

Weekly Discovery

We SHARE to inspire and ignite ideas!

12 AUGUST 2019 - 16 AUGUST 2019

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

ARTIFICIAL INTELLIGENCE

Artificial Intelligence Helps Banana Growers Protect the World's Most Favorite Fruit

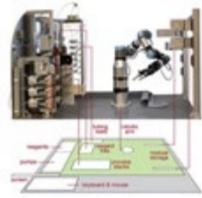


"Using artificial intelligence, scientists created an easy-to-use tool to detect banana diseases and pests. With an average 90 percent success rate in detecting a pest or a disease, the tool can help farmers avoid millions of dollars in losses."

Source: [CIAT](#) (12 August 2019)

AUTOMATION

Guided by AI, Robotic Platform Automates Molecule Manufacture

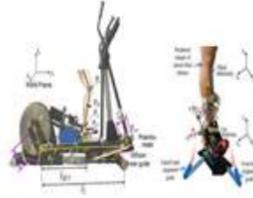


"Guided by artificial intelligence and powered by a robotic platform, a system developed by MIT researchers moves a step closer to automating the production of small molecules that could be used in medicine, solar energy, and polymer chemistry." Also read at [Science](#).

Source: [MIT News](#) (8 August 2019)

BIOMEDICAL SCIENCE

New Robotic System Diagnoses Knee Osteoarthritis with Gait Data



"Motion Analysis Laboratory can measure the knee rotational force, but the equipment is expensive and requires a long time for data collection and processing. This places a heavy burden on patients."

Source: [Korea Biomedical Review](#) (13 August 2019)

BUILDING MATERIALS

Which Are the Most Used Materials in Social Housing?



"In this article, we analyze different projects published on our site to identify some of the predominant materials used in social housing, both for the formation of structures or enclosures. The intentions of this are two-fold: firstly, to create a worldwide panorama of different case studies with different construction styles from a range of geographical locations, and secondly, to provide inspiration and tools to architects to make better social housing."

Source: [Arch Daily](#) (12 August 2019)

INNOVATION

3 Ways to Build a Culture of Collaborative Innovation



"All organizations have the ability to be smarter than the sum of their members' intelligence and talent. Unfortunately, most are actually dumber. The good news is there are a handful of practical steps to boost collective intelligence."

Source: [Harvard Business Review](#) (12 August 2019)

MATERIALS SCIENCE

Stretching the Functional Range of Sticky Tape

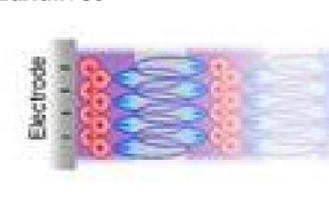


"To make their tape, the researchers pulled a film from the interior of an array of SACNTs, similar to pulling a strip of tape from a roll. The resulting double-sided tape could adhere to surfaces through van der Waals interactions, which are weak electric forces generated between two atoms or molecules that are close together."

Source: [Asian Scientist](#) (13 August 2019)

MATERIALS SCIENCE

Supercapacitors Turbocharged by Laxatives



"... This gives ionic liquids numerous advantages over conventional electrolytes because they are stable, non-flammable, and often much more environmentally friendly." Read more at [Nature Materials](#).

Source: [Phys.org](#) (12 August 2019)

MICRO HOME

Two Shipping Containers Contain a Micro Home Furnished with Nendo

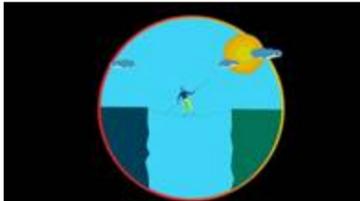


"Pellegrini designed the 18-square-metre show home to demonstrate that recycled shipping containers can be disguised and used for high-end housing. This surface material ... is made from quartz, porcelain, and glass, fused together under high pressure to form a UV- and heat-resistant slab that is harder than granite."

Source: [Dezeen](#) (12 August 2019)

MILLENNIALS

The Deloitte Global Millennial Survey 2019



"Despite current global economic growth, expansion and opportunity, millennials and Generation Z are expressing uneasiness and pessimism—about their careers, their lives and the world around them, according to Deloitte's eighth annual Millennial Survey."

Source: [Deloitte](#) (2019)

NEW MATERIAL

Scientists Create the World's Thinnest Gold



"Scientists have created a new form of gold which is just two atoms thick - the thinnest unsupported gold ever created."

Source: [Science Daily](#) (6 August 2019)

RESEARCH

Unethical Work Must Be Filtered Out or Flagged



"Researchers need guidance on how to handle published work whose ethics have been questioned, argue Graeme D. Ruxton and Tom Mulder."

Source: [Nature](#) (5 August 2019)

ROBOTICS

Cobot Market Will Exceed \$11B by 2030, ABI Research Says



"Lower cost, ease-of-use, and re-programming ability driving growth of market ..."

Source: [Robotics Business Review](#) (13 August 2019)

STATISTICS

Mathematicians of TU Dresden Develop New Statistical Indicator



"To calculate the dependence measure, not only the values of the observed variables themselves, but also their mutual distances are recorded and from these distance matrices, the distance multivariance is calculated. This intermediate step allows for the detection of complex dependencies, which the usual correlation coefficient would simply ignore. Our method can be applied to questions in bioinformatics, where big data sets need to be analysed."

Source: [IDU](#) (9 August 2019)

SUSTAINABILITY

Stanford-Led Study Gauges Trees' Potential to Slow Global Warming in the Future



"By analyzing decades of experiments, the researchers mapped the potential of carbon dioxide to increase forest biomass by the end of the century, when atmospheric concentrations of the gas could nearly double. This, in turn, will enable plants and trees to store more carbon."

Source: [Stanford News](#) (12 August 2019)

TECHNOLOGY

The Power of Technology for People with Disabilities



"One of technology's most fundamental purposes is empowering people to do more, and that's why people with disabilities are often the ultimate early adopters."

Source: [Microsoft](#) (2019)

WATER MANAGEMENT

Floating Treatment Wetlands as a Suitable Option for Large-Scale Wastewater Treatment



"... there are limited or insufficient wastewater treatment infrastructures. Floating treatment wetlands (FTWs) can be a cost-effective phytoremediation approach to treat various types of wastewater ..."

Source: [Nature Sustainability](#) (12 August 2019)