

Weekly Discovery

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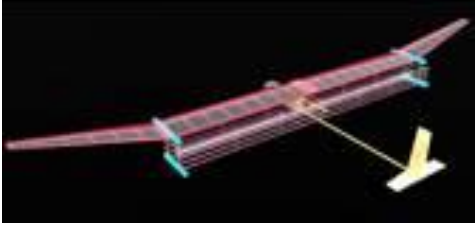
26 November 2018 - 30 November 2018

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Artificial Intelligence & Data Science	Aviation	Cities
HealthCare	Robotics & Automation	Design & Innovation
Cybersecurity	Digital Design & Fabrication	Advanced Manufacturing


AERONAUTICS
MIT Engineers Complete World's First Flight of Plane with No Moving Parts



"Engineers at the Massachusetts University of Technology have built an ion-powered plane that flies without propellers or turbines, and requires no fossil fuel."

Source: [Dezeen](#) (23 November 2018)

ARCHITECTURE
Architecture's Scaffolds



"Bamboo is a material in flux. In addition to its foundational architectural function as scaffolding, it acts as a metaphorical scaffolding as well: be it tradition, poverty, sustainability, or a new form of eco-chic luxury."

Source: [e-flux Architecture](#) (25 November 2018)

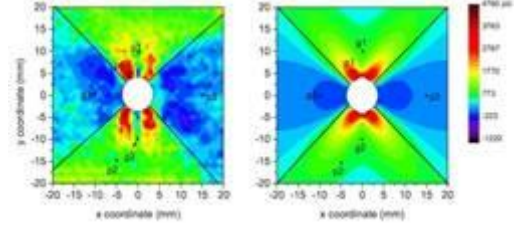
ARTIFICIAL INTELLIGENCE
The First AI-Scripted Commercial Is Here - and It's Surprisingly Good



"IBM's Watson AI system crunched 15 years' worth of advertising data to come up with an engaging script."

Source: [World Economic Forum](#) (22 November 2018)

BIO-FACADE
These Algae-Filled "Urban Curtains" Suck CO₂ from the Air



"... large bio-plastic sheets, each more than 20 feet long, contain built-in channels filled with algae. Dirty air enters the bottom and bubbles up to the algae, which captures CO₂ and pollutants, and fresh oxygen is released at the top."

Source: [Fast Company](#) (23 November 2018)

BLOCKCHAIN
The Evolution of Maritime Blockchain



"The market for blockchain-based solutions, especially with regard to container shipping and the global supply chain, has become highly competitive."

Source: [Port Technology](#) (22 November 2018)

CURRENCY
Sweden's Push to Get Rid of Cash Has Some Saying, 'Not So Fast'



"Cash is disappearing in the country faster than anyone thought it would. Now, officials are trying to slow its demise as they determine the societal costs."

Source: [The New York Times](#) (21 November 2018)

ENTREPRENEURSHIP
How First-Time Entrepreneurs Can Learn from Amazon's HQ2 Decision



"What does a company valued at nearly \$1 trillion have to teach first-time entrepreneurs about where to locate their businesses? As it turns out, plenty."

Source: [Forbes](#) (26 November 2018)

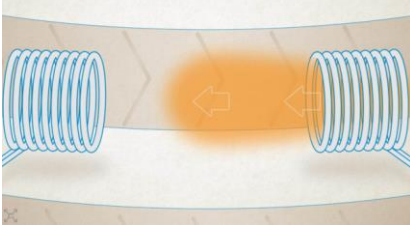
FINTECH
Top 28 Fintech and Insurtech Innovation Labs in Singapore



"The list compiles 28 of the most notable fintech and insurtech innovation labs in Singapore."

Source: [fintechnews.sg](#) (16 November 2018)


MAGNETIC DIODE
Magnetic Field Diode Is a First, Say Physicists



"If a commercially-viable magnetic field diode can be made, it could transform the capabilities of electrical components. It could, for example, enable wireless charging where energy only flows in one direction."

Source: [Physics World](#) (26 November 2018)

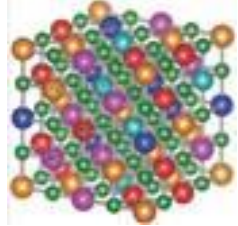
MATERIALS SCIENCE
Australian Researchers Invent Fire-Resistant Cladding from Electric Cables



"A University of Melbourne researcher has discovered an organic, non-combustible and lightweight cladding core, a product that was previously thought to be impossible to create. Dr. Nguyen provided expert guidance in formulating a material that could withstand heat of 750 degrees Celsius."

Source: [Architecture & Design](#) (23 November 2018)

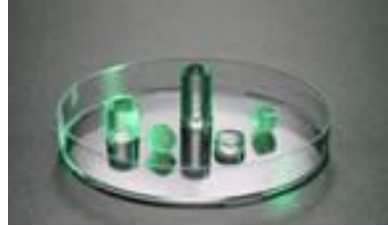
MATERIALS SCIENCE
Disordered Materials Could Be Hardest, Most Heat-Tolerant Carbides



"Materials scientists have discovered a new class of carbides expected to be among the hardest materials and the highest melting points in existence. Made from inexpensive metals, the new materials may soon find use in a wide range of industries from machinery and hardware to aerospace."

Source: [Science Daily](#) (26 November 2018)

MEDICAL MATERIAL
A Hydrogel That Adheres Firmly to Cartilage and Meniscus



"Two EPFL research groups have created a biocompatible hydrogel that naturally adheres to soft tissues like cartilage and the meniscus. Their hydrogel, which is almost 90% water, can withstand mechanical stresses and extensive deformation, therefore eliminates the need for a separate binding process."

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

PHYSICS
Physicists Discover First Evidence for 2D Magnetic Topological Insulator



"A team of US and Korean physicists has found the first evidence for a two-dimensional (2D) material that can become a magnetic topological insulator even when it is not placed in a magnetic field."

Source: [Materials Today](#) (23 November 2018)

TIMBER ARCHITECTURE
4 Projects That Show Mass Timber Is the Future of American Cities



"As architects face up to the need for ethical, sustainable design in the age of climate change awareness, timber architecture is making a comeback in a new, technologically impressive way."

Source: [Arch Daily](#) (24 November 2018)

WASTE MANAGEMENT
Researchers Create First Model of How Plastic Waste Moves in the Environment



"A Washington State University researcher for the first time has modeled how microplastic fibers move through the environment."

Source: [Phys.org](#) (27 November 2018)

WATER RESOURCE MANAGEMENT
A Water Treatment Breakthrough, Inspired by a Sea Creature



"Inspired by Actinia, a sea organism that ensnares its prey with its tentacles, a team of researchers has developed a method for efficiently treating water."

Source: [EurekAlert!](#) (26 November 2018)

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