

Weekly Discovery

We SHARE to inspire and ignite ideas!

13 February 2017 – 17 February 2017

SPECIAL HIGHLIGHT

ARCHITECTURAL CONSERVATION

Architectural conservation is a process that retains the authentic built form of old buildings through restoration. In doing so, it serves as an aid in the preservation of buildings. Restoration is also viewed as a viable alternative to new construction, since the former reduces construction waste and uses less energy. Architectural conservation is particularly impacted by two main aspects, cultural and historical. The cultural aspect involves the conservation of cultural heritage buildings in tandem with consideration of the local customs of an area. The historical aspect involves the conservation of well-known historical buildings and also considers changes made over time in building conservation, such as technological advancements and new materials.

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AGRICULTURE

Absorbent Beads Could Save Energy - and Lives

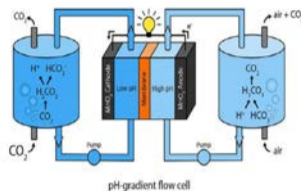


Zeolite beads can absorb moisture that causes decay in crops. This technology is remarkable, as it not only reduces the loss of crops to decay, but also reduces energy consumption in large-scale crop drying operations.

Source: [MIT Technology Review](#) (13 February 2017)

BATTERY TECHNOLOGY

Battery can be recharged with carbon dioxide



This is an uncomplicated alternative to current CO₂ conversion techniques that are cost and energy intensive. Read more at [Environmental Science and Technology Letters](#).

Source: [Phys.org](#) (9 February 2017)

CYBERSECURITY

IBM to Use Jeopardy! Winning Machine Watson to Fight Cyber Attacks



IBM's Watson security machine can help rectify cybersecurity issues in a couple of minutes only. According to research done by IBM, AI is going to play a big role in the industry by 2019.

Source: [The Telegraph](#) (13 February 2017)

ENTREPRENEURSHIP

How to build lasting business relationships according to this publicity coach



Selena Soo mentions to be very clear about whom to establish business relationships with depending on their goals, to connect with influencers in a value-adding manner to strengthen the business relationship and to request for help when necessary.

Source: [TechnAsia](#) (14 February 2017)

GREEN ARCHITECTURE

China Welcomes Asia's First Vertical Forest

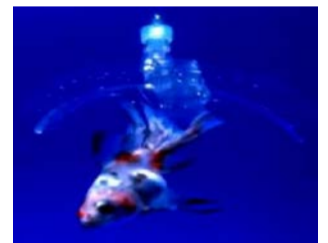


To cope with the poor air quality, architect Stefano Boeri is looking at creating two greenery-laden towers in populated area to absorb carbon dioxide while producing oxygen, claiming the very first vertical forest in Asia.

Source: [Architectural Digest](#) (13 February 2017)

HYDROGEL ROBOTS

MIT researchers create soft hydrogel robots that can catch live fish



Transparent hydrogel robots that can be set in motion when water is pumped in and out of them has been designed by researchers at the Massachusetts Institute of Technology. Learn more about the robots in [this video](#).

Source: [Tech 2](#) (5 February 2017)

INTERNET AND SOCIAL MEDIA

Digital snapshot: Internet and social media use in 2017



Data on Internet and social media use in 2017. Key findings include that globally the smartphone use is prevalent in the majority, mobile phones are the largest source of web traffic, social media penetration exceeds 50% in many regions and that Facebook was the most widely used social media site.

Source: [TechnAsia](#) (9 February 2017)

MATERIAL SCIENCE

See How Flexible, Superthin Glass is Produced



Extremely thin, flexible glass is currently used in a variety of applications, such as smartphone and watch screens. This [video](#) shows you how it is fabricated.

Source: [ArchDaily](#) (9 February 2017)

ROBOTICS

Japan's robot chefs aim to show how far automation can go

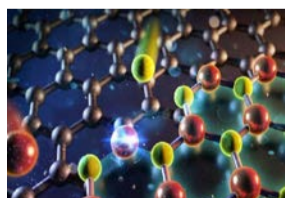


A restaurant in Japan has more robot chefs than human workers. The robots cook and provide reminders to diners before the end time of a buffet. They are part of an initiative to analyse which kitchen and food processes should be carried out by robots and which are to be left to humans.

Source: [Financial Times](#) (1 February 2017)

SEMICONDUCTORS

The World's Thinnest Oxide Semiconductor

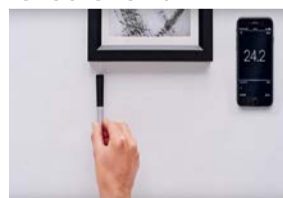


Discover a semiconductor that has a thickness of just [one atom](#). It was fabricated with a zinc oxide monolayer, has a wide band gap and good optical transparency. Read more about this semiconductor at [Nano Letters](#).

Source: [Asian Scientist](#) (13 February 2017)

SMART DEVICES

A new sensor-filled smart pen can measure any 3D object just by being rolled over it



Presenting a smart pen, by a company called InstruMMents, equipped with sensors that allow it to measure a 3D object merely by running over it. It also has an app to allow users to vary the unit of measurement. Learn more about the smart pen in [this video](#).

Source: [Breaking News](#) (9 February 2017)

VIRTUAL REALITY

Virtual Reality Weather Add-Ons Let You Feel the Sun and Wind



Imagine skiing down a virtual mountain on a sunny day you feel the wind blowing on your face and the warm sunshine on the back of your neck. A group of researchers from NUS are now striving towards the ultimate VR experience.

Source: [New Scientist](#) (13 February 2017)

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