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3D PRINTING

Researchers 3D Print Tiny Multicolor Microstructures

"Researchers have developed an automated 3D printing method that can produce multicolor 3D microstructures using different materials. The new method could be used to make a variety of optical components for applications such as soft robotics and medical applications."

Source: The Optical Society (16 September 2020)

ADVANCED MATERIALS

New Composite Material Revs Up Pursuit Of Advanced Electric Vehicles

"Scientists used new techniques to create a composite that increases the electrical current capacity of copper wires, providing a new material that can be scaled for use in ultra-efficient, power-dense electric vehicle traction motors."

Source: Technology.Org (21 September 2020)

BIOENGINEERING

Marine Sponges Inspire The Next Generation Of Skyscrapers And Bridges

"Researchers from the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) are using the glassy skeletons of marine sponges as inspiration for the next generation of stronger and taller buildings, longer bridges, and lighter spacecraft."

Source: Harvard University (21 September 2020)

BIOMEDICAL

Should You Trust Apple's New Blood Oxygen Sensor?

"In the time of COVID, pulse oximeters are the new thermometers, on the shelves of many medicine cabinets. But do they belong in wristwatches?"

Source: IEEE Spectrum (21 September 2020)

BIOTECH

Brain-Scanning Backpack Brings Neuroscience Into The Real World

"The advance could allow researchers to get a sense of how the brain works outside of a laboratory—and how to monitor diseases such as Parkinson's and post-traumatic stress disorder in real-world settings."

Source: Science(18 September 2020)

ENGINEERING

Engineers Produce A Fisheye Lens That's Completely Flat

"To capture panoramic views in a single shot, photographers typically use fisheye lenses -- ultra-wide-angle lenses made from multiple pieces of curved glass, which distort incoming light to produce wide, bubble-like images.'

Source: EurekAlert! (15 September 2020)

INDUSTRY 4.0

A Partner Ecosystem Can Generate Customer-Ready Solutions And Accelerate Time To Market

"Companies are increasingly looking to build out their partner ecosystems to generate market-ready solutions and speed time to market. This article, 12th in our series on digital transformation, discusses how partner roles are evolving."

Source: DELOITTE (3 September 2020)

MACHINE LEARNING

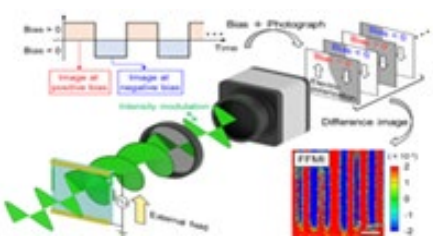
Generate Biomedicines Emerges From Stealth Mode With AI And Big Data Aimed At COVID-19

"Traditional protein drug discovery methods, such as high-throughput screening, involve a lot of trial and error. Algorithms and high powered computing could greatly shrink the amount of time scientists spend searching for new drug candidates."

Source: IEEE Spectrum (15 September 2020)

MATERIALS

How To See Invisible Materials



"Optical materials used in electro-optical devices, such as lasers, can be hard to investigate given their transparent nature… The pursuit of better transparent materials inspired researcher Yohei Uemura and his team to pioneer new ways to study these materials. They recently developed a technique called birefringent field-modulation imaging."

Source: University of Tokyo (18 September 2020)

MATERIALS SCIENCE

World's First Photodetector That Can See All Shades of Light

"Researchers have developed the world's first photodetector that can see all shades of light, in a prototype device that radically shrinks one of the most fundamental elements of modern technology."

Source: SciTechDaily (22 September 2020)

MATHEMATICS

New Mathematical Tool Can Select The Best Sensors For The Job

"Texas A&M University researchers have now developed a comprehensive mathematical framework that can help engineers make informed decisions about which sensors to use and where they must be positioned in aircraft and other machines."

Source: TAMU (16 September 2020)

NETWORK SECURITY

Integration Of Capabilities Transforming The Asia-Pacific Network Security Market, 2020

"The overall APAC network security market is expected to grow at 7.9% CAGR from 2019 to 2024…In the immediate future, the widespread effects of the COVID-19 pandemic will drastically impair the network security market just as it will affect the wider economy. Future growth will also be impacted as the market grapples to recover."

Source: Frost & Sullivan (16 September 2020)

SMART PHARMACEUTICALS

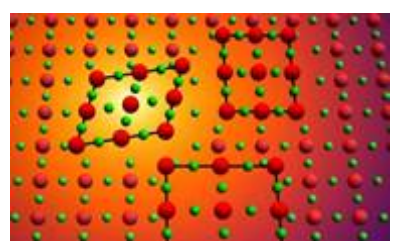
Chemists Develop 'Smart Cells' With Potential To Treat Illness At Cellular Level

"New research by an international team of chemists describes a new type of artificial cell that can communicate with other cells within the body—with potential applications in the field of smart pharmaceuticals. Read more in Science Advances."

Source: Folio (18 September 2020)

SUPERCONDUCTOR

Researchers Identify New Type Of Superconductor

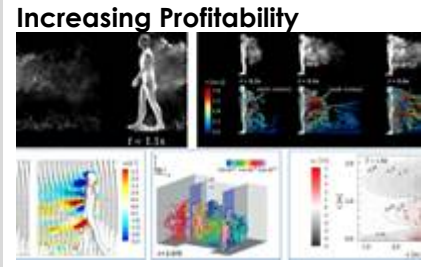


"Until now, the history of superconducting materials has been a tale of two types: s-wave and d-wave. Now, Cornell researchers …have discovered a possible third type: g-wave."

Source: Phys.org (22 September 2020)

TECHNOLOGY

New Technology Dramatically Reduces Transmission Of Airborne Viruses In Restaurants While Also Increasing Profitability

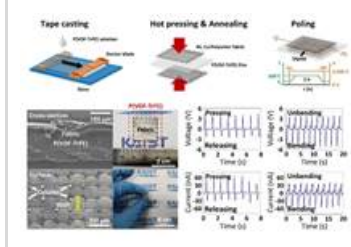


"To aid these businesses, Miami-based startup Creating Revolutions has invented a multi-patented technology, called called Service Request, that dramatically helps create a balance of safety and profitability."

Source: Restaurant Technology (15 September 2020)

WEARABLES

Sturdy Fabric-Based Piezoelectric Energy Harvester Takes Us One Step Closer To Wearable Electronics



"KAIST researchers presented a highly flexible but sturdy wearable piezoelectric harvester using the simple and easy fabrication process of hot pressing and tape casting. This energy harvester, which has record high interfacial adhesion strength, will take us one step closer to being able to manufacture embedded wearable electronics."

Source: KAIST (17 September 2020)

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