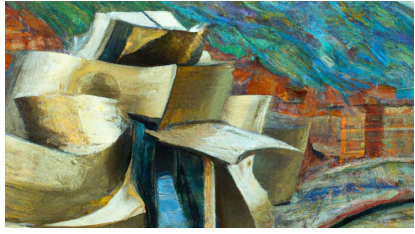# Weekly Discovery
We SHARE to inspire and ignite ideas!

28 Aug – 1 Sep 2023

AI
[AI exposes designers and architects to copyright complications say experts](#)

"Increasing use of AI could have major copyright implications for designers and architects, warn experts as part of our Altopia series.

In recent months, lawsuits have been filed against leading AI companies such as OpenAI, Google and Stable Diffusion by authors, artists and stock-image suppliers who claim theft of their intellectual property.

Noam Shemtov, a professor of intellectual property and technology law at Queen Mary University's Centre for Commercial Law Studies, told Dezeen that similar concerns could soon start to affect designers and architects.

"Potential infringement risks"

Intellectual-property lawyer Erik Rõuk also warned that designers and architects using AI need to be wary about copyright breaches.

"I would say if anyone wanted to take their AI projects further and they wanted to start producing actual products or real-world items, be that either a matchbox or a building, there could be a potential infringement risk there that the user should always be aware of," he told Dezeen."

Source: [Dezeen](#) (21 Aug 2023)

AI
### [How to address AI's energy demands? AI can help with that](#)

"Generative AI technologies that can turn simple phrases into stunning, photo-realistic images have sparked the world's imagination.

They also require a substantial amount of energy. Researchers estimate that running one generative AI algorithm requires up to five times more energy than a regular search engine query. Just training ChatGPT took the same amount of energy as driving 123 combustion vehicles for one year.

With AI queries on the rise – openai.com alone pulled in 1.9 billion visits in May 2023, according to SimilarWeb – the boost in energy requirements matters. Heat emanating from data centers processing the queries is at odds with broader sustainability goals now common among companies and governments."

Source: [JLL](#) (02 Aug 2023)

AI
[NTU Singapore scientists invent micrometres-thin battery charged by saline solution that could power smart contact lenses](#)
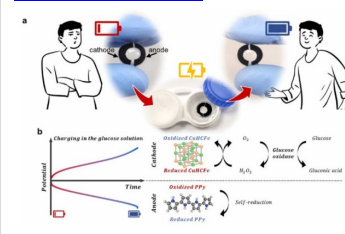
"Scientists from Nanyang Technological University, Singapore (NTU Singapore) have developed a flexible battery as thin as a human cornea, which stores electricity when it is immersed in saline solution, and which could one day power smart contact lenses.

Smart contact lenses are high-tech contact lenses capable of displaying visible information on our corneas and can be used to access augmented reality. Current uses include helping to correct vision, monitoring wearers' health, and flagging and treating diseases for people with chronic health conditions such as diabetes and glaucoma. In the future, smart contact lenses could be developed to record and transmit everything a wearer sees and hears to cloud-based data storage."

Source: [NTU](#) (24 Aug 2023)

ARCHITECTURE
[MVRDV, Adrian Lahoud and HCH Develop Tools and Strategies to Show Adaptations to Climate-Induced Threats](#)

"Architects, urban planners, and researchers from around the world are working on solutions to address the rising threat of climate change and climate-induced rise in sea levels and storm surges. Among them, MVRDV, as part of the North Creek Collective, has released a series of proposals for the city of Vancouver, mapping out possible adaptations of waterfront buildings, landscape, and infrastructure. On a similar note, a group of researchers led by Adrian Lahoud has developed the Second Sea Calculator, a digital tool that estimates the financial damages owned to coastal cities by different nations, while Human Climate Horizons has developed a platform for visualizing how different levels of global heating will affect people's lives."

