

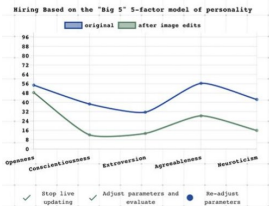
Weekly Discovery

We SHARE to inspire and ignite ideas!

17 – 21 October 2022

AI

Claims AI can boost workplace diversity are 'spurious and dangerous', researchers argue



“Recent years have seen the emergence of AI tools marketed as an answer to lack of diversity in the workforce, from use of chatbots and CV scrapers to line up prospective candidates, through to analysis software for video interviews..

However, in a new report published in Philosophy and Technology, researchers from Cambridge’s Centre for Gender Studies argue these claims make some uses of AI in hiring little better than an ‘automated pseudoscience’ reminiscent of physiognomy or phrenology: the discredited beliefs that personality can be deduced from facial features or skull shape.”

Source: [Cambridge](#) (10 October 2022)

ARCHITECTURE

The Science Behind the Resilience of Earth Architecture



“Earth architecture is built on a far-reaching history. Its story continues to be told through aged structures that have stood the test of time. Across the world, indigenous earth construction techniques have been pioneered by many ancient civilizations. Communities originally built shelters from earth - the most readily available material to them - and have passed on their construction techniques through generations. Earth architecture evolved with a careful understanding of land and location. With practices perfected decades ago, it is fascinating to see earth architecture remaining resilient through adversities.”

Source: [archdaily](#) (17 October 2022)

ARCHITECTURE

Alberto Kalach designs monumental hotel entirely powered by solar energy



“Mexican studio Taller de Arquitectura X has designed Hotel Terrestre, a sprawling series of villas in the coastal city of Puerto Escondido, Mexico, that runs on solar power.

Mexico City-based Taller de Arquitectura X (TAX), headed by architect Alberto Kalach, designed Hotel Terrestre to be a serene travel destination that utilises only solar power and has a minimal impact on the local ecology.”

Source: [Dezeen](#) (17 October 2022)

BATTERY

Battery tech breakthrough paves way for mass adoption of affordable electric car



“A breakthrough in electric vehicle battery design has enabled a 10-minute charge time for a typical EV battery. The record-breaking combination of a shorter charge time and more energy acquired for longer travel range was announced today (Oct. 12) in the journal Nature.”

Source: [PSU](#) (12 October 2022)

CITIES

Green spaces in cities linked to crime risk, a study shows



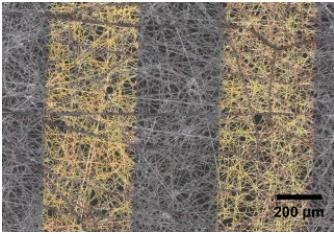
“Maintaining green parks and gardens in cities has the potential to lower the risk of crime, research suggests.

More green space in a city is linked with lower risk of crime against property – such as burglary, arson and vandalism – and less risk of violent offences, the study found.”

Source: [Uni of Edinburgh](#) (11 October 2022)

HEALTHCARE

Improving wearable medical sensors with ultrathin mesh



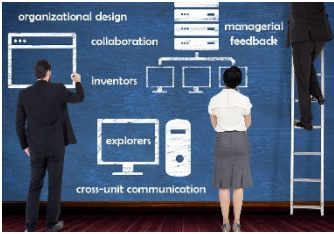
“On-skin medical sensors and wearable health devices are important health care tools that must be incredibly flexible and ultrathin so they can move with the human body...

In a recent paper, researchers demonstrated how an important component of the sensors called a thermistor can be constructed using an ultrathin fiber-mesh. Thermistors are a type of resistor whose resistance significantly varies with temperature..”

Source: [SHINSHU](#) (30 September 2022)

INNOVATION

USF study reveals exploring inventors thrive in workplace with open communications



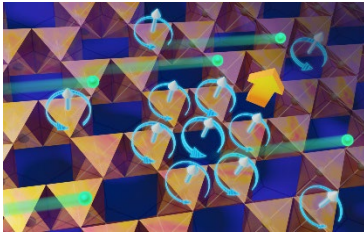
“A new organizational design study from researchers at the University of South Florida sheds light on the ideal work environment inventors need in order to succeed and thrive when they venture into new knowledge domains.

The study revealed that “explorers,” or inventors who go outside their area of expertise whether in technologies, disciplines or industries, are most productive when they are working in an organization that supports cross-company communications, versus a top-down, hierarchical approach.”

Source: [USF](#) (5 October 2022)

MATERIALS

Physicists probe ‘astonishing’ morphing properties of honeycomb-like material

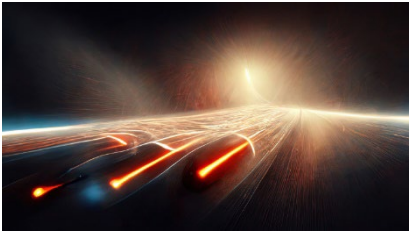


“A series of buzzing, bee-like “loop-currents” could explain a recently discovered, never-before-seen phenomenon in a type of quantum material. The findings from researchers at CU Boulder may one day help engineers develop new kinds of devices, such as quantum sensors or the quantum equivalent of computer memory storage devices.”

Source: [Colorado](#) (12 October 2022)

MATERIALS

Heat-Proof Chaotic Carbides Could Revolutionize Aerospace Technology



“A group of scientists led by Duke University have engineered a new class of materials capable of producing tunable plasmonic properties while withstanding incredibly high temperatures.

Plasmonics is a technology that essentially traps the energy of light within groups of electrons oscillating together on a metallic surface. This creates a powerful electromagnetic field that interacts with incoming light, allowing devices to absorb, emit or otherwise control specific frequencies across much of the electromagnetic spectrum.”

Source: [DUKE](#) (11 October 2022)

SUSTAINABILITY

CCNY study: advanced plastics recycling yields climate benefits



“The City College of New York Grove School of Engineering today released a new report which examined advanced recycling. The report concluded that advanced recycling helps avoid climate impacts, reduces demand for energy resources, and offers key tools for expanding the circular economy. The report was authored by Dr. Marco J. Castaldi, professor of chemical engineering and director of CCNY’s Earth Engineering Center (EEC), and EEC research associate Lauren Creadore.”

Source: [CCNY](#) (12 October 2022)

SUSTAINABILITY

Eco-labels on menu options prompt diners to make more sustainable choices, new research finds



“A first-of-its-kind study has shown adding eco-friendly ratings on menu items results in diners making choices which are kinder to the environment.

The research, led by the University of Bristol, found that providing a traffic light rating of eco-friendliness next to dishes on the menu significantly increased the likelihood of diners choosing more sustainable options.”

Source: [BRISTOL](#) (26 September 2022)

SUSTAINABILITY

Research explores the potential for mechanical devices to clear the ocean of plastics



“Mechanical devices are increasingly being considered as a potential way to help address plastic pollution found globally in marine environments.

However, a new study by researchers at the University of Plymouth suggests that while mechanical devices remove plastics and other items of marine litter, the quantities of litter removed can be comparatively low and they can also trap marine organisms.”

Source: [Plymouth](#) (6 October 2022)

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