

Weekly Discovery

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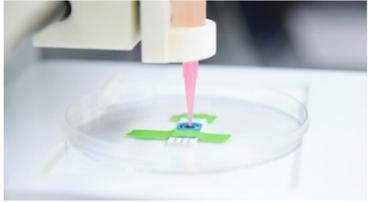
18 – 22 APRIL 2022

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HealthCare	Robotics & Automation	Design & Innovation
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3D PRINTING
Want to 3D Print a Kidney? Start By Thinking Small



"Stevens computational model aims to accelerate microfluidic bio-printing that opens up a pathway for 3D printing any kind of organ at any time."

Source: [Stevens Institute of Technology](#) (13 April 2022)

ARTIFICIAL INTELLIGENCE
AI Can Predict Probability of COVID-19 vs. Flu Based on Symptoms



"A new study from the College of Health and Human Services' researchers highlights how clinicians can use artificial intelligence and seasonality to screen patients and identify the probability of COVID-19 prior to testing."

Source: [George Mason University](#) (13 April 2022)

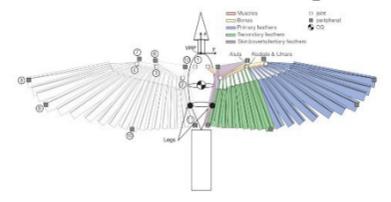
ARCHITECTURE
Schmidt Hammer Lassen unveils design for world's tallest timber building



"Danish studio Schmidt Hammer Lassen has revealed its design for a 100-metre-tall housing block in Switzerland, which will be the world's tallest timber building when it completes... It will be comprised of four volumes of different heights, one of which will rise to 100 metres tall making it the world's tallest building with a load-bearing timber structure."

Source: [Dezeen](#) (14 April 2022)

AVIATION
Avian Secret: The Key to Agile Bird Flight Is Switching Quickly Between Stable And Unstable Gliding



"While it had been assumed that unstable gliding was the key to agility in bird flight, a collaboration between aerospace engineers at the University of Michigan and biologists at the University of British Columbia revealed that stability plays a role. The discovery could lead to the design of more agile aircraft, specifically uncrewed aerial vehicles (UAVs)."

Source: [Michigan Engineering](#) (9 March 2022)

MATHEMATICS
Tear-Free Brushing? All You Need is Math



"Researchers develop a mathematical understanding of detangling that could be used for textile manufacturing, robotic hairdressers"

Source: [Harvard](#) (13 April 2022)

MATERIAL SCIENCE
Method Efficiently Breaks Down Plastic Bottles into Component Parts



"A research team has demonstrated that a material called a metal-organic framework (MOF) is a stable and selective catalyst for breaking down polyester-based plastic into its component parts. Only three things are needed: plastic, hydrogen and the catalyst."

Source: [Northwestern University](#) (12 April 2022)

MATERIAL SCIENCE
Seeing More Deeply into Nanomaterials



"New 3D imaging tool reveals engineered and self-assembled nanoparticle lattices with highest resolution yet—7nm—about 1/100,000 of the width of a human hair."

Source: [Columbia University](#) (13 April 2022)

ROBOTS
How to Compete with Robots



"Swiss roboticists and economists from EPFL and University of Lausanne developed a method for estimating the probability of jobs being automated by future intelligent robots and suggesting career transitions with lower risks and minimal retraining effort."

Source: [EPFL](#) (14 April 2022)

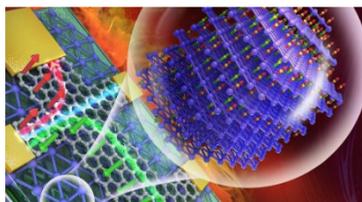
ROBOTS
Joystick-Operated Robot Could Help Surgeons Treat Stroke Remotely



"Engineers developed a telerobotic system to help surgeons remotely treat patients experiencing stroke or aneurysm. With a modified joystick, surgeons may control a robotic arm at another hospital to operate on a patient."

Source: [MIT](#) (13 April 2022)

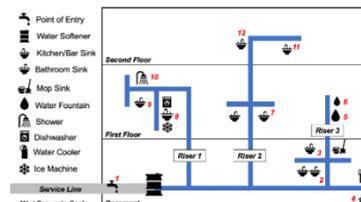
TRANSISTOR
New Transistor Could Cut 5% From World's Digital Energy Budget



"A new spin on one of the 20th century's smallest but grandest inventions, the transistor, could help feed the world's ever-growing appetite for digital memory while slicing up to 5% of the energy from its power-hungry diet."

Source: [University Of Nebraska-Lincoln](#) (11 April 2022)

WATER
Office Buildings with Infrequent Water Use May Have Poor Water Quality



"Low-consumption office buildings with infrequent water use could have chemical and microbiological safety issues, according to a new study. The research could have implications for office buildings used less frequently during pandemic lockdowns, and suggests that regular water testing in commercial buildings may be needed."

Source: [Science Daily](#) (9 March 2022)

WIRELESS CHARGING
Charging Underwater and Body-Implanted Electronic Devices Using Ultrasonic Waves



"Ultrasonic waves have applications in wireless charging of batteries underwater or in body-implanted electronic devices."

Source: [EurekAlert!](#) (18 April 2022)

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