Source: [Archdaily](#) (28 Aug 2023)

ARCHITECTURE
[Five key projects by German architect and Dezeen Awards China judge Ole Scheeren](#)
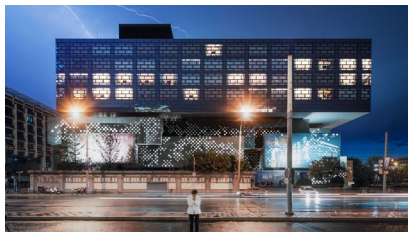
"German architect Ole Scheeran has joined Dezeen Awards China 2023 as a judge. Here, he selects five projects that best reflect his work.

Architecture practice Büro Ole Scheeren has offices in Hong Kong, Beijing, London and Berlin. Principal Scheeren considers architecture "a matrix of hybrid narratives from which we can construct future realities.""

Source: [Dezeen](#) (28 Aug 2023)

AUGMENTED REALITY
[Meta's Flamera Has a New Vision for Augmented Reality This cyberpunk headset keeps you in touch with actual reality](#)


"Meta's latest prototype headset, Flamera, looks ripped straight from a sci-fi action flick—and it quickly turned heads at Siggraph 2023, where Flamera won the coveted Best in Show award.

The Flamera headset, bug-eyed and glowing ominous red, is an intimidating piece of kit that looks radically different from its peers. And the look is not just for show. The headset debuts a new lens design that could solve augmented reality's most pressing problem: "passthrough," or the use of external cameras to provide a headset user with a view of the world around them."

Source: [IEEE](#) (25 Aug 2023)

BATTERY ELECTRIC VEHICLE
[NEW STUDY FINDS WAYS TO SUPPRESS LITHIUM PLATING IN AUTOMOTIVE BATTERIES FOR FASTER CHARGING ELECTRIC VEHICLES](#)
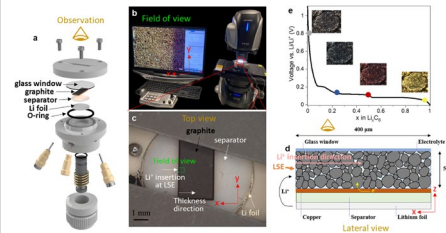
"A new study led by Dr. Xuekun Lu from Queen Mary University of London in collaboration with an international team of researchers from the UK and USA has found a way to prevent lithium plating in electric vehicle batteries, which could lead to faster charging times. The paper was published in the journal Nature Communications.

The study provides new insights into developing advanced fast charging protocols by improving the understanding of the physical processes of lithium redistribution within graphite particles during fast charging. This knowledge could lead to an efficient charging process while minimising the risk of lithium plating."

Source: [ScienceDaily](#) (24 Aug 2023)

EV
[Eve and DHL Partner to Design a Supply Chain Concept for eVTOL Support](#)

"Eve Air Mobility ("Eve") (NYSE: EVEX; EVEXW) and DHL Supply Chain, a global leader in warehousing and distribution, announced today the signature of a Memorandum of Understanding (MoU) to conduct a study of key demands and supply chain characteristics for Eve's electric vertical take-off and landing aircraft (eVTOL) operation. The primary goal of the partnership is to explore and understand best practices for supplying operators and service centers with spare parts and inputs, with an emphasis on batteries and the specific requirements concerning transport, storage and disposal of those devices. Other aspects reviewed will include modes of transportation, frequency, and delivery plan, required logistics partners, potential locations for advanced inventories, physical and technological infrastructure requirements and contingency plans."

