

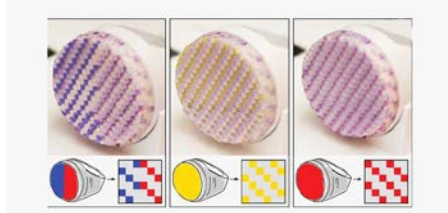
# Weekly Discovery

We SHARE to inspire and ignite ideas!

29 January 2018 - 2 February 2018

## 3D PRINTING

### Changing the Color of 3-D Printed Objects

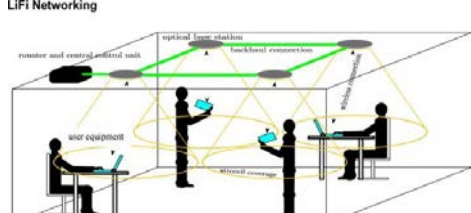


MIT ColorFab develops [a 3-D-printable photochromic system](#) that allows colours to change after 3D printing them. The colours can be activated using ultraviolet light and deactivated using visible light.

Source: [MIT News](#) (29 January 2018)

## 5G NETWORK

### LiFi Is a Paradigm-Shifting 5G Technology

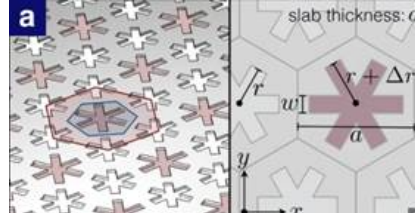


Imagine lights becoming the access points for wireless networking. The 5th Generation wireless technology LiFi uses visible light communication to achieve high speeds of 8 Gbps that is secure, bi-directional and fully networked.

Source: [Reviews in Physics](#) (November 2018)

## ACOUSTIC METAMATERIALS

### Crystal Slab of 'Snowflakes' to Become World's Tiniest Sonic Shield



A new sonic insulator that is thinnest ever designed with snowflakes-shaped holes, aims to overcome the vibration-bending boundary and spread out waves. Read more at [APS](#).

Source: [Live Science](#) (25 January 2018)

## AUTOMOBILE

### Five Trends Transforming the Automotive Industry

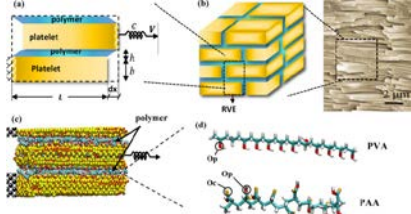


According to this [PwC report](#), the future of mobility will be "EASCY" – Electrified, Autonomous, Shared, Connected, and "Yearly" updated. Studies on people's mobility behaviours and an outlook on the sector are included.

Source: [PwC](#) (16 January 2018)

## BIOMIMETICS MATERIAL

### Insights on Synergy of Materials and Structures in Biomimetic Platelet-Matrix Composites



Inspired by the mechanics of mother-of-pearl, scientists found that the right mix of hydrogen bond in polymer and cement results in strong and tough infrastructure. This has large impact on replacing of ageing infrastructure and making better earthquake resistant concrete.

Source: [Applied Physics Letters](#) (January 2018)

## CLOUD-AI-AS-A-SERVICE

### AI on Cloud Nine

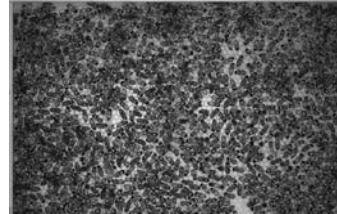


Dr Min Wanli from Alibaba Cloud shared insights on the convergence of artificial intelligence and cloud computing. With its ET Brain technology, Alibaba has also ventured into city management and cancer diagnosis.

Source: [Asian Scientist](#) (Jan - Jun 2018)  
Available @ SUTD Library (Call Number Q80 ASI)

## COMMUNICATION

### Reach out and Feed Someone: Automated System Finds Rapid Honey Bee Communication Networks

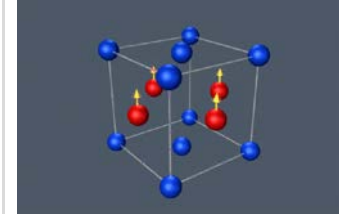


In-depth monitoring of the social interactions of honey bees shows information transmission similar to human networks. The findings may help us design more effective human-machine communication systems. Also read more at [PNAS](#).

