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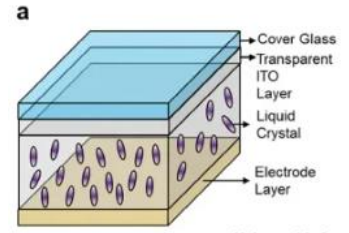
Dear Readers,

Welcome to **NewsEffect** –  
December 2023

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# Automotive Holographic Displays



- [Hyundai Mobis, Hyundai's largest supplier, is teasing its first transparent display screen using holographic tech.](#) Hyundai Mobis is going to unveil its latest EV technology at CES 2024. Hyundai Mobis is the sixth-largest auto supplier globally and the largest for the Hyundai Motor Group. It is set to introduce its first transparent display screen using holographic technology. At CES 2024, the company will be introducing its innovative display series for next generation vehicles at the event. This includes the world's first rollable display and swivel display for the automotives, It will also unveil the Quantum Dot and Local Dimming Display (QL) display and a 3D display featuring OLED-level performance. Hyundai Mobis will present a transparent display that uses holographic elements for the first time. The display appears on a transparent panel, making it easier for drivers to keep their eyes on the road.
- [Dynamic holographic technology company Envisics announced raising \\$100 million for car holographic displays.](#) Envisics announced raising \$100 million in its latest Series C funding round from M&G Investments and Van Tuyl Companies. The raised funds will be employed to propel the development of holographic augmented reality displays for automobiles. This large investment underscores the growing interest in AR technology within the automotive sector and a revolution for in-car experiences. Envisics' innovative AR displays have the potential to transform the way drivers interact with their vehicles. With these fresh funds, Envisics will be working to accelerate the development and deployment of its cutting edge AR displays for automotives. Envisics efforts in scaling dynamic holography for major global automakers is going to make remarkable headway.
- [Japanese scientists have found a way to generate 3D holograms from 2D images made by a simple camera using deep learning.](#) This innovation can open up numerous possibilities for low cost 3D displays and immersive worlds. Scientists believe that this method can revolutionize the development of holographic head-up displays in cars, showing the necessary information to passengers in 3D. Deep learning technology can make holograms from 3D data gathered by RGB-D cameras that record an object's color and depth. This new method is comparatively easier and avoids many of the complex computer problems linked to the old way of generating holograms. This new method uses three deep neural networks to change a normal 2D color picture into data that can be used to display a 3D scene as a hologram.
- [Researchers from the Universities of Cambridge, Oxford and University College London have developed an advanced augmented reality holographic system specifically designed for automotive head-up displays.](#) The advanced augmented reality holographic system projects 4K video using LiDAR point clouds. This technology significantly enhances the road safety by displaying real-time, 3D holographic images that align with real-world objects and provides the drivers with a comprehensive view of potential road hazards. The proposed system utilizes LiDAR data, transformed into detailed 3D images, and leverages GPU-accelerated computing to create holograms faster than traditional CPU processing. This technology offers an augmented view of the road, maintaining the driver's focus and also reducing the risk of accidents.

## Disruptive Technology Leads



• [Katricks Technologies Completes First Testing Milestone](#) Katrick

Technologies has concluded the first stage of the Alpha testing phase of its novel wind power generation technology. Developed in partnership with The Manufacturing Technology Centre (MTC) and tested at the University of Strathclyde, the prototype of the company's Wind Panel has yielded impressive results during this latest testing phase, demonstrating the technology's potential as a disruptive innovation in the greentech sphere.

• [Startup Mantra: Digi-tech dispensing valve for liquids to upscale biz](#)

The innovation can be used for process control, automatic formulation batching, bottling, liquid filling. The groundbreaking creation finds applications across various industries, offering a globally applicable solution for liquid dispensing. Satish, the founder of Samiep Technology Innovations established in May 2017, illustrates its practicality through a common scenario: fuel dispensing pumps at refueling stations. The disruptive nature of Satish's invention lies in the incorporation of industrial valves that are not only versatile and configurable, but also precise in their digital control. The transformative technology has the potential to optimise the amount of fuel dispensed into vehicles, showcasing its real-world implications for efficiency and precision.

