SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

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AI & HEALTHCARE

Powerful Antibiotics Discovered Using AI

"A pioneering machine-learning approach has identified powerful new types of antibiotic from a pool of more than 100 million molecules — including one that works against a wide range of bacteria, including tuberculosis and strains considered untreatable."

Source: Nature (20 February 2020)

ARCHITECTURE

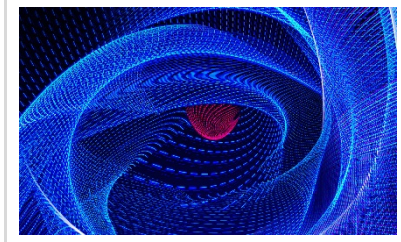
How Aggressive Architecture Designs the Homeless Out of the Public Realm

"In recent years, the architectural community has become heavily involved, in both positive and negative ways, with the chronic global issue of homelessness … Using the typology of public benches in London, Furzer documents public fixtures which act as deterrents to rough sleepers, essentially denying a right to the city for those who ultimately have no choice but to be there."

Source: ArchDaily (24 February 2020)

ARTIFICIAL INTELLIGENCE

AI Deception: When Your Artificial Intelligence Learns to Lie



"Given the likely importance that advances in artificial intelligence could play in shaping our future, it is critical to begin a discussion about ways to take advantage of the benefits of AI and autonomous systems, while mitigating the risks."

Source: IEEE Spectrum (24 February 2020)

BATTERIES

Hydro-Québec to Commercialize Glass Battery Co-Developed by John Goodenough

"John Goodenough's latest lithium (glass) battery will be developed by a Canadian utility. Braga said her and Goodenough's battery is high capacity, charges in 'minutes rather than hours,' performs well in both hot and cold weather, and that its solid-state electrolyte is not flammable. 'This is one of the safest materials for lithium ion today,' Zaghib said. 'It's used for electric buses and for energy storage'."

Source: IEEE Spectrum (24 February 2020)

BIOMIMICRY

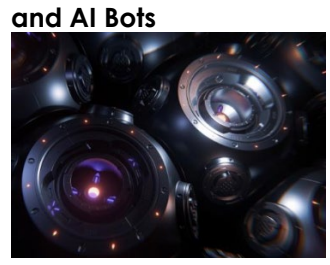
Cool Butterfly Effect: Insect Equipment Could Inspire Heat-Radiating Tech

"Researchers at Columbia University and Harvard University have now uncovered these colorful insects' built-in cooling mechanisms. Their wings behave a bit like nanoscale radiators and could inspire new lightweight materials to beat the heat."

Source: Scientific American (18 February 2020)

BOTS

Choosing Between Rule-Based Bots and AI Bots



"Rule-based bots and AI bots both have their own benefits and disadvantages, and both can be useful in their own ways. Enhanced customer service is king when it comes to the growth of a business. Understanding how different bots will improve their customer service ultimately helps them choose the best-suited bot for their business."

Source: Forbes (23 February 2020)

COVID-19

Drones and Self-Driving Robots Used to Fight Coronavirus in China

"China is deploying robots and drones to remotely disinfect hospitals, deliver food and enforce quarantine restrictions as part of the effort to fight coronavirus. Chinese state media has reported that drones and robots are being used by the government to cut the risk of person-to-person transmission of the disease."

Source: Dezeen (20 February 2020)

ENTREPRENEURSHIP

A Survival Guide for Startups in the Era of Tech Giants

"Big Tech has the money, technology, data, and talent to replicate and enhance any technological innovation that is not fully protected by patents - which encompasses most digital products."

Source: Harvard Business Review (21 February 2020)

HEALTHCARE

New Technology Uses Microwaves and AI for Tumor Detection

"Researchers have developed a new, inexpensive technology that could save lives and money by routinely screening women for breast cancer without exposure to radiation."

Source: News-Medical.Net (24 February 2020)

HIGHER EDUCATION

How Technology Is Changing the Future of Higher Education

"Labs test artificial intelligence, virtual reality and other innovations that could improve learning and lower costs for Generation Z and beyond."
Click here to register for your NYT account.

Source: The New York Times (24 February 2020)

MACHINE LEARNING

New Machine Learning Method from Stanford, with Toyota Researchers, Could Supercharge Battery Development for Electric Vehicles

"Using artificial intelligence, a Stanford-led research team has slashed battery testing times – a key barrier to longer-lasting, faster-charging batteries for electric vehicles – by nearly fifteenfold."
Also read at Nature.

Source: Stanford News (19 February 2020)

MEDICAL ROBOTS

Surgeons Successfully Treat Brain Aneurysms Using a Robot

"In this study, Canadian researchers report the results of the first robotic brain vascular procedures. They used a robotic system specifically adapted for neurovascular procedures. Software and hardware adaptations enable it to accommodate microcatheters, guidewires and the other devices used for endovascular procedures in the brain."

Source: American Heart Association (21 February 2020)

NANOTECHNOLOGY

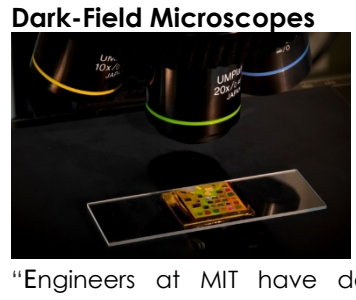
Tiny Micromotor Is Powered Directly with Light

"Researchers developed a micromotor that rotates thanks to the traveling deformation of the soft material, caused by the laser beam and its interaction with the ground. The main part — the rotor is a 5 millimeter ring. Appropriate design of the orientation of the elastomer molecules provides stable performance of the micromotor or can increase the rotation speed."

Source: SciTechDaily (21 February 2020)

PHOTONICS

Mirrored Chip Could Enable Handheld Dark-Field Microscopes



"Engineers at MIT have developed a small, mirrored chip that helps to produce dark-field images, without dedicated expensive components … The new optical chip can be added to standard microscopes as an affordable, downsized alternative to conventional dark-field components."

Source: MIT News (24 February 2020)

ROBOTICS

The Robot Does the Hard Work. Can You Still Attain Enlightenment?

"This is a mandala, reimagined. These complex patterns are meant to reflect the visions that monks see while meditating about virtues such as compassion, wisdom, and more, says Tenzin Priyadarshi, a Buddhist monk and the CEO of the Dalai Lama Center for Ethics and Transformative Values at MIT. To automate the elaborate process of creating and destroying them."

Source: MIT Technology Review (21 February 2019)

SUSTAINABLE DESIGN

This Flower-Inspired Stadium Design Is All About Sustainability

"NBBJ Architects designed the all-new Hangzhou Olympic Sports Center using far less steel than is standard in stadium design, meaning less carbon dioxide was emitted to create the structure."

Source: Architectural Digest (21 February 2020)