Source: [EurekAlert!](#) (29 January 2018)

## DATA STORAGE

### Scientists Catch Light Squeezing and Stretching Next-Gen Data Storage Material



Magnetization of nanoparticles by laser increases the disk capacity and the speed of data storage devices. This could lead to the production of next generation high density storage devices. Also read more at [Nature](#).

Source: [Phys.org](#) (30 January 2018)

## FINTECH

### FinTech—Growth Opportunities in the Global Market



This [report](#) explains the current technology in the FinTech space like IoT, AI, Robo-Advisory and more. It also details the market trends, opportunities and challenges within the FinTech sector.

Source: [Frost & Sullivan](#) (3 January 2018)

## DIGITAL INNOVATION

### The Global Impact of Digital Transformation in Commercial Aviation, 2017



Learn about [digital transformation](#) and how this is impacting the Aviation industry. Also read how [SIA](#) is moving towards digital aviation to boost new business opportunities in aerospace.

Source: [Frost & Sullivan](#) (12 January 2018)

## MICROFLUIDICS

### Researchers Build a Microfluidic Flowmeter

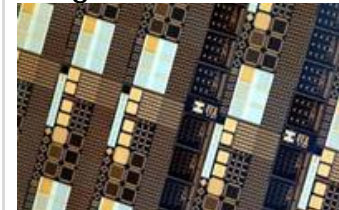


A patent pending invention - a micro flow measurement device using optical technology, the size of a nickel, could pave the way for faster clinical diagnosis and chemical research.

Source: [Machine Design](#) (29 January 2018)

## NANOTECHNOLOGY

### New Technology Standard Could Shape the Future of Electronics Design



Traditional transistors are reaching physical limits. Scientists found a new method to improve memristor's capabilities, which has raised hope for next generation electronics. Also read more at [Nature](#).

Source: [Science Daily](#) (25 January 2018)

## PRODUCTIVITY

### Secrets of the Most Productive People

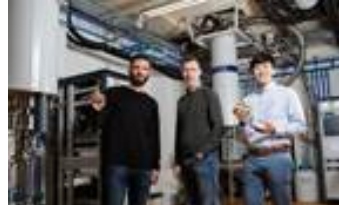


Learn through a collection of interviews how CEOs, COOs, Music Producers and other successful people stay productive in their work and lifestyle. Also suggestions on how to be more productive based on your lifestyle habits such as waking up early or late.

Source: [Fast Company](#) (Dec 2017 / Jan 2018)  
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## QUANTUM CHIP

### Quantum Race Accelerates Development of Silicon Quantum Chip



Researchers at Delft University of Technology have demonstrated that by using a silicon chip, quantum information could be transferred via an electron spin and a photon. Also read more at [Science](#).

Source: [Delft University of Technology](#) (25 January 2018)

## SUPPLY CHAIN

### Infrastructure Projects That Defy the Status Quo

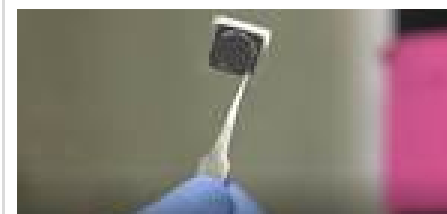


This 21-page [report](#) lists 10 distinctive large scale infrastructure projects, such as port management, high speed rail, battery storage and power grid, that show a lot of promise.

Source: [Industry Week](#) (29 January 2018)

## TISSUE ENGINEERING

### Reprogram, Restore, Regenerate



A new technology, tissue nanotransfection, allows us to repair tissues by injecting DNA directly into cells. The innovation may open a new method for regeneration. Also read more at [Nature](#).

Source: [Scientific American](#) (December 2017)  
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