

# Weekly Discovery

We SHARE to inspire and ignite ideas!

18 September 2017 - 22 September 2017

## ARCHITECTURE

### Proposed World's Tallest Wooden Structure Would Filter Contaminated Water in New York's Central Park



A wooden tower that has a water filter to clean a contaminated lake and a wind turbine to power the filtration process and transport people up to the viewing point that boasts a 360 degree view above 500 feet high.

Source: [Archdaily](#) (15 September 2017)

## DEFENSE TECHNOLOGIES

### Emerging Technologies for Defense



This Frost & Sullivan report features 10 emerging technologies in the aerospace and defence industry, such as biosensors, metamaterials and robotic exoskeletons. Also highlighting the key trends and major innovators in the sector.

Source: [Frost & Sullivan](#) (14 September 2017)

## INTERNET OF THINGS

### The Internet of Things Is a Boon for B2B: Report

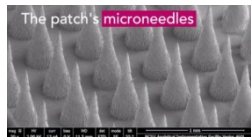


The Internet-of-Things (IoT) market has experienced a 41% expansion this year, attracting \$66 billion investment. Learn more on how IoT is driving the digital transformation through the [Verizon Report](#).

Source: [Ecommerce Times](#) (13 September 2017)

## MEDICAL TECHNOLOGY

### Skin Patch Dissolves 'Love Handles' in Mice

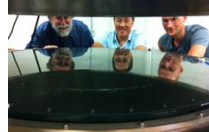


These skin patches can burn off unwanted fat in a selected area. The patch's microneedles maybe effective in treating metabolic disorders like diabetes and obesity.

Source: [Science Daily](#) (15 September 2017)

## OPTICS

### New Mirror-Coating Technology Promises Dramatic Improvements in Telescopes



Silver is sought after for its high reflection performance. This Atomic Layer Deposition technique can prevent silver coatings from tarnishing and corroding, prolonging the lifespan to up to 10 years.

Source: [EurekaAlert](#) (18 September 2017)

## PRINTABLE SELF-ACTUATOR

### Peel-and-Go Printable Structures Fold Themselves



Without the aid of any external catalyst, this 3D print-out can instantly self-fold with a new printer-ink material. This empowers functional electronics, which are usually created on planar surfaces, to go 3D.

Source: [MIT News](#) (13 September 2017)

## ROBOTICS

### These Robots Can Merge and Split Their Brains to Form New Modular Bots



Instead of one brain controlling all modular robots, this mergeable nervous system allows any single module to be a brain at any stage. Robots that can flexibly alter form and size become possible. Read more at [Nature](#).

Source: [IEEE Spectrum](#) (18 September 2017)

## SMART MATERIALS

### Plants Can Grow Their Own Glow-in-the-Dark Cotton, No Genetic Engineering Required



Imagine an extraordinary dress that could store data, glow in the dark, and can never be worn out. Isn't it impressive? Scientists proposed an innovative solution that directly "grows" these fantastic features into cotton fibres.

Source: [Science](#) (14 September 2017)

## TECHNOLOGY & PSYCHOLOGY

### The Bionic Blues: Robot Rejection Lowers Self-Esteem



Researchers studied how robot rejection and acceptance would influence human self-esteem through a game. Findings indicated that social surrogates like robots might bring mental harm to human beings.

Source: [Computers in Human Behavior](#) (12 September 2017)

## THERMAL MANAGEMENT

### The Refrigerant Is Also the Pump



This electrocaloric polymer prototype cooler is able to achieve greater coefficient of performance and thermal capacity. It could be used for wearable cooling bandages, compact air conditioners, and more.

Source: [Science](#) (15 September 2017)

## WASTE MANAGEMENT

### The New Economy of Excrement



Discover how new businesses and products are being developed from human waste. Not only is there economic benefit from these innovations, environmental issues are also addressed in their processing.

Source: [Nature](#) (13 September 2017)

## WEARABLES

### Wearable Solar Cells that You Can Put in the Wash



This extremely thin and flexible photovoltaic device can efficiently harvest solar power and convert into electricity even after being immersed in water for 2 hours or harshly compressed. Read also at [Nature](#).

Source: [Asian Scientist](#) (19 September 2017)