

Weekly Discovery

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24 September - 28 September 2018

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Artificial Intelligence & Data Science	Aviation	Cities
HealthCare	Robotics & Automation	Design & Innovation
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AUGMENTED REALITY

For Museums, Augmented Reality Is the Next Frontier



"as the technology becomes easier to use and the experiences easier to create, museums are increasingly turning to them as a way to engage visitors—whether that's fleshing out the skeletons on view at the Smithsonian's National Museum of Natural History, or taking a tour of Mars with astronaut Buzz Aldrin (as a hologram, naturally)."

Source: [Wired](#) (21 September 2018)

AUTONOMOUS VEHICLE

Toyota's Vision of Autonomous Cars Is Not Exactly Driverless

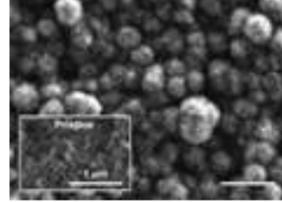


The company invested \$4 billion in a robotics and AI research institute to create safer vehicles. Toyota's self-driving vision isn't really about getting rid of drivers. Rather, it's about using autonomous and related technologies to make cars safer and more user-friendly...

Source: [Bloomberg Businessweek](#) (19 September 2018)

BATTERY

New Battery Gobbles Up Carbon Dioxide



"A new type of battery developed by researchers at MIT could be made partly from carbon dioxide captured from power plants. Rather than attempting to convert carbon dioxide to specialized chemicals using metal catalysts, which is currently highly challenging, this battery could continuously convert carbon dioxide into a solid mineral carbonate as it discharges."

Source: [Science Daily](#) (21 September 2018)

ECONOMY

Global Top 100 Companies



"In this brief report we have ranked the Global Top 100 companies by market capitalisation and highlighted the major trends since 2009 as they emerged from the global financial crisis."

Source: [PwC](#) (31 March 2018)

ENERGY INNOVATION

Innovations in Lithium-ion Batteries, Fuel Cells, Wind Turbines, Solar Cells, and Geothermal Power Generation



"This edition of the Energy and Power Systems TOE profiles innovations in impact-resistant lithium-ion battery, boosting capacity for lithium-ion battery, bearing supports that can improve wind turbine performance, and low-cost fuel cell."

Source: [Frost & Sullivan](#) (September 2018)

HEALTHCARE TECHNOLOGY

How Medtechs Will Create Value In The New Health Ecosystem



"In the 12th edition of EY's medtech report, The Pulse of the Industry, we examine the annual performance of the medical device industry in the context of the technological advances and rising customer expectations associated with the Fourth Industrial Revolution"

Source: [Ernst & Young](#) (24 September 2018)

INDUSTRIAL REVOLUTION

Industry 4.0: Future Trends



"Industry 4.0 is expected to transform manufacturing processes. These changes will require new technologies, operational and supply chain management changes, but how should organisations respond?"

Source: [Furomonitor](#) (September 2018)

MAGNETIC FIELD

New Technology Helps Detect Smallest Magnetic Fields Produced In Neuronal Networks



Source: Absolute Native Electronics

"The scientists in Freiburg will produce and optimize NV centers in diamond in order to achieve highly sensitive magnet field detectors working at room temperature, and by those means develop the world's first laser threshold magnetometer."

Source: [News Medical Life Science](#) (25 September 2018)

NEW MATERIAL

Biodegradable Natural Plastic Nuatan can Safely be Eaten By Fish



"A type of compostable bioplastic made of corn starch, sugar and used cooking oil, created by Crafting Plastics Studio, could replace "all the packaging we know", according to its designers."

Source: [Dezeen](#) (24 September 2018)

ROBOTICS

'Robotic Skins' turn Everyday Objects into Robots



"When you think of robotics, you likely think of something rigid, heavy, and built for a specific purpose. New "Robotic Skins" technology developed by Yale researchers flips that notion on its head, allowing users to animate the inanimate and turn everyday objects into robots."

Source: [Yale News](#) (19 September 2018)

SURVEILLANCE

A Sensor Inspired By An African Thumb Piano Could Root Out Bogus Medicines



"An inexpensive, handheld tool inspired by an ancient African instrument called an mbira, or thumb piano, can distinguish between liquids of different densities. That could help pharmacists and consumers identify counterfeit and contaminated drugs, which make up an estimated 10.5% of all medications in low- and middle-income countries."

Source: [Sciencenews.org](#) (18 September 2018)

TECHNOLOGY

Spray-On Antennas Could Unlock Potential Of Smart, Connected Technology

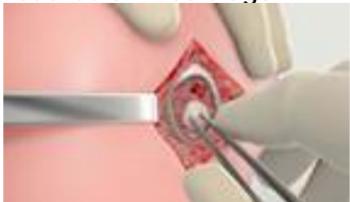


"In research recently published in Science Advances, the group reports on a method for spraying invisibly thin antennas, made from a type of two-dimensional, metallic material called MXene, that perform as well as those being used in mobile devices, wireless routers and portable transducers."

Source: [Phys.org](#) (21 September 2018)

TISSUE ENGINEERING

This Implant Helps Heal Knees With a Patient's Own Cartilage



Vericel's FDA-approved MACI procedure has a small but valuable audience. By employing a sort of medical scaffolding made of collagen, Vericel takes some of a patient's own cartilage cells, multiplies them in a petri dish, and inserts the new crop back into the damaged knee.

Source: [Bloomberg Businessweek](#) (22 September 2018)

TRANSPORTATION

Germany Launches World's First Autonomous Tram In Potsdam

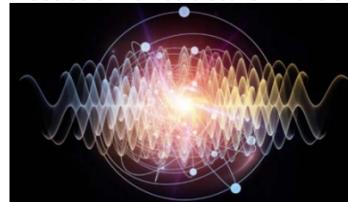


"Fitted with multiple radar, lidar (light from a laser), and camera sensors, forming digital eyes that film the tram and its surroundings during every journey, the tram reacts to trackside signals and can respond to hazards faster than a human."

Source: [The Guardian](#) (23 September 2018)

ULTRASOUND WAVES

Ultrasonic Waves Allow Easy Detection Of Structural Defects



"The research team noted that their technology could make it possible to accurately evaluate material damage that is too small to be detected with existing technology, thereby improving the safety and reliability of socially important structures such as power generation plants and airplanes."

Source: [The Asian Scientist](#) (20 September 2018)

WASTE MANAGEMENT

New Technology To Convert Plant Waste Into Greener Fuel



"Scientists have created a ready-to-use recipe to turn sawdust into gasoline, which can help existing gas plants generate greener fuel."

Source: [The Week](#) (25 September 2018)