Weekly Discovery

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21 OCTOBER 2019 - 25 OCTOBER 2019

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HealthCare | Robotics & Automation | Design & Innovation
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3D PRINTING

Highest Throughput 3D Printer Is the Future of Manufacturing

Source: Science

"Researchers have developed a new, futuristic 3D printer that is so big and so fast it can print an object the size of an adult human in just a couple of hours." Read more at Science.

Source: Science Daily (17 October 2019)

CONSTRUCTION

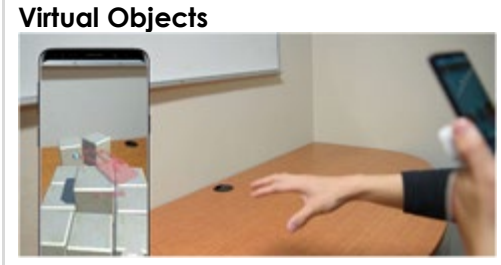
Advanced Construction: Material Innovations and New Technologies

"When looking to innovations in advanced construction, the Institute for Computational Design (ICD) and the Institute of Building Structures and Structural Design (ITKE), together with students at the University of Stuttgart, have been creating a series of experimental pavilion for many years. These structures tell a story of computational design and computer-aided manufacturing processes for advanced construction."

Source: ArchDaily (18 October 2019)

AUGMENTED REALITY

New Augmented Reality System Lets Smartphone Users Get Hands-On with Virtual Objects



"Developed at Brown University, a new augmented reality system places virtual objects within real-world backgrounds on cell phone screens and lets people interact with those object by hand as if they were really there."

Source: Brown University (16 October 2019)

BIOFUELS

Kelp Elevator Could Give Biofuels a Lift

"The idea behind the project is to find an efficient way to farm kelp for fuel. The ribbon like sea vegetable requires a minimum of resources -- no soil, no fresh water, no fertilizer -- and can grow up to 2 feet each day, earning it the nickname "the Sequoia of the sea." Ultimately, the kelp would be harvested and turned into a petroleum substitute called biocrude."

Source: Inside Science (14 October 2019)

DATA ANALYTICS

Top 12 Big Data, Analytics and Data Science Influencers of 2019

"Here is the list of top 12 Big Data, Analytics and Data Science influencers of 2019 who have been highly recognized and appreciated for their work and expertise."

Source: Analytics Insight (20 October 2019)

ECONOMY

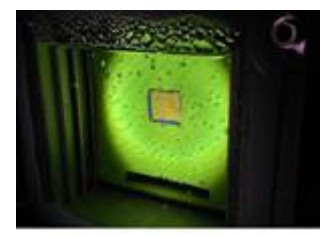
2019 Megatrends: State of Play

"Euromonitor International's team of experts have been analysing megatrends for the past 2 years to compile their findings in the 2019 Megatrends State of Play report. This extract focuses on the most popular megatrends: Connected Consumers, Healthy Living, Ethical Living, Shopping Reinvented, Experience More, Middle Class Retreat, Premiumisation and Shifting Market Frontiers."

Source: Euromonitor (2019)

ENERGY

'Artificial Leaf' Successfully Produces Clean Gas



Source: University of Cambridge

"A widely-used gas that is currently produced from fossil fuels can instead be made by an 'artificial leaf' that uses only sunlight, carbon dioxide and water, and which could eventually be used to develop a sustainable liquid fuel alternative to gasoline."

Source: Science Daily (21 October 2019)

GENE-EDITING

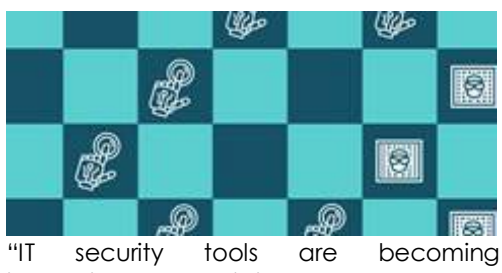
Breakthrough Gene-Editing Tool Can Find and Replace DNA Better Than CRISPR

"'Prime editing' is more precise and more efficient than CRISPR and could herald a new era of genetic manipulation."

