

Weekly Discovery

We SHARE to inspire and ignite ideas!

21 May 2018 - 25 May 2018

AUTONOMOUS ELECTRIC VEHICLES

Can Autonomous Electric Vehicles Accelerate the Low Carbon Transition?

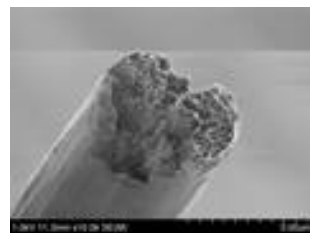


Find out how carbon emissions can be reduced by using Autonomous EVs and also the rethinking of what transportation is in this detailed report by PwC, which analyses their impact using several outlook reports.

Source: [PwC](#) (March 2018)

BIOMATERIALS

World's Strongest Bio-Material Outperforms Steel and Spider Silk



Made of cellulose nanofibers, these artificial but bio-degradable fibres are stronger than steel and even dragline spider silk. Read more at [ACS Nano](#).

Source: [DESY](#) (16 May 2018)

BLOCKCHAIN

The Emergence of Blockchain and Its Impact on E-Discovery



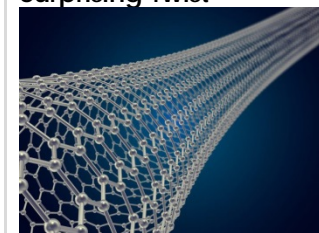
Source: Sashkin/Shutterstock.com

The core to blockchain technology is its transparent ledger feature. This feature may turn out to be a double-edged sword as the technology may expose third parties or trade secrets when implemented in smart contracts.

Source: [Legaltechnews](#) (15 May 2018)

CARBON NANOTUBES

Important Carbon Nanotube Breakthrough Found to Have Surprising Twist

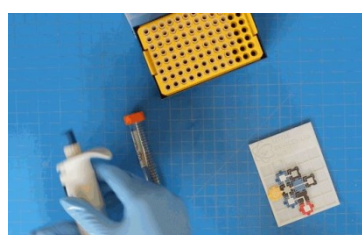


While the current approaches of mass producing carbon nanotubes will only result in twisted tubes that are clumped together, this new [method](#) addresses the issue with just a low-cost and common solvent.

Source: [Silicon Republic](#) (17 May 2018)

CUSTOMISED DIAGNOSTICS

Plug-and-Play Diagnostic Devices



MIT's [Ampli blocks](#) can be easily assembled in various patterns to create diagnostic devices with different functions, such as testing blood glucose levels and detecting viral infection.

Source: [MIT News](#) (16 May 2018)

DIGITAL MARKET OUTLOOK

eServices Report 2018



From 2017 to 2022, the projected potential increase in revenue of global eServices market is 125%. Four categories of services (Dating Services, Fitness, Event Ticketing, & Food Delivery) were highlighted in the report.

Source: [Statista](#) (2018)

ENTREPRENEURSHIP

10 Leaders in Hong Kong Share Their Corporate Innovation Advice



Source: Seoclerk.com

Creativity and innovation are the secrets of success. However, there are many barriers to innovation. Check out how 10 leaders in Hong Kong define and address innovation obstacles.

Source: [Collective Campus](#) (14 May 2018)

NANOROBOTICS

Robotic Assembly of the World's Smallest House – Even a Mite Doesn't Fit Through the Door

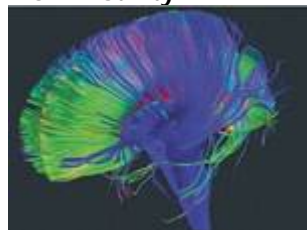


Gain access to inaccessible locations like jet engines and blood vessels to detect radiation levels or reaching viral molecules respectively by manipulating ion guns, electronic beams and finely controlled robotics. Read more at [AIP](#).

Source: [Phys.org](#) (18 May 2018)

NEUROSCIENCE

Scientists Are Using Holograms to Edit Brain Activity

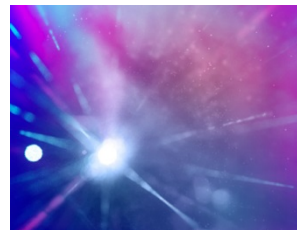


Unleash the possibilities of assisting patients in facing challenges with day-to-day functions and the ability to programme and remove traumatic memories altogether.

Source: [Interesting Engineering](#) (21 May 2018)

OPTICAL TECHNIQUES

Super-Fast Lasers Detect Poisonous Air



An ultra-fast and accurate [optical technique](#) detects molecules in the air in milliseconds using infrared lasers. Applications include pollutant scanning and medical breath analysis.

Source: [ASME](#) (16 May 2018)

RESEARCH MANAGEMENT

Health Tips for Research Groups



Check out the tips from leaders of different research labs on how to make lab life healthier, happier and more productive.

Source: [Nature](#) (16 May 2018)

ROBOTICS

Wireless 'Robofly' Looks Like an Insect, Gets Its Power from Lasers



A new leap in designing of diminutive airborne robots. This new robot does not leash the RoboBee down with cables to supply the power, but allows them to fly freely by getting power via laser beams.

Source: [LiveScience](#) (17 May 2018)

SENSOR

An Electronic Rescue Dog



The smallest and cheapest ever equipment for detecting people by smell. Suitable for searching in inaccessible areas for buried people in earthquakes or avalanches. Read more at [ACS](#).

Source: [ETH Zurich](#) (16 May 2018)

SUSTAINABILITY

New Catalyst Upgrades Greenhouse Gas into Renewable Hydrocarbons

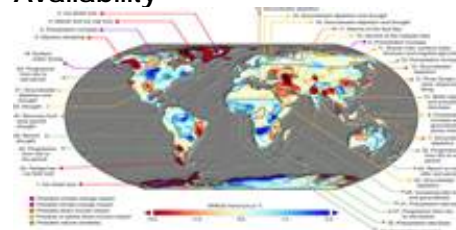


Scientists have developed a new method of converting carbon dioxide to ethylene which can be used in the production of plastics. This process not only has commercial value but can help fight climate change.

Source: [EurekAlert!](#) (17 May 2018)

WATER RESOURCE MANAGEMENT

Emerging Trends in Global Freshwater Availability



Gain insight through the images captured by satellites of the Gravity Recovery and Climate Experiment (GRACE) between 2002 and 2016. Climate change and human factors are the reasons for depleting freshwater resources.

Source: [Nature](#) (17 May 2018)

ZOO ARCHITECTURE

Coexist: Rethinking Zoos



Take a look at the winners of a zoo architecture competition where the theme is to educate, investigate and contribute to the conservation of the various animal species.

Source: [Archstorming](#) (May 2018)

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