

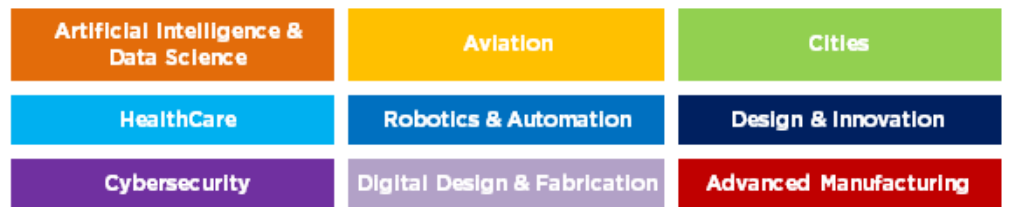
# Weekly Discovery

We SHARE to inspire and ignite ideas!

3 December 2018 - 7 December 2018

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**AGEING**  
**Applicability of 'Aging in Place' in Redeveloped Public Rental Housing Estates in Hong Kong**



"This study aimed to investigate the implementation of the 'aging in place' philosophy, through evaluating the applicability and effectiveness of those facilities. The Un Chau Estate in Hong Kong was selected as a case study."

Source: [Cities](#) (31 December 2018)

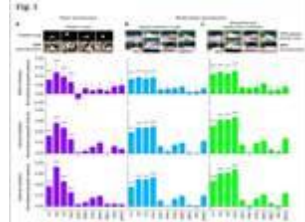
**BIOMEDICAL ENGINEERING**  
**It's Not a Shock: Better Bandage Promotes Powerful Healing**



"A new, low-cost wound dressing developed by WISC engineers could dramatically speed up healing in a surprising way. The method leverages energy generated from a patient's own body motions to apply gentle electrical pulses at the site of an injury."

Source: [Phys.org](#) (29 November 2018)

**DATA SCIENCE**  
**Yale Researchers Predict How People's Eyes Move When Viewing Natural Scenes**



"People can see better than AI systems can ... Understanding how the brain performs its complex calculations is an ultimate goal of neuroscience and benefits AI efforts."

Source: [News-Medical.net](#) (4 December 2018)

**ENERGY**  
**Researchers Just Overcame a Key Barrier to Fusion Power**



"One promising approach to nuclear power is a type of reactor called a tokamak. Uses powerful magnetic fields to trap super-heated plasma in a bagel-shaped torus. An obstacle making reactors viable is that the plasma gets extremely hot, reaching temperatures of up to 100 million degrees Celsius as hot as the Sun."

Source: [Futurism](#) (2 December 2018)

**FINTECH**  
**5 Innovation Trends That Will Define Banking in 2019**



"The banking industry is beginning to incorporate the traits and practices that were once the domain of fintech startups. Banks and credit unions have become more comfortable with a faster pace of innovation, using data more extensively."

Source: [The Financial Brand](#) (3 December 2018)

**HEALTHCARE**  
**The Future of Fighting Cancer: Zapping Tumors in Less Than a Second**



"New accelerator-based technology aims to reduce the side effects of cancer radiation therapy by shrinking its duration from minutes to under a second and help make radiation therapy more accessible around the world."

Source: [SLAC National Accelerator Laboratory](#) (28 November 2018)

**HUMANOID ROBOT**  
**As I Move, It Moves: Toyota's Humanoid Robot Will Rock in Action Mode**



"Good things happen when Toyota cozies up to the next generation 5G technology. The news is not about self-driving cars but rather another 'tomorrow' topic, in the name of robotics. Toyota has turned to 5G to remotely control a robot and with success."

Source: [Tech Xplore](#) (2 December 2018)

**INDUSTRY OUTLOOK**  
**Industries in 2019**



"This edition of our annual report discusses the changes that Mr Trump's policies - and other global trends - have already brought to six industry sectors: automotive, consumer goods and retailing, energy, financial services, healthcare, and telecoms. And we look ahead to the challenges facing these businesses in 2019."

Source: [The Economist Intelligence Unit](#) (November 2018)

**INNOVATION**  
**These Five Google Successes Began as Employee Passion Projects**



"Area 120 - Google's in-house incubator for hatching new ideas with the potential to become big businesses - has only been around for a couple of years."

Source: [Fast Company](#) (3 December 2018)

**MATERIALS SCIENCE**  
**Advancing Composites: Cda Company's Breakthrough Technology Attracting Interest from Big Players**



"The result was Continuous Composites, a 3-year-old startup company that its owners say could revolutionize manufacturing, dramatically lowering the costs for fiberglass, Kevlar and carbon fiber composites."

Source: [The Spokesman-Review](#) (3 December 2018)

**NANOTECHNOLOGY**  
**Nanotechnology Solution for Photovoltaic Systems**



"The inorganic-organic hybrid coating of SolarSharc is only a few microns thick, as explained on the project website ... Based on a silica (glass) network chemically bound to non-stick organic groups Solar Sharc [coating] readily repels water and water-borne contamination."

Source: [Phys.org](#) (3 December 2018)

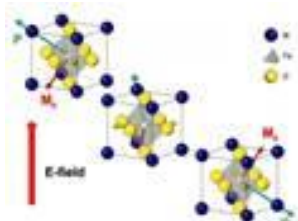
**NANOTWEEZERS**  
**These New Tweezers Let Scientists Do Biopsies on Living Cells**



"It's like the world's smallest game of 'Operation.' A new set of nanotweezers can extract DNA and other single molecules from a living cell without killing it."

Source: [Science News](#) (3 December 2018)

**QUANTUM MATERIALS**  
**New Quantum Materials Could Take Computing Devices Beyond the Semiconductor Era**



"Scientists in industry and academia are looking for new materials to succeed highly successful semiconductor transistors. Scientists have hit on a very promising post-transistor technology: multiferroics, which use magnetic spin states instead of electron charge to store binary data."

Source: [Science Daily](#) (3 December 2018)

**ROBOTICS**  
**Walmart Is About to Deploy Hundreds of Robot Janitors**



"The bots will scrub floors without human supervision. By the end of January 2019, the tech company will equip 360 of the retailer's floor scrubbing machines with a platform called BrainOS."

Source: [Futurism](#) (3 December 2018)

**STARTUPS**  
**Rise of the Global Startup City**



"America's long-held singular dominance of startup and venture capital activity is being challenged by the rapid ascent of cities in Asia, Europe, and elsewhere. While the United States remains the clear global leader, the rest of the world is gaining ground at an accelerating rate."

Source: [Centre for American Entrepreneurship](#) (28 November 2018)

**TRANSFORMABLE DESIGN**  
**How a Harvard Professor Uses Toys and Origami to Transform Design**



"Chuck Hoberman's eponymous sphere is one of the best-loved toys of the last quarter century. But it's only one example of his incredible work in transformable design. From adaptive nanotech to flexible building materials, Hoberman has created surprising and inventive designs at every scale."

Source: [Wired](#) (28 November 2018)

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