SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

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7 Sep – 10 Sep 2020

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AI

Robotics, AI, and Cloud Computing Combine to Supercharge Chemical and Drug Synthesis

"The main benefit that turning over the carrying out of the reactions to a robotic system is expected to yield is to free up chemists from doing the often tedious process of having to design a synthesis from scratch…"

Source: IEEE Spectrum (31 August 2020)

ARCHITECTURE

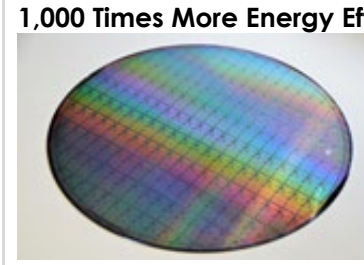
Koichi Takada Architects Unveils 'Urban Forest' High-Rise Planned For Brisbane

"koichi takada architects has shared a first look of their latest work – a new mixed-use residential tower planned for the cultural precinct of south brisbane, australia. designed with the ambition of being the world's greenest residential building, the 'urban forest' project features a host of sustainable design strategies alongside a densely-forested vertical garden.
"

Source: DesignBoom (2 September 2020)

ARTIFICIAL INTELLIGENCE

Brain-Inspired Electronic System Could Make Artificial Intelligence 1,000 Times More Energy Efficient



"The system, which uses memristors to create artificial neural networks, is at least 1,000 times more energy efficient than conventional transistor-based AI hardware."

Source: SciTechDaily(6 September 2020)

AVIATION

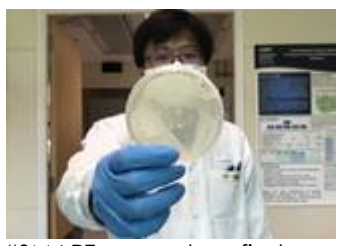
Japan on Track to Introduce Flying Taxi Services in 2023

"SkyDrive's success in conducting a piloted eVTOL test indicates short-hop flights are close to commercial reality"

Source: Spectrum IEEE (4 September 2020)

BIOLOGICAL ENGINEERING

A New Way To Make Bacteria More Sensitive To Antibiotics

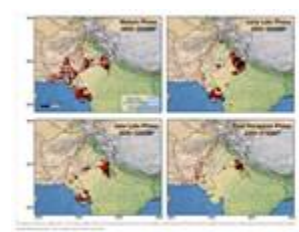


"SMART researchers find exposing bacteria to hydrogen sulfide can increase antimicrobial sensitivity in bacteria that do not produce H2S."

Source: MIT News (3 September 2020)

CLIMATE CHANGE

New Mathematical Method Shows How Climate Change Led To Fall Of Ancient Civilization



Malik developed a method to study paleoclimate time series, sets of data that tell us about past climates using indirect observations.

Source: EurekAlert! (3 September 2020)

COVID-19

Results Of Decade-Long Dundee Uni Research Work Could Signal 'Significant' Breakthrough In Lung Conditions And Covid-19 Fight

"After studying patients whose lungs were badly scarred by conditions including asthma, the city researchers have detected an excessive immune response which, if detected early, could be tackled with a commonly-used antibiotic."

Source: The Courier (7 September 2020)

GREEN TECHNOLOGY

Oxford PV and the Latest Solar Power Breakthrough

"A UK-based clean technology leader – Oxford PV – recently set a new world record for conversion efficiency in a perovskite solar technology. These highly efficient solar panels have been touted by many to be the next step in the future of photovoltaics."

Source: AZO Materials (7 September 2020)

INNOVATION

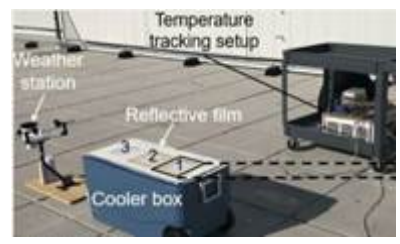
The Global Innovation Index (GII) 2020: Who Will Finance Innovation?

"In 2020, the Global Innovation Index (GII) presents its 13th edition dedicated to the theme Who Will Finance Innovation? This edition sheds light on the state of innovation financing by investigating the evolution of financing mechanisms for entrepreneurs and other innovators, and by pointing to progress and remaining challenges—including in the context of the economic slowdown induced by the coronavirus disease (COVID-19) crisis."

Source: WIPO (2 September 2020)

MATERIALS

Self-Cleaning And Self-Cooling Paper



"Scientists present a new paper-based material capable of reflecting sunlight and also strongly radiating accumulated heat. A particularly interesting part is that this material also has excellent self-cleaning capabilities. Read more here. "

Source: Technology.Org (3 September 2020)

MATERIALS

Wool-Like Material Can Remember And Change Shape

"Now, researchers at the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) have developed a biocompatible material that can be 3D-printed into any shape and pre-programmed with reversible shape memory. The material is made using keratin, a fibrous protein found in hair, nails and shells. The researchers extracted the keratin from leftover Agora wool used in textile manufacturing."

Source: Harvard University (3 September 2020)

NEW NORMAL

Tech Tent: Big Tech And The Future Of Work

In countries where the economy has been ravaged by the effects of the coronavirus, job losses are soaring - except in the technology sector, where companies such as Amazon are creating thousands of new jobs.

Source BBC News (5 September 2020)

ROBOTICS

This Motorized Backpack Eases the Burden for Hikers

"… designed a new backpack that accounts for the inertial forces of the bag against a backpacker's body as they walk, reducing metabolic energy required by the user by an average of 11%."

Source: IEEE Spectrum (8 September 2020)

ROBOTS

Small Autonomous Robot Removes Pollutants from Water

The robot's aquatic capabilities also are new, as the device was recently updated from a land-based version. This is what paves the way for the new aforementioned applications in aquatic and medical scenarios.

Source: Design News (2 September 2020)

SUSTAINABILITY

Why Not Melt Your Clothes And Turn Them Into Plastic?

Fast fashion has changed the way we dress. We buy more clothes, more often, but wear them less. The average lifespan of a garment is just two years, and 87 per cent of unwanted clothing ends up in landfill or incinerators.

Source: Wired (5 September 2020)

WEARABLES

Wearable Ozone Therapy Device for Chronic Wound Treatment

Researchers at Purdue University have developed a wearable device that can administer antibacterial ozone gas to chronic wounds to help disinfect them. The technology could allow people to disinfect chronic wounds at home, …

Source: Medgadget (8 September 2020)

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