Source: [EVA](#) (9 Aug 2023)

MATERIALS
["I don't think AI knows what humans like" says Daniel Escobar](#)
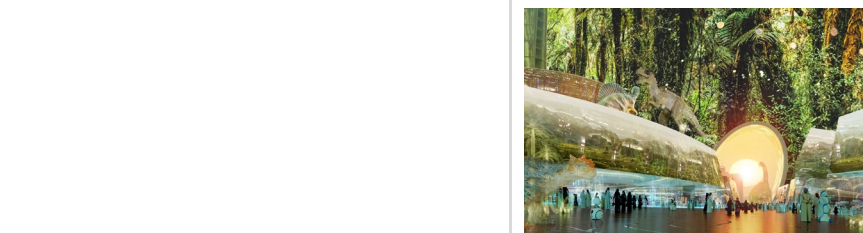
"Over-reliance on AI tools for architecture like floor-plan generators could result in boring buildings, Online Lab of Architecture co-founder Daniel Escobar tells Dezeen in this interview.

While the most popular use of artificial intelligence (AI) in architecture and design today is for creating visualisations with text-to-image models such as Midjourney, building configurators such as LookX and 3DGuru are beginning to enter the market.

Online Lab of Architecture (OLA) co-founder Escobar warned that too much dependency on these kinds of technologies could result in the human touch being lost from design.

"There's still the issue of having that custom or very tailored design approach that design firms have," Escobar explained.

"You would get these generic, typical developer base buildings, where they just optimise it for a certain specific efficiency. That will be one of the things to look out for.""

Source: [Dezeen](#) (22 Aug 2023)

METAVERSE
[Defining The Impact of The Metaverse](#)

"This article is the first in a series focusing on the Architecture of the Metaverse. ArchDaily has collaborated with John Marx, AIA, the founding design principal and Chief Artistic Officer of Form4 Architecture, to bring you monthly articles that seek to define the Metaverse, convey the potential of this new realm as well as understand its constraints.

The Metaverse is currently hard to define. Try to think of it as the bringing together of the abundance of virtual communities we have created over the years on Facebook with the enormous range of leisure opportunities akin to shopping on Amazon. Yet, the Metaverse goes far beyond this and makes a new type of landscape possible by playing on the very qualities of placemaking we know from the cities, towns, and villages we inhabit worldwide. The Metaverse is a transactional space, and perhaps above all an experiential space where unexpected events take place and, importantly, shared events are enjoyed on an individual and communal basis."

Source: [Archdaily](#) (23 Aug 2023)

QUANTUM COMPUTING
[Quantum computer unveils atomic dynamics of light-sensitive molecules](#)
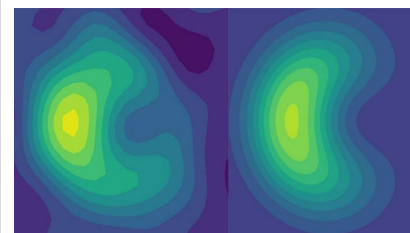
"DURHAM, N.C. – Researchers at Duke University have implemented a quantum-based method to observe a quantum effect in the way light-absorbing molecules interact with incoming photons. Known as a conical intersection, the effect puts limitations on the paths molecules can take to change between different configurations.

The observation method makes use of a quantum simulator, developed from research in quantum computing, and addresses a long-standing, fundamental question in chemistry critical to processes such as photosynthesis, vision and photocatalysis. It is also an example of how advances in quantum computing are being used to investigate fundamental science."

Source: [EurekAlert!](#) (28 Aug 2023)

ROBOTICS
[Apptronik Introduces Apollo Humanoid Robot Apollo's custom actuators will keep the cost low](#)

"Apptronik is unveiling Apollo. It says the robot is "designed to transform the industrial workforce and beyond in service of improving the human experience." It will first be used in logistics and manufacturing, but Apptronik promises "endless potential applications long term." Still, the company must make it happen: It's a big step from a prototype to a commercial product.

The biped that we saw in January was a prototype for Apollo, but today Apptronik is showing an alpha version of the real thing. The robot is roughly human-size, standing 1.7 meters tall and weighing 73 kilograms, with a maximum payload of 25 kg. It can run for about 4 hours on a swappable battery. The company has two of these robots right now, and it is building four more."

Source: [IEEE Spectrum](#) (23 Aug 2023)