• ["Laser Beam Breakthrough: Revolutionizing Cancer Treatment with High-energy Electrons"](#)

Ultrafast laser technology is a significant advancement in the field of medicine, particularly in cancer treatment. Scientists at the "Institut national de la recherche scientifique" (INRS) and McGill University Health Centre in Montreal, Canada, have made a groundbreaking discovery. They have shown that powerful laser pulses can be utilized to accelerate electrons to energy levels similar to those used in radiation therapy.

• [AIKO Solar's black modules top global rankings by efficiency, innovation](#)

ABC modules, invented and developed independently by AIKO, have led the TaiyangNews Top Solar Modules Listing this year, outranking other commercially available products. According to the listing in June 2023, AIKO had an efficiency rate of 24%, breaking its own record of 23.6%, set in March, and beating the runner-up by 0.8 percentage points. Also this year, AIKO scooped Intersolar Award 2023, handed to the most innovative and disruptive products and technologies in the photovoltaic industry. The criteria include innovation, technological creativity, and environmental impact. The jury noted that AIKO's ABC modules combined n-type solar cells with passivating contacts and back-contact architectures to create some of the world's most powerful solar panels, reaching a capacity of 620 watts at 24% efficiency, significantly higher than most available panels.

• [The Dawn Of AI Disruption: How 2024 Marks A New Era In Innovation.](#)

2024 will mark a watershed moment for generative artificial intelligence, triggering a metamorphosis across the global economic landscape as businesses wake up to its broad potential. Advanced generative algorithms will reach new heights in capability, accessibility and scalability - catalyzing widespread adoption. Dedicated strategic investment into ethical development and implementation will be crucial as generative AI becomes deeply integrated into business functions in 2024. Without diligent governance and oversight, this exponentially powerful technology poses risks of exacerbating problems like bias, misinformation, and lack of accountability. Looking beyond 2024, I predict that generative AI will lead to the emergence of new business models and potentially disrupt traditional industries. Businesses need to adapt to this AI-centric landscape to avoid becoming obsolete.

# Disruptive Technology Leads (Contd.)



• [NEMESI, technology and the human factor combined.](#) With the NEMESI (New Engineering & Manufacturing Enhanced System Innovation) project, the journey towards the factory of the future has begun at Pomigliano d'Arco. Vincenzo Prata, Head of Manufacturing Engineering at Leonardo Aerostructures, highlights the heart of the initiative, "We are reengineering the entire process based on Industry 4.0 principles, using automatic and semiautomatic processes." Reducing production inefficiencies, costs and times and, as a result, improving product quality. Such goals are made possible by a synergistic blend of technical skills, production processes automation and application of disruptive technologies.

• [Symbio inaugurates its first gigafactory SymphonHy, Europe's largest integrated site producing hydrogen fuel cells, supporting the deployment of sustainable and efficient mobility.](#) With its capacity for innovation and industrialization, and an annual output of 50,000 fuel cell systems, SymphonHy is paving the way for large-scale production. SymphonHy is part of HyMotive, a strategic €1 billion project to develop disruptive technology, supported by the European Union and the French government as part of the IPCEI (Important Project of Scientific Interest) programme Supplied by Symbio with its fuel cells, Stellantis will continue to extend its Hydrogen offer beyond already available mid-size vans in Europe, with large-size vans, Ram pickups, and heavy-duty trucks for the North American market.

• [Minimal Assistive Multifunctional Clocks.](#) The team at Pupupula created the Little House Alarm Clock, which is a minimally designed device that helps children manage their time without having to rely on screens. The developers created something to aid both parents and children in navigating through life more efficiently. The integration of a smart speaker and voice assistant in the Little House Alarm Clock opens up possibilities for disruptive innovation in the smart home technology industry, combining time management with home automation.

• [Huawei teases 'disruptive' products in 2024 after surprise launch of Mate 60 5G smartphone series,](#) Huawei Technologies' consumer business head said the company would launch "disruptive" products next year that could "rewrite the history of the industry", months after the US-sanctioned Chinese telecommunications giant surprised the world with the launch of its 5G-capable Mate 60 smartphone series. Yu's bold claim came after the company released the Mate 60 handset series, which is powered by the Chinese-made advanced processor Kirin 9000s. It marked Huawei's return to the 5G smartphone market after US trade sanctions barred the firm from accessing American technology.

