

# Weekly Discovery

We SHARE to inspire and ignite ideas!

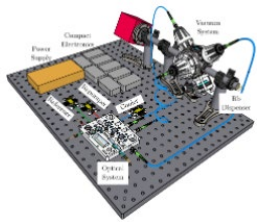
8 - 12 November 2021

The Library publishes **9 alerts** focusing on Topics relevant to **growth and research areas** to SUTD.

Stay up to date by **subscribing** to any of these **9 Topical Reports** - [CLICK HERE TO SUBSCRIBE NOW](#)

Artificial Intelligence & Data Science	Aviation	Cities
HealthCare	Robotics & Automation	Design & Innovation
Cybersecurity	Digital Design & Fabrication	Advanced Manufacturing

## 3D PRINTING 3D Printing Makes A Smaller, Lighter Cold Atom Trap



"A team led by physicists at the University of Nottingham, UK has created a [3D-printed magneto-optical trap \(MOT\)](#) capable of holding more than  $2 \times 10^8$  rubidium atoms at temperatures a fraction of a degree above absolute zero."

Source: [Physics World](#) (8 November 2021)

## ARCHITECTURE Open Architecture Unveils Rock-Like Concert Hall In A Valley Outside Beijing



"The building comprises a semi-outdoor amphitheatre, outdoor stage, viewing platforms and a rehearsal room. Built entirely from concrete that has been enriched with an aggregate made from local stone, the concert hall has been designed to resemble a piece of the natural landscape."

Source: [Dezeen](#) (5 November 2021)

## ARCHITECTURE Prefabricated Bamboo Community Centre In Pakistan Built By Local People



"Decorative bamboo screens enclose the Zero Carbon Cultural Centre, a giant pavilion in Makli built by local people together with architect Yasmeen Lari's Heritage Foundation of Pakistan organisation...The Zero Carbon Cultural Centre serves as a community centre and social space for people living in poor and marginalised communities in the town, which is located in southern Pakistan."

Source: [Dezeen](#) (5 November 2021)

## ARTIFICIAL MATERIAL Creating An Artificial Material That Can Sense, Adapt To Its Environment



"Researchers at the University of Missouri and University of Chicago have developed an artificial material, called a metamaterial, which can respond to its environment, independently make a decision, and perform an action not directed by a human being."

Source: [University of Missouri](#) (2 November 2021)

## CAREER The Most Fundamental Skill: Intentional Learning And The Career Advantage



"Learning itself is a skill. Unlocking the mindsets and skills to develop it can boost personal and professional lives and deliver a competitive edge."

Source: [Mc Kinsey & Company](#) (7 August 2021)

## ENERGY Storing Energy In Plants With Electronic Roots



"By watering bean plants (*Phaseolus vulgaris*) with a solution that contains conjugated oligomers, researchers at the Laboratory of Organic Electronics, Linköping University, have shown that the roots of the plant become electrically conducting and can store energy."

Source: [EurekaAlert!](#) (8 November 2021)

## MATERIALS After 30 Days In The Ocean, These Fibers Fully Biodegrade



"Clothing made of synthetic fabrics like polyester shed millions of plastic microfibers that pollute the ocean. If Lenzing's wood-based fibers end up in the sea, they just biodegrade."

Source: [Fast Company](#) (8 November 2021)

## PLASTIC WASTE New Study Pinpoints Likely Path Of COVID-Related Plastic Waste In The Ocean



"Researchers use a new model to project where the surge of mismanaged medical waste will end up—including beaches, seabeds, and the Arctic Ocean."

Source: [UC San Diego](#) (8 November 2021)

## ROBOTICS Autonomous Robotic Rover Helps Scientists With Long-Term Monitoring Of Deep-Sea Carbon Cycle And Climate Change



"An autonomous robotic rover, Benthic Rover II, has provided new insight into life on the abyssal seafloor, 4,000 meters (13,100 feet) beneath the surface of the ocean. A study published today in Science Robotics details the development and proven long-term operation of this rover. This innovative mobile laboratory has further revealed the role of the deep sea in cycling carbon. The data collected by this rover are fundamental to understanding the impacts of climate change on the ocean."

Source: [MBARI](#) (3 November 2021)

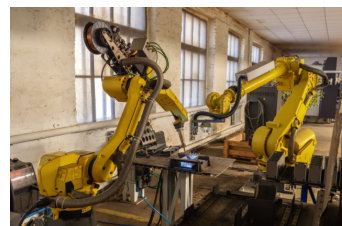
## ROBOTICS How To Build Tiny Robots From Stretchy Sheets



"New research shows that microscale robots can be made from shape shifting 2D sheets. Itai Cohen and Itay Griniasty of Cornell University in the US have developed a mathematical technique for encoding the motion cycle of a tiny robot onto the surface of a flat material."

Source: [Physics World](#) (4 November 2021)

## ROBOTS Giving Robots Social Skills



"MIT researchers have now incorporated certain social interactions into a framework for robotics, enabling machines to understand what it means to help or hinder one another, and to learn to perform these social behaviors on their own."

Source: [MIT](#) (5 November 2021)

## STARTUP The Startups That Could Close The Greenwashing Loopholes



"The process of measuring carbon needs a revolution similar to fintech's, an industry that came out of nowhere to challenge incumbents by bringing together the brightest minds in technology and finance. The good news is that seems to be happening: an array of startups is racing to solve the puzzle."

Source: [Bloomberg Opinion](#) (8 November 2021)

To view past Weekly Alerts [CLICK HERE](#)  
For more articles or in-depth research, contact us at [library@sutd.edu.sg](mailto:library@sutd.edu.sg)  
A SUTD Library Service©2021