

Weekly Discovery

We SHARE to inspire and ignite ideas!

9 April 2018 - 13 April 2018

3D PRINTING

The World's First 3D-Printed Steel Bridge Looks Like It Came from Another Planet



The world's first 3D printed stainless steel bridge will be installed over the Oudezijds Achterburgwal canal in Amsterdam, possibly in 2019. Read on and explore this unconventional project.

Source: [Inhabitat](#) (5 April 2018)

ARCHITECTURE

Floating Cities: The Future of Urban Life.



Due to rising sea-level, the concept of floating cities is soon to be a reality. Get some insights on the pros and cons of designing such floating cities from this article.

Source: How It Works (Issue 110)
Available @ SUTD Library (Call Number Q162 HOW)

AUTOMATION

Robotic Data Collection and Simulation for Evaluation of Building Retrofit Performance



A new framework that uses autonomous mobile indoor robots to record real-time building information, which can be analysed and adapted for decision making for building retrofits and energy performance.

Source: [Automation in Construction](#) (August 2018)

CITIES

Place Quality in Innovation Clusters: An Empirical Analysis of Global Best Practices from Singapore, Helsinki, New York, and Sydney



Gain insights from 4 case studies around the world into the attributes of place quality, which need to be considered while planning for innovation clusters and identifying and classifying indicators of place quality at the cluster scale.

Source: [Cities](#) (April 2018)

CLOUD BUSINESS INTELLIGENCE

The State of Cloud Business Intelligence, 2018



Cloud-based business intelligence tools have been flourishing for the past few years. Check out the user deployment trends and attitudes toward cloud business intelligence in 2018.

Source: [Forbes](#) (8 April 2018)

HEALTHCARE

Two Colorado Studies Find Resistance Mechanisms in ALK+ and ROS1+ Cancers

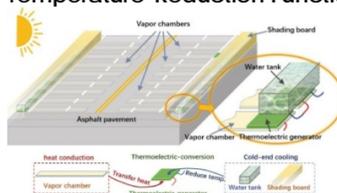


Studies have shown that cancers have built up resistance against treatments and have learnt to leverage on the treatments for their growth.

Source: [EurekAlert!](#) (10 April 2018)

MATERIALS SCIENCE

Design and Experiment of Thermoelectric Asphalt Pavements with Power-Generation and Temperature-Reduction Functions

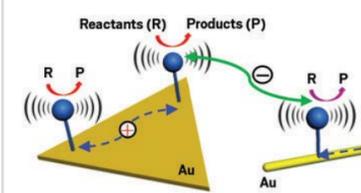


This new road thermoelectric generator system transfers pavement heat, offering a new method to relieve the urban heat-island effect by converting and making use of solar heat absorbed in asphalt pavement.

Source: [Energy and Buildings](#) (15 June 2018)

NANOPARTICLE

Nanoparticle Catalysts Communicate Across Distances

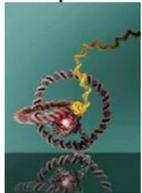


The reactions on a nanoparticle on one area have the same reaction on nanoparticles a distance away. Helping to understand the effect of biocatalysts and lead to more efficient drugs or chemical reactions required.

Source: [C&EN](#) (2 April 2018)

NANOTECHNOLOGY

Tiny Nanomachine Successfully Completes Test Drive



These tiny DNA nano-circles function as the motors and wheels for precise drug delivery to cells within a human body. Additionally, read at [Nature](#) to learn more about this breakthrough.

Source: [ScienceNewsline](#) (10 April 2018)

NEW MATERIAL

Glueless Glue, New Textile Fibres and Replacements for Microplastics



Pieces of wood can be clamped together when ionic liquids are spread over their surfaces under appropriate pressure and temperature. Possible applications include environmentally friendly textiles and biodegradable cellulose beads.

Source: [University of Helsinki](#) (6 April 2018)

SMART HELMET

The Connected Road Trip



This smart helmet suppresses ambient noises and enables its wearer to hear surrounding sounds. Its smart communication system can also connect itself to up to 8 other helmets within one mile.

Source: Popular Mechanics (March 2018)
Available @ SUTD Library (Call Number T1 POP)

SMART HOSPITAL

China's First Smart Hospital Featuring AI Opened in Guangzhou



Smart hospital has become a buzzword in healthcare in the Information Age. Learn about how China's first smart hospital uses AI to help patients easily make appointments and payments and create medical profiles through WeChat.

Source: [OpenGov Asia](#) (4 April 2018)

STEM CELL

Cambridge Breakthrough in Brain Regeneration



A new kind of neural stem cell has been discovered which is highly promising for brain repair. It may pay way to a big leap in fighting against Alzheimer's, head trauma and ageing. Read more at [Science](#).

Source: [Business Weekly](#) (9 April 2018)

SYSTEMS THINKING

Systems Thinking in the Built Environment: Seeing the Bigger Picture, Understanding the Detail



Systems thinking approach identifies and understands the system as a whole, predicts behaviour and devises modifications so as to achieve desired outcomes in addressing issues of healthy environment and people's well-being.

Source: [Indoor and Built Environment](#) (8 April 2018)

VACCINE

A Vaccine for Edible Plants? A New Plant Protection Method on the Horizon



A new type of vaccine injected into plants only targets at certain plant diseases or pests without affecting the plant genes. Read also at [Plant Biotechnology](#).

Source: [Science Daily](#) (5 April 2018)

WEARABLES

MIT's AlterEgo Device "Silently Converses" with the Voices in Your Head



Without the need of looking at a screen, typing out words or controlling a device, a person can now get the answer for an internal question he or she has with this wearable, while remaining active in the external environment.

Source: [Dezeen](#) (9 April 2018)

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