

Weekly Discovery

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17 December 2018 - 21 December 2018

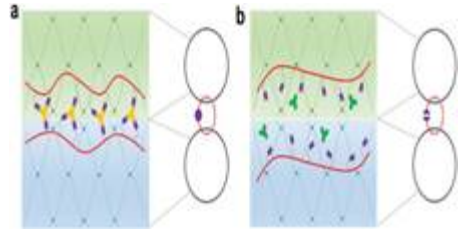
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Artificial Intelligence & Data Science	Aviation	Cities
HealthCare	Robotics & Automation	Design & Innovation
Cybersecurity	Digital Design & Fabrication	Advanced Manufacturing

ADVANCED MATERIALS

Photodetachable Adhesion



"Peeling from strong adhesion is hard, and sometimes painful. Herein, an approach is described to achieve both strong adhesion and easy detachment. The latter is triggered, on-demand, through an exposure to light of a certain frequency range."

Source: [Wiley](#) (14 December 2018)

ARCHITECTURE

"Post-Digital Architecture Will Be Rough, Provisional and Crafted by Robots"



"The critical point is that all of this will be done by robots not so very different from today's Polibot prototype. Assembled and disassembled potentially almost at will, post-digital buildings will be inherently ad hoc in nature, existing in perpetual transition."

Source: [Dezeen](#) (12 December 2018)

ARTIFICIAL INTELLIGENCE

AI Year in Review: Highlights of Papers and Predictions from IBM Research AI



"Today we [released](#) a 2018 retrospective that provides a sneak-peek into the future of AI. We have curated a collection of one hundred IBM Research AI papers we have published this year, authored by talented researchers and scientists from our twelve global Labs."

Source: [IBM](#) (13 December 2018)

AUTOMOTIVE TECH

8 Best New Automotive Technology for 2019



"To help car buyers choose the right tech for their next new car, the editors at Autotrader have put together their list of the Best New Automotive Technology for 2019. Safety enhancements and smartphone integrations top this year's list of tech options car shoppers should consider."

Source: [Capital FM](#) (17 December 2018)

DRONES

Foldable Drone Changes Its Shape in Mid-Air



"We believe that a morphing quadrotor can tailor its shape to more dynamic tasks, like for example flying at high speed, where it can improve its performance by folding to change its aerodynamic properties. This would allow very fast flight in time-critical scenarios."

Source: [IEEE Spectrum](#) (13 December 2018)

DRONES

New Study Details Benefits of Drones in the Energy Industry



"This independent report on power and utility industries finds a market in transition from field trials and POC's to scaling in the enterprise for UAV operations. It also reveals the initial insights into the critical infrastructure market's use of drones in their inspection, mapping, and surveying projects."

Source: [Windpower](#) (17 December 2018)

ECONOMY

Economies in 2019



"Euromonitor International predicts that the global economy will slow in 2019 with annual growth of 3.6% in real terms. We offer key insights from economy, finance and trade; cities; business dynamics; industrial; and natural resources perspectives."

Source: [Euromonitor](#) (13 December 2018)

HEART MONITOR SYSTEM

Breakthrough Technology for Unborn Babies



"INFANT (Intelligent Foetal Assessment) was developed to enhance the current CTG heart monitoring system most pregnant women are familiar with."

Source: [9News](#) (14 December 2018)

LOGISTICS

Container Storage Breakthrough Promises to Triple Ports Capacity



"German engineering specialist SMS Group has developed technology that promises to triple the storage capacity for global port logistics, in a rare example of a German company going on the offensive with disruptive technology."

Source: [Financial Times](#) (17 December 2018)

MATERIALS SCIENCE

Team Invents Method to Shrink Objects to the Nanoscale

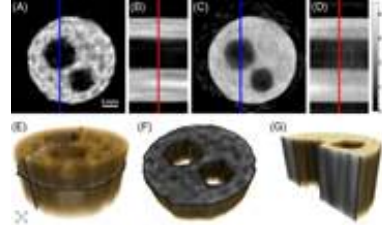


"Using the new technique, the researchers can create any shape and structure they want by patterning a polymer scaffold with a laser. After attaching other useful materials to the scaffold, they shrink it, generating structures one thousandth the volume of the original."

Source: [MIT News](#) (13 December 2018)

MEDICAL IMAGING

3D X-Ray Techniques Can Enhance Medical Imaging



"Two new approaches to creating 3D images using X-rays could improve screening for diseases and the study of very fast processes, as well as enable analysis of material properties and provide structural information of opaque objects with unprecedented detail, an international research team has discovered."

Source: [Physics World](#) (17 December 2018)

MEDICAL TECH

Ingestible Capsule Can Be Controlled Wirelessly

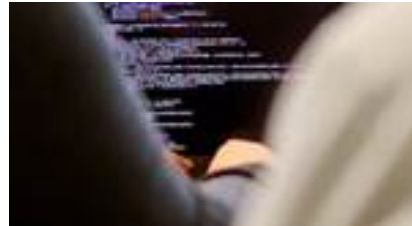


"The capsule, which can be customized to deliver drugs, sense environmental conditions, or both, can reside in the stomach for at least a month, transmitting information and responding to instructions from a user's smartphone."

Source: [MIT News](#) (13 December 2018)

NEW MATERIALS

Artificial Intelligence Meets Materials Science



"A Texas A&M engineering research team is harnessing the power of machine learning, data science and the domain knowledge of experts to autonomously discover new materials."

Source: [Science Daily](#) (18 December 2018)

RESEARCH

China Introduces 'Social' Punishments for Scientific Misconduct



"Researchers in China who commit scientific misconduct could soon be prevented from getting a bank loan, running a company or applying for a public-service job. The government has announced an extensive punishment system that could have significant consequences for offenders - far beyond their academic careers."

Source: [Nature](#) (14 December 2018)

SMART AIRPORT

DIA Is First in the Nation to Test New TSA Technology



"Called Enhanced Advanced Imaging Technology (eAIT), this technology will provide better security screening while moving passengers through lines faster."

Source: [The Denver Channel](#) (17 December 2018)

STARTUPS

50 World-Changing Startups to Watch



"Kairos unveiled its annual list of winning entrepreneurs at the end of November. Out of 2,500 early-stage startups, which were referred from more than 65 countries around the world, just 50 companies made the cut."

Source: [Inc.](#) (13 December 2018)

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