• [Infleqtion and L3Harris Collaborate to Develop and Deploy New Quantum RF Sensing Technology Solutions.](#) Infleqtion, the world's leading quantum information company, is thrilled to announce a strategic collaboration with L3Harris, a global aerospace and defense company, to jointly develop and transition quantum radio frequency (RF) sensing technology from the lab to the field. This collaboration marks a significant milestone in advancing quantum capabilities to benefit advanced dual-use applications.

• [Pipedream Partners with Curiosity Lab to Launch World's First Underground Logistics Network in Peachtree Corners, Georgia.](#) Peachtree Corners – one of the nation's first smart cities powered by real-world connected infrastructure and 5G – today launched the world's first below-ground autonomous robot delivery system with Pipedream, the underground logistics network that is revolutionizing the way goods are delivered. The new delivery system is bringing consumers unprecedented convenience through faster, autonomous, efficient and cost-effective transportation channels. Peachtree Corners is the first city to launch and install the underground logistics solution.



## Disruptive Technology Leads (Contd.)



• [Oobli Milk Chocolate Bars are Low-Sugar & Free from Artificial Sweeteners](#)

Oobli used a proprietary fermentation process and plant-based sweet proteins to create Dark Chocolates, and now the same innovations are being applied to expand the brand's range to include Oobli Milk Chocolate Bars. The brand's latest launch is touted as the world's first-ever low-sugar milk chocolate bars made without artificial sweeteners. 1. Proprietary Fermentation Process - Oobli's use of a proprietary fermentation process offers a disruptive innovation opportunity to create low-sugar chocolate bars without artificial sweeteners. 2. Plant-based Sweet Proteins - The development of plant-based sweet proteins presents a disruptive innovation opportunity for the creation of low-sugar chocolate bars that are healthier alternatives to traditional options.

• [Cali Sober Makes Vibrant Canned Drinks with 5mg of THC Cali Sober is a new range of THC.](#)

hemp-infused mocktails that are vibrant and useful for providing a different kind of buzz that the brand described as "chill" and "smooth." These euphoric alcohol-free drinks are ready for adults to sip in varieties like Paloma Spritz, Ranch Water and Berry Ginger Fizz. As more adults open themselves up to alcohol alternatives, especially in Dry January, they're exploring other ways to get a buzz with non-alcoholic social tonics infused with cannabis. Cali Sober's flavorful mocktails share five milligrams of THC per 12-ounce can. Like other non-alcoholic options on the market, this hangover-free drink helps people sidestep the nausea, the headaches, the fatigue and the dizziness that often come with consuming alcohol. Hangover-free mocktails are gaining traction as more consumers seek healthier alternatives to alcohol, creating a potential disruptive innovation opportunity for the beverage industry.

• [This innovative JLEE Announces - Aeona AI. The World's First AI Chatbot Platform for Disruptive Innovation!](#)

JLEE and Associates, an innovative and disruptive technology firm, announces a new initiative to build a first-of-its-kind technology. Aeona AI is the world's first AI chatbot platform for disruptive innovation. A revolutionary SaaS platform that aims to simplify and demystify approaches to achieve maximum growth with limited resources, thereby disrupting the failure rate of all businesses. Our team has consistently delivered outstanding results, leading to over 200 startup ideas being transformed into products and validated through Series B. We have driven over \$1 billion of growth and exits, and we've grown companies from sub-\$100k to hundreds of millions in ARR. Igniting innovation and disruptive product development on demand is a challenging task that we have consistently risen to..

• [32°N Sunglasses by Deep Optics Seamlessly Switch Between Modes.](#)

In the 6th annual Dezeen Awards, the 32°N Sunglasses by Deep Optics were named Winner in the Product Design of the Year 2023 in the consumer design and wearables category. The first and only adaptive sunglasses of their kind stand out with the use of pixelated liquid crystal (LC) lenses that mimic human eye behavior, enabling wearers to focus on objects at will, just as they would naturally without wearing them. The 32°N sunglasses are the first product from Deep Optics and they allow wearers to seamlessly switch between reading mode for near vision and scenic mode for distances, without changing their opacity. The 32°N Sunglasses by Deep Optics disrupt the eyewear industry with their adaptive design and pixelated liquid crystal lenses.

