

Weekly Discovery

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30 DECEMBER 2019 - 3 JANUARY 2020

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HealthCare	Robotics & Automation	Design & Innovation
Cybersecurity	Digital Design & Fabrication	Advanced Manufacturing

ARCHITECTURE Innovative Uses of Water in Architecture



"Below, we synthesize a series of water features espoused by innovative contemporary architectural projects, ranging from single-family residential homes to vast commercial complexes."

Source: [ArchDaily](#) (1 January 2020)

DEEP LEARNING HKU Scientists Develop a Deep Learning Approach to Predict Disease-Associated Mutations of the Metal-Binding Sites



"A research team implemented a robust deep learning approach to predict disease-associated mutations of the metal-binding sites in a protein. This is the first deep learning approach for the prediction of disease-associated metal-relevant site mutations in metalloproteins, providing a new platform to tackle human diseases."

Source: [The University of Hong Kong](#) (15 December 2019)

ENVIRONMENT Scientists Link La Niña Climate Cycle to Increased Diarrhea



"A study finds that spikes in cases of life-threatening diarrhea in young children are associated with La Niña climate conditions. The findings could provide the basis for an early-warning system that would allow public health officials to prepare for periods of increased diarrhea cases as long as seven months ahead of time."

Source: [Science Daily](#) (30 December 2019)

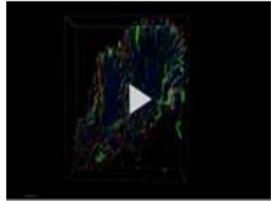
FURNITURE DESIGN Joint Forces: Designers That Are Hitting the Mark with Details



"... Hagit Pincovici went for a more embellished approach, developing an aluminium foam which connects the wooden seat of her 'Sands' stool to its sandstone supports, while London-based Italian designer Martino Gamper opted for something more classic when designing his 'Round & Square' collection, which uses contrasting woods to make a feature of the good, old-fashioned V joint."

Source: [Wallpaper](#) (24 December 2019)

HEALTHCARE Heart Attack Discovery Could Give Hope to People Not Able to Be Treated



"A new study has shown that a protein therapy- recombinant human platelet-derived growth factor-AB (rhPDGF-AB) - could improve outcomes following heart attack."

Source: [EurekAlert!](#) (1 January 2020)

INNOVATION Buying New Tech for Your Business? Here Are 12 Crucial Aspects to Consider



"Below, 12 members of Forbes Technology Council examine the aspects that you should look at when deciding whether it's beneficial or not to adopt new technology for your organization's use."

Source: [Forbes](#) (26 December 2019)

INTRUSION DETECTION New Technology Can Help to Combat Stealth Attacks on Drones



"To test out different vulnerability scenarios, scientists have run a series of stealth attacks on robotic vehicles (cars and drones). These attacks show how vulnerable these forms of automation are to external threats."

Source: [Digital Journal](#) (1 January 2020)

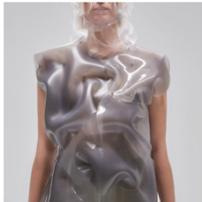
LIDAR Frost Radar in the Global LiDAR Market



"Frost & Sullivan evaluated companies in the emerging LiDAR market on parameters including LiDAR leadership, vision and strategy, funding, core technology and intellectual property (IP) ownership, partnerships and collaborations, series production, mergers and acquisitions, and distribution network."

Source: [Frost & Sullivan](#) (24 December 2019)

MATERIALS INNOVATION Dezeen's Top 10 Innovative Materials of 2019



"From lab-grown spider silk to cellulose, design and technology reporter Natashah Hitti continues our review of the year with 10 of the most interesting materials developed or used throughout 2019, with a particular focus on reuse."

Source: [Dezeen](#) (29 December 2019)

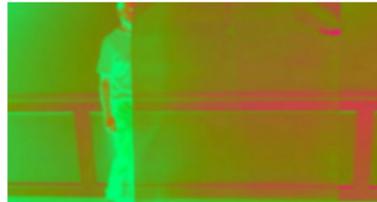
MEDICAL TECH Medgadget's Best Medical Technologies of 2019



"Stents and blood flow diverters are now a common way to treat brain aneurysms, but whether these therapies actually help specific patients is hard to tell post treatment ... Researchers at Georgia Tech developed a sensor that can be built into currently available neural stents and flow diverters that can provide live hemodynamic information precisely from the spot that was treated."

Source: [Medgadget](#) (30 December 2019)

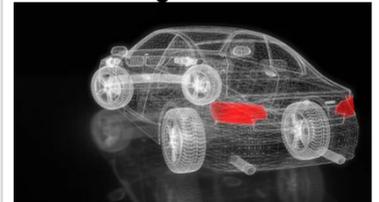
MILITARY TECH The Coolest (and Scariest) Military Tech of 2019



"It's also, often, where technological development advances at several paces beyond every other sector even remotely like it. These are some of literature's best (and most dystopian) ideas, fully realized. And 2019 especially boasted some of the most mind-bending military tech the world's ever seen."

Source: [Futurism](#) (27 December 2019)

PRODUCT DESIGN How the Internet of Things Streamlines Product Design



"IoT sensors installed on a product or in environments can gather many real-world datasets. Using the analytics generated by this data, engineers can model how a product performs in different scenarios, diagnose potential problems, optimize performance, or improve the product's design, thereby making the design process more efficient."

Source: [Engineering.com](#) (23 December 2019)

SENSORS This New Tech Can Turn Any Surface Into a Touchscreen



"[TouchPoint](#), the company's new sensor technology, can make any surface into a touchscreen, regardless of the material, due to its patented 3D ultrasound technology. The sensor is super tiny and only about the size of the tip of a pen. It'll be showcased at the Consumer Electronics Show in Las Vegas in January."

Source: [Popular Mechanics](#) (26 December 2019)

SMART CITIES Mobility Operating System for Global Smart Cities, 2019



"A mobility operating system essentially empowers a city government to utilize distributed city data, converging it to enable effective communications and developing innovative solutions for city management."

Source: [Frost & Sullivan](#) (24 December 2019)

TECHNOLOGY The Tech That Will Invade Our Lives in 2020



"From smart homes to ultrafast wireless speeds, here's what to watch."

Source: [The New York Times](#) (1 January 2020)

URBAN DESIGN 5 Bold Urban Design Projects That Made Cities More Fun, Clean, and Accessible in 2019



"Here's a look at some of the most fun and interesting urban innovations of 2019, proving that some cities are already in the future and are using their corners of the world to make our planet a little bit better."

Source: [Fast Company](#) (30 December 2019)