moving EVs

Stanford scientists have managed to transmit electricity wirelessly to a moving LED lightbulb, a technology that could one day be used to charge electric cars on the highway. The long-sought dream of a life on the run—unplugged—is a step closer to reality, thanks to a team of Stanford University scientists, who have developed a way to wirelessly delivery electricity to moving objects.

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Carmaker initiates Malaysia's first Industry 4.0

Located in Proton City, the Tanjung Malim factory has been selected as the principal automotive factory to implement Industry 4.0, according to Second International Trade and Industry Minister Datuk Seri Ong Ka Chuan. This makes the state of Perak the first in the country to implement the Industry 4.0 concept.

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5G Won't Boost Cellular Until 2021

SAN JOSE, Calif. — Despite enthusiasm over 5G, spending on cellular base stations will continue a significant decline over the next three years before returning to growth in 2021, according to a new report from Dell'Oro Group.

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ASML Claims Major EUV Milestone

SAN FRANCISCO—It has taken far longer and cost far more than nearly anyone would have predicted, but the semiconductor industry finally appears close to moving extreme ultraviolet (EUV) lithography into high volume production.

At the Semicon West tradeshow here this week, lithography vendor ASML announced it had achieved an important and long-elusive milestone: the demonstration of a 250-watt EUV source. Source power—a measurement of the amount of EUV photons delivered to the scanner to enable wafer exposure—equates directly to productivity. Chipmakers have long insisted that source power of 250 watts would be required to achieve throughput of 125 wafers per hour (WPH), and the inability of ASML and Cymer (which ASML acquired in 2013) to push the technology to hit that mark has been considered the primary roadblock for EUV development in recent years.

Imec Aims 2-D FETs at Sub-5-nm Node

LAKE WALES, Fla. — Designers can extend Moore's Law scaling beyond the 5-nanometer node by choosing two-dimensional anisotropic (faster with the grain) materials such as monolayers of black phosphorus, according to Imec (Leuven, Belgium). Researchers from the nonprofit semiconductor research institute described their findings at the annual Imec Technology Forum, held in San Francisco on the eve of Semicon West (July 11-13).

Imec's demonstration project focused on field-effect transistors for high-performance logic applications as part of its Core CMOS program. Using co-optimization at the material, device, and circuit levels, Imec and its collaborators proved the concept using 2-D monolayers of anisotropic black phosphorus with a smaller effective mass in the transport direction. The black phosphorus was sandwiched between interfacial layers of low-k dielectric, with stacked dual gates deployed atop high-k dielectrics to control the atomically thin channels.

Wireless Charging Tech May Soon Power Moving Evs

Stanford scientists have managed to transmit electricity wirelessly to a moving LED lightbulb, a technology that could one day be used to charge electric cars on the highway.

The long-sought dream of a life on the run—unplugged—is a step closer to reality, thanks to a team of Stanford University scientists, who have developed a way to wirelessly delivery electricity to moving objects.

The team built on existing technology developed in 2007 at MIT for transmitting electricity wirelessly over a distance of a few feet to a stationary object. In the new work, results of which were published in the journal Nature, the Stanford team transmitted electricity wirelessly to a moving LED lightbulb.

The demonstration only involved a 1mW charge, whereas electric cars often require tens of kilowatts to operate. The team said it is now working on increasing the amount of electricity that can be transferred, and tweaking the system to extend the transfer distance and improve efficiency.

Carmaker Initiates Malaysia's First Industry 4.0

Malaysian carmaker Proton is set to implement Industry 4.0 at its automotive factory in the state of Perak, Bernama reported.

Located in Proton City, the Tanjung Malim factory has been selected as the principal automotive factory to implement Industry 4.0, according to Second International Trade and Industry Minister Datuk Seri Ong Ka Chuan. This makes the state of Perak the first in the country to implement the Industry 4.0 concept.

Ong pointed out that the factories in Perak currently do not "use high technology in their operations," which means that they "could not create high-paying jobs." However, "the implementation of Industry 4.0 in the state would facilitate the creation of new factories which wudl supply raw materials to the principal factory," the minister said, according to the news outlet.

5G Won't Boost Cellular Until 2021

SAN JOSE, Calif. — Despite enthusiasm over 5G, spending on cellular base stations will continue a significant decline over the next three years before returning to growth in 2021, according to a new report from Dell'Oro Group.

The report is roughly in line with the outlook from infrastructure giant Ericsson that reported worse than expected quarterly results. Dell'Oro predicted a high single-digit percentage decline in base station sales this year followed by two years of declines in low single digits. Ericsson expressed hopes that the market would be flat in 2019.

The news underlines the precarious position for wireless vendors. They are making significant investments now in 5G technologies and services while navigating the end of major 4G deployments