

Weekly Discovery

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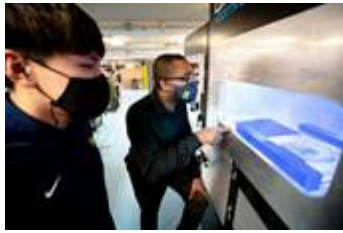
11 – 15 March 2022

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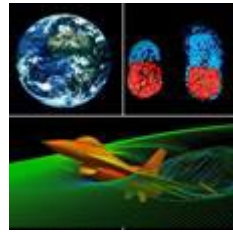
3D PRINTING
Smarter 3D Printing Makes Better Parts Faster



"3D printers may soon get better at producing intricate metal and plastic parts, thanks to new software developed at the University of Michigan that reduces harmful heat buildup in laser powder bed fusion printers."

Source: [University of Michigan](#) (8 April 2022)

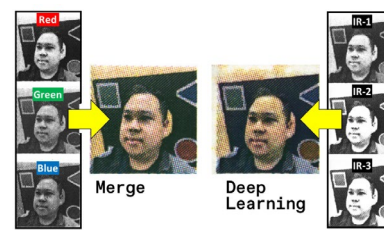
AI
Better, Faster, Energy Efficient Predictions



"researchers from the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) are forming what they call "intelligent alloys", combining the power of computational science with artificial intelligence to develop models that complement simulations to predict the evolution of science's most complex systems."

Source: [Harvard Seas](#) (7 April 2022)

AI
Color Night Vision Brought to You by AI



"A team of researchers at the University of California used deep learning to enable limited color vision in the dark. The group published a paper describing their work on the open-access site [PLOS ONE](#)."

Source: [IEEE Spectrum](#) (7 April 2022)

AI
Trainee Teachers Made Sharper Assessments About Learning Difficulties After Receiving Feedback From AI



"A trial in which trainee teachers who were being taught to identify pupils with potential learning difficulties had their work 'marked' by artificial intelligence has found the approach significantly improved their reasoning."

Source: [University of Cambridge](#) (11 April 2022)

ARCHITECTURE
Tents: An Architectural Language



"It's a ubiquitous architectural form. An architectural typology that spans centuries and borders, a staple across cultures. The tent. In its simplest form – it's a shelter, with material draped over a frame of poles. It's an architectural language that is intrinsically linked to nomadic living."

Source: [archdaily](#) (11 April 2022)

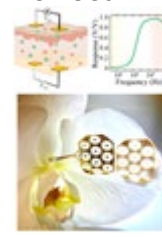
BLOCKCHAIN
Blockchain Offers A Solution To Post-Brexit Border Digitisation To Build Supply Chain Trust, Research Shows



"As a result of the UK leaving the European Union, logistics firms have faced additional friction at UK borders. Consequently, there have been calls for automated digital borders, but few such systems exist. Surrey researchers have now discovered that a blockchain-based platform can improve supply chain efficiency and trust development at our borders."

Source: [University of Surrey](#) (5 April 2022)

COMMUNICATION
Wireless, High-Speed, Low-Power Communications For Implantable Devices



"Now researchers at Columbia Engineering have invented a way to augment implantable bioelectronics with simple, high-speed, low-power wireless data links using ions, positively or negatively charged atoms that are naturally available in the body."

Source: [Columbia University](#) (6 April 2022)

COMPUTER CHIPS
Honey Holds Potential For Making Brain-Like Computer Chips



"In a study published in [Journal of Physics D](#), the researchers show that honey can be used to make a memristor, a component similar to a transistor that can not only process but also store data in memory."

Source: [Washington State University](#) (5 April 2022)

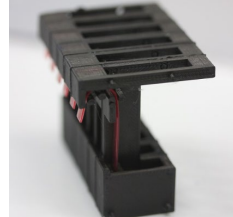
MATERIALS
Solar Nanowire-Nanotube Filter Offers Easy Access To Clean Drinking Water



"The scientists first show that the TiO₂ nanowires by themselves can efficiently purify water in the presence of sunlight. But interweaving the nanowires with carbon nanotubes forms a composite material that adds an extra layer of decontamination by pasteurizing the water – killing off human pathogens such as bacteria and large viruses."

Source: [EurekAlert!](#) (7 April 2022)

MEDTECH
Dengue Test Shows New Hope For Low-Cost Diagnostics



"In a paper published in [PLOS Neglected Tropical Diseases](#), biomedical technology researchers from the University of Reading used a new diagnostic kit called Cygnus to detect Dengue Fever with significantly improved rates over lateral flow testing kits."

Source: [University of Reading](#) (8 April 2022)

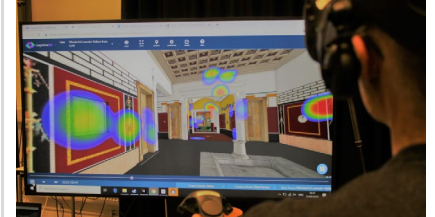
ROBOTS
A Robot That Can Put A Surgical Gown On A Supine Mannequin



"A pair of researchers working in the Personal Robotics Laboratory at Imperial College London has taught a robot to put a surgical gown on a supine mannequin. In their paper published in the journal [Science Robotics](#), Fan Zhang and Yiannis Demiris described the approach they used to teach the robot to partially dress the mannequin."

Source: [Tech Xplore](#) (7 April 2022)

VR
How Did Visitors Experience The Domestic Space In Pompeii?



"Researchers at Lund University in Sweden have used virtual reality and 3D eye-tracking technology to examine what drew the attention of the visitors when entering the stunning environment of an ancient Roman house. The team recreated the House of Greek Epigrams in 3D and tracked the gaze of study participants as they viewed the home."

Source: [LUND University](#) (6 April 2022)

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