Source: CNET (21 October 2019)

INNOVATION

An Innovation War: Cybersecurity vs. Cybercrime

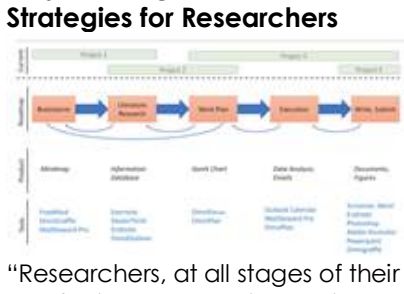


"IT security tools are becoming increasingly sophisticated thanks to artificial intelligence, but advances in the cybercriminal world are close behind."

Source: MIT Technology Review (18 October 2019)

KNOWLEDGE MANAGEMENT

Managing Ideas, People, and Projects: Organizational Tools and Strategies for Researchers

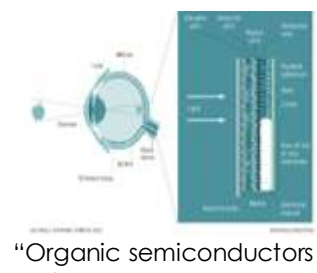


"Researchers, at all stages of their careers, are facing an ever-increasing deluge of information and deadlines. This article discusses the strategies for managing the organization of, and access to, digital information and planning structures can greatly facilitate the efficiency and impact of an active scientific enterprise."

Source: iScience (25 October 2019)

POLYMER

Polymers Promise a More Flexible Artificial Retina

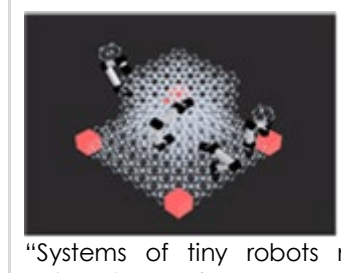


"Organic semiconductors can link up with brain cells to send and receive signals. They may find a use in sight-restoring prostheses."

Source: Knowable Magazine (22 October 2019)

ROBOTICS

Assembler Robots Make Large Structures from Little Pieces



"Systems of tiny robots may someday build high-performance structures, from airplanes to space settlements." Also read at IEEE Robotics and Automation Letters.

Source: MIT News (16 October 2019)

ROBOTICS

MIT Develops a Way for Robots to Grasp and Manipulate Objects Much Faster

"MIT has developed a new way to speed up the planning involved in a robot grasping an object, making it "significantly" faster — reducing the total time from as much as 10 or more minutes to less than a second."

Source: Tech Crunch (18 October 2019)

ROBOTICS

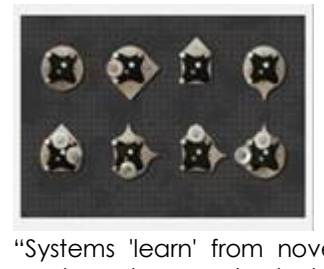
New Haptic Arm Places Robotics Within Easy Reach

"Imagine being able to build and use a robotic device without the need for expensive, specialist kit or skills. That is the vision that researchers from the University of Bristol have turned into reality, creating a lightweight, affordable and simple solution for everyday users."

Source: University of Bristol (20 October 2019)

ROBOTICS

Pushy Robots Learn the Fundamentals of Object Manipulation

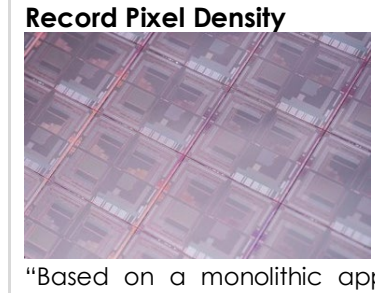


"Systems 'learn' from novel dataset that captures how pushed objects move, to improve their physical interactions with new objects."

Source: EurekAlert! (22 October 2019)

SENSOR

Imec Unveils Monolithic Thin-Film Image Sensor for the SWIR Range with Record Pixel Density



"Based on a monolithic approach, the process will deliver increased fabrication throughput and cost compared to today's conventional IR imagers, while at the same time enabling multi-megapixel resolution."

Source: New Electronics (21 October 2019)

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