



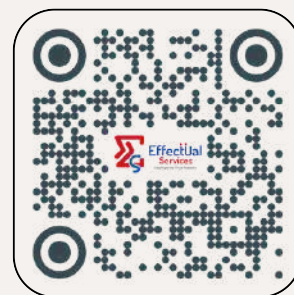
NEWSEFFECT

INNOVATION FRONTIER

Our Company's Growth &

SUCCESS IN 2025

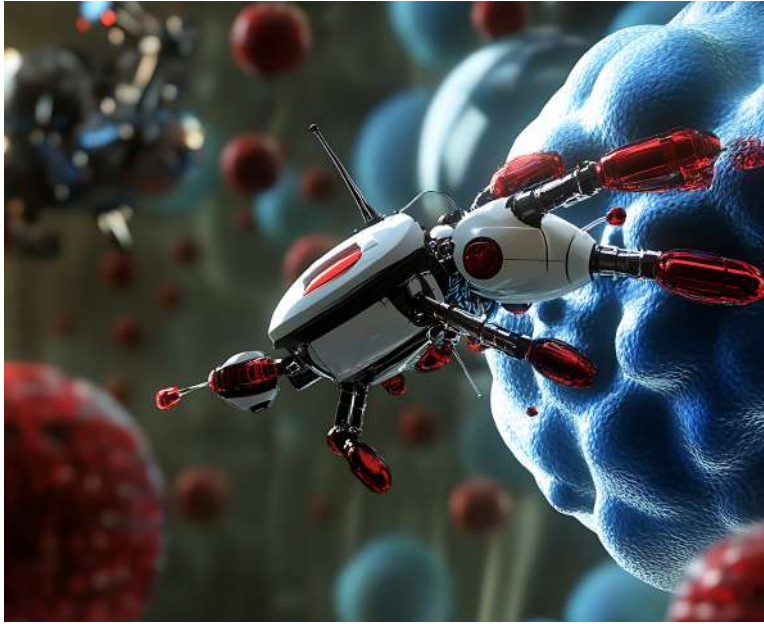
Our beloved leader – **Dr. Amit Goel** has been recognized & included in the renowned **WIPR – World IP Review** Leaders 2025 Directory, which is a testament to our expertise in the field of IP.



CONTENTS

- AI ADVANCEMENTS
- DISRUPTIVE TECHNOLOGIES
- IP INSIGHTS
- IP NEWS
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AI ADVANCEMENTS



JOHNSON & JOHNSON MEDTECH ADVANCES SURGICAL ROBOTICS WITH NVIDIA AI, PLANS 2026 LAUNCH.

- J&J MedTech unveils surgical robots with physical AI.
- Enables simulations for faster innovation, workflow optimization, and training.
- Uses Nvidia Isaac & Omniverse for digital twins & OR/patient simulations.
- Nvidia Cosmos generates accurate synthetic, physics-based data.
- Builds on 1.5-year J&J-Nvidia AI surgery partnership to boost decision-making, education & collaboration.

MISSOURI STARTED USING AI & DRONES TO (QUIETLY) TRACK WