

Weekly Discovery

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16 MARCH 2020 - 20 MARCH 2020

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3D PRINTING Speculative Machines Produce Existential Wonder



"Kubli and the Tangible Media Group have been prototyping different fabrication techniques, experimenting with materials that will be thin and light enough to hold helium, and yet also rigid enough to form shapes far more complex than an ordinary balloon."

Source: [MIT News](#) (12 March 2020)

ADVANCED MANUFACTURING SMART Announces New Method For Processing Fluid Droplets



"A new embedded droplet printing method suspends 3D arrays of droplets in a uniquely isolated state that allows for precise processing and experimentation."

Source: [MIT News](#) (16 March 2020)

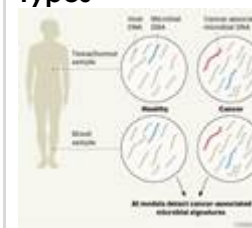
AGING Rethinking Mortality And How We Plan For Old Age



"A new IASA study however shows that older Europeans, and especially women, frequently underestimate how many years they have left, which could lead to costly decisions related to planning for their remaining life course."

Source: [EUREKALERT!](#) (17 Mar 2020)

ARTIFICIAL INTELLIGENCE AI Finds Microbial Signatures In Tumours And Blood Across Cancer Types



"The authors' models were generally good at discriminating between cancer types, although there were some limitations. Further validation of these results is needed in larger cohorts across cancer types using dedicated methods."

Source: [Nature](#) (11 Mar 2020)

ARTIFICIAL INTELLIGENCE AI Can Pick Out Specific Odours from a Combination of Smells



"An AI can sniff out certain scents, giving us a glimpse of how our nose might work in detecting them ... The algorithm mimics a part of the mammalian olfactory bulb (MOB) that distinguishes between different smells that are usually present as a mixture of compounds in the air."

Source: [New Scientist](#) (16 March 2020)

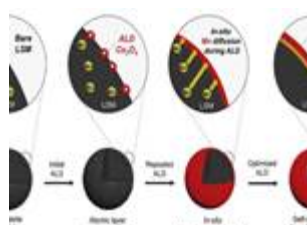
BATTERY Fast-Charging Damages Electric Car Batteries



"the researchers have developed a method for charging electric car batteries at lower temperatures with less risk of catastrophic damage and loss of storage capacity."

Source: [University of California, Riverside](#) (11 Mar 2020)

BATTERIES New Catalyst Provides Boost to Next-Generation EV Batteries



"Metal-air batteries (MABs), which use oxygen from ambient air as recourse to store and convert energy, have received considerable attention for their potential use in electric vehicles (EVs) owing to their large storage capacity, light weight, and affordability."

Source: [Phys.Org](#) (13 March 2020)

BUILDINGS New Low-Cost Approach Detects Building Deformations with Extreme Precision in Real Time



"With the ability to detect submillimeter movements in real time, new method could be valuable for monitoring historic structures and adaptive buildings of the future."

Source: [QSA](#) (16 March 2020)

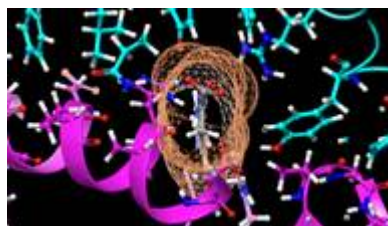
COMPUTING CSL Research Team Develops Voice Localization Techniques For Smart Speakers



"Knowing a user's location within a home could help a smart device better support currently available skills. Using a technique known as reverse triangulation, Shen and advisor Romit Roy Choudhury are getting closer to voice localization."

Source: [Granger College of Engineering](#) (10 Mar 2020)

COVID 19 Could Supercomputers and Rapid Treatment Trials Slow Down Coronavirus?



"Supercomputer-aided development of possible antiviral therapies, rapid lab testing of other prospective treatments, and grants to develop new vaccine technologies: Coronavirus responses such as these may still be long shots when it comes to quickly containing the pandemic."

Source: [IEEE Spectrum](#) (17 Mar 2020)

INNOVATION The World's 50 Most Innovative Companies



"Read on to see how these and dozens more inspiring accomplishments are driving this year's list of the World's Most Innovative Companies. Plus, the 44 Top 10 most innovative firms, by sector and region. We hope you're as inspired learning from these businesses."

Source: [Fast Company](#) (10 March 2020)

IOT Leaving Cyberattackers Lost in the Fog



"A*STAR researchers have found a way to arrest distributed-denial-of-service attacks close to their source, with implications for securing the Industrial Internet of Things."

Source: [A*STAR Research](#) (12 March 2020)

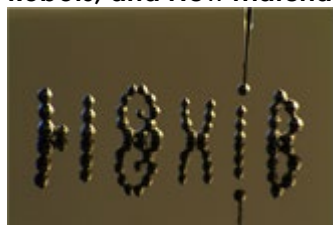
MATERIALS Graphene Solar Heating Film Offers New Opportunity For Efficient Thermal Energy Harvesting



"Researchers at Swinburne's Centre for Translational Atomaterials have developed a highly efficient solar absorbing film that absorbs sunlight with minimal heat loss and rapidly heats up to 83°C in an open environment."

Source: [Swinburne University](#) (13 Mar 2020)

MATERIALS SCIENCE Core Concept: Liquid Metal Renaissance Points to Wearables, Soft Robots, and New Materials



"A growing number of research groups are working with liquid metals, hoping to exploit their potential to create new materials, new catalysts, and possibly new ways to trap carbon dioxide."

Source: [PNAS](#) (10 March 2020)

OPTICS Researchers Create Focus-Free Camera With New Flat Lens



"Using a single lens that is about one-thousandth of an inch thick, researchers have created a camera that does not require focusing. The technology offers considerable benefits over traditional cameras, which require multiple lenses to form high-quality, in-focus images."

Source: [EurekAlert!](#) (12 Mar 2020)

TYRE TECHNOLOGY Goodyear's New Tire Concept Can Regenerate Tread on the Go



"To help drivers avoid the misery of waiting around for a tire change, Goodyear has introduced an intriguing new concept: tires that can regenerate new tread on the spot."

Source: [Popular Mechanics](#) (13 March 2020)

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