## Advancement in AI



- [AI-driven advancements in electronic skin technology promise revolution in health monitoring and diagnostics.](#) In a recent review article published in the journal Nature Medicine Intelligence, scientists at the California Institute of Technology discussed the involvement of artificial intelligence (AI) technologies in engineering next-generation electronic skin (e-skin) and analyzing health data collected by e-skin. Reproducing vital human skin properties in artificial skin remains problematic mainly because of many unsolved material challenges. AI has been proposed to optimize materials discovery and sensor designs to redesign new e-skin patches autonomously.
- [Enabling breakthroughs: How AI is transforming oncology.](#) Artificial intelligence (AI) advances are delivering hugely promising results in oncology, from enhancing drug development to improving the detection of early-stage cancers. We explore the progress AI is making and the ways to overcome barriers to drug access for patients. For instance, oncology-focused biotech firm Lantern Pharma has developed a proprietary machine-learning-based platform to analyse patient data – such as genetic makeup and health issues – to accurately organise patients for specific cancer treatments. Similarly, Massive Bio has recently launched an AI-powered platform that enables oncologists to identify more cancer treatment options for patients, including recently approved drugs and active clinical trials.
- [Religious Advancements in Artificial Intelligence.](#) In this exploration of the intersection between religion and artificial intelligence (AI), titled “Divine Coding,” delve into the transformative impact of religious advancements on the relationship between humanity and technology. The journey navigates through challenges, opportunities, and the potential that emerges when spirituality guides technological evolution and, reciprocally, technology enriches the spiritual tapestry of humanity.
- [Artificial Intelligence Advancements in Bioanalytics & Life Sciences.](#) Vibrational spectroscopy, a technique essential for analyzing chemical components in biological compounds, cells, organisms, tissues, and bioactivity products, plays a significant role in various fields. Its applications span many fields, from chemistry, microbiology, medicine, agriculture, and food science to forensics, botany, and environmental assessment, providing critical bioanalytical insights. Key methods of vibrational spectroscopy, such as infrared (IR), near-infrared (NIR), and Raman spectroscopy, are crucial for analyzing complex biological samples. They provide both quantitative and qualitative insights into the structure and configuration of the compounds composing these samples.
- [Revolutionizing AI Exposure in Crypto Markets with \\$AI: A New Era of Investment.](#) The intersection of artificial intelligence (AI) and cryptocurrency is heralding a new era in digital investments, with \$AI leading the charge. This innovative digital asset is not just a cryptocurrency; it's a symbol of the growing influence of AI in the global economy. \$AI represents an exciting venture in the crypto market, one that bridges the gap between digital currencies and the burgeoning field of AI.
- [IBM Advances Geospatial AI to Address Climate Challenges](#) Ibm collaborating with mohamed bin zayed university of artificial intelligence, government of kenya and the united kingdom's science and technology facilities council (stfc) hartree centre to expand application of ibm's geospatial ai technologies to urban heat island mapping, reforestation and climate resiliency in aviation. Ibm and the mohamed bin zayed university of artificial intelligence (mbzuai) are pioneering an attempt to apply foundation models to the mapping of urban heat islands – areas with significantly higher temperatures compared to surrounding locations.

## IP News



[AI cannot patent inventions, UK Supreme Court confirms](#). The UK Supreme Court has upheld earlier decisions in rejecting a bid to allow an artificial intelligence to be named as an inventor in a patent application. Technologist Dr Stephen Thaler had sought to have his AI, called Dabus, recognised as the inventor of a food container and a flashing light beacon. But in 2019, the intellectual property office (IPO) rejected this, saying only a person could be named as an inventor. The decision was then backed by both the High Court and Court of Appeal. manufacturing methods that have been used in the industry for decades.

[DeFi Technologies Pays 7,297,090 Common Shares to Acquire Solana Trading Intellectual Property](#). Prominent crypto-focused firm DeFi Technologies Inc. has officially disclosed its strategic move to acquire intellectual property (IP) from renowned Solana developer Stefan Jørgensen. Per the official statement, the acquisition marks a pivotal advancement in DeFi Technologies' growth strategy, with a dedicated focus on bolstering its offerings within the Solana ecosystem.

[China's National Intellectual Property Administration to Allow Third-Party Challenges to Pharmaceutical Patent Term Extensions](#). China's National Intellectual Property Administration (CNIPA) announced it would allow third parties to challenge the grant of patent term extension (PTE) for Chinese pharmaceutical patents effective January 20, 2024. PTE extends the life of a patent due to a potentially lengthy regulatory review process. Per the recently released Implementing Regulations of the Patent Law PTE is calculated by deducting 5 years from the interval between the date of filing of the patent application and date of licensing of the drug. The announcement also allows for a patentee to challenge annuity fee reduction decisions when registering for open licensing.

[New Patents Strengthen NICO's Intellectual Property Portfolio as It Expands Market Applications for Its Technologies](#). Medical device innovator NICO Corporation and world leader in minimally invasive neurosurgery, continues to increase its intellectual property portfolio that now includes over 260 patents across multiple North American and European jurisdictions. Ten newly issued patents further protect the company's unique innovations and capabilities to address unmet clinical needs in treating hemorrhagic stroke (ICH) and brain tumors through safe and repeatable minimally invasive access to the brain.

[Japanese Patent Holder BWB Files Milestone Intellectual Property Infringement Complaint Against Retail Giant Alibaba Group](#). On November 15, 2023, BWB filed a complaint for patent infringement in U.S. District Court for the Northern District of California, accusing Alibaba of infringing on four of BWB's e-commerce patents in the U.S., which the company also holds in Japan, South Korea, Taiwan, Indonesia, Singapore, Russia and Brazil. These technology patents were issued to BWB CEO and inventor Ryutaro Nishiura between 2019-2023. According to the lawsuit, BWB asked for an injunction against Alibaba and its logistics unit Cainiao, as well as Tmall operator Taobao China Holding LTD.

[Apple makes surprise decision to pause some Watch sales before Christmas over patent dispute](#). Apple will pause U.S. sales of two of the latest versions of its Apple Watches due to an intellectual property dispute over their Blood Oxygen feature, the company said. The decision stems from two orders issued by the U.S. International Trade Commission on Oct. 26, which would restrict Apple's ability to sell products that use the Blood Oxygen feature after an intellectual property disagreement between Apple and Masimo, a medical technology company.

## IP News (Contd.)



• [Apple loses latest bid to thwart patent dispute threatening to stop US sales of two watch models.](#)

The International Trade Commission rejected Apple's bid to get around a late October order revolving around the technology used in the Blood Oxygen measurement feature on the Series 9 and Ultra 2 versions of its internet-connected watch. Apple has been rebuffed in its latest attempt to untangle a patent dispute that is pushing the company into suspending sales of two popular Apple Watch models as the holiday shopping season wraps up. The International Trade Commission rejected Apple's bid to get around a late October order revolving around the technology used in the Blood Oxygen measurement feature on the Series 9 and Ultra 2 versions of its internet-connected watch. The dispute stems from a patent infringement claim filed in 2021 by medical technology company Masimo, culminating in a US ban on Apple using the technology that makes the Blood Oxygen feature work on those two watches

• [BioNTech wins round in CureVac mRNA patent dispute.](#)

Shares in CureVac have plummeted after a German court ruled that a patent it holds on mRNA-based COVID-19 vaccines was invalid. The validity of the patent is at the heart of patent litigation between CureVac and fellow German biotech BioNTech and its partner Pfizer, claiming infringement by their Comirnaty coronavirus shot. A judgment that Comirnaty infringed CureVac's patents could result in a big financial windfall for the company, given cumulative, global sales of Comirnaty are on track to reach upwards of \$80 billion.

• [The first CRISPR cure might kick-start the next big patent battle.](#)

Vertex Pharmaceuticals plans to sell a gene-editing treatment for sickle-cell disease. A patent on CRISPR could stand in the way. By the middle of December, Vertex Pharmaceuticals, based in Boston, is expected to receive FDA approval to sell a revolutionary new treatment for sickle-cell disease that's the first to use CRISPR to alter the DNA inside human cells. (Vertex has already received regulatory approval in the UK.) The problem is that the US patent on editing human cells with CRISPR isn't owned by Vertex—it is owned by the Broad Institute of MIT and Harvard, probably America's largest gene research center, and exclusively licensed to a Vertex competitor, Editas Medicine, which has its own sickle-cell treatment in testing.

• [Daiichi Sankyo scores \\$182M from Novartis settlement in long-running patent case.](#)

After years of back and forth with Daiichi Sankyo over cancer drug patent claims, Novartis has thrown in the towel with a \$182 million settlement. The case stems back to 2017 and has its roots in Novartis' Tafinlar, a melanoma therapy that the company acquired from GSK after a 2015 asset swap. Daiichi's former subsidiary Plexikon, which makes melanoma treatment Zelboraf, alleged that GSK scientists only gathered the knowledge necessary to develop the rival drug after consulting with Plexikon for talks about a partnership that never came to fruition. The verdict was ultimately upheld by a Northern California district court, but the jury's willful infringement finding was reversed. Novartis took the case to an appeals court last October, but the case is now dismissed with the settlement, Daiichi said in a new statement.



## IP News (Contd.)



### [CNIPA deals heavy blow to patent portfolio of AbbVie's blockbuster drug Upadacitinib](#)

On 10 August 2023, China National Intellectual Property Administration (CNIPA) issued two invalidation decisions, No. 561725 (Decision 1) and No. 562232 (Decision 2). These were in response to invalidity requests filed by the same petitioner against AbbVie's two core patents related to its blockbuster drug Upadacitinib. Decision 1 declared the patentee's compound patent ZL201080062920.6 invalid in its entirety. Decision 2 maintained the partial validity of the patentee's pharmaceutical composition patent ZL201810902092.0, keeping the claims relating to a general formula covering Upadacitinib alive, yet declaring the claims related to Upadacitinib invalid. Both decisions were based on the same facts and reasonings.

### [Multinationals Need to Watch Patent Litigation in China Courts](#)

China's market remains formidable for global business, offering substantial opportunities for foreign enterprises, especially those from the US. However, companies entering this marketplace must stay attuned to the evolving landscape of patent infringement litigation in Chinese courts. The vibrancy of the Chinese market extends beyond trade to legal activity. Chinese courts have witnessed a significant increase in patent cases in recent years, with foreign entities consistently making their presence felt. For instance, China's Intellectual Property Tribunal of the Supreme People's Court has highlighted that in 2020, 2021, and 2022, foreign-related cases made up over 10% of its total caseload, experiencing an impressive annual growth rate of 45.6%.

### [Checkpoint Therapeutics Strengthens Intellectual Property Protection for Cosibelimab with New U.S. Patent Issuance](#)

WALTHAM, Mass., Dec. 05, 2023 (GLOBE NEWSWIRE) -- Checkpoint Therapeutics, Inc. ("Checkpoint") (Nasdaq: CKPT), a clinical-stage immunotherapy and targeted oncology company, today announced that the U.S. Patent and Trademark Office ("USPTO") has issued a new patent (U.S. Patent No. 11,834,505) covering a method of treating various cancers, including cutaneous squamous cell carcinoma ("cSCC"), through the administration of cosibelimab.

### [Application of Administrative Mediation in Disputes concerning Patent Infringement | Dispute over "Pneumatic Tire" Patent Infringement Handled by Tianjin Intellectual Property Office](#)

In this case, the intellectual property administrative agency gave full play to mediation, based on ascertained facts, to efficiently resolve a dispute over intellectual property rights. Further, with the petitioner being an internationally known foreign enterprise, this case embodies China's equal protection for domestic and foreign intellectual property owners.

### [Maxeon Solar files fresh lawsuit against Aiko Energy over alleged patent infringement](#)

Dec 21 (Reuters) - Singapore-based Maxeon Solar Technologies (MAXN.O) said on Thursday it had filed a patent infringement lawsuit against Aiko Energy (600732.SS) in a Dutch court, ramping up its legal fight with the Chinese panel maker. Maxeon has accused Aiko and its affiliates of infringing on the design patent of its All-Back Contact solar cells which produce higher energy yield than conventional cells in the Hague District Court.

## GLANCE @ EFFECTUAL



13<sup>th</sup> Anniversary Celebration and Year end achievements – We celebrated our Founders day by rewarding and recognizing people who contributed to our success and helped us become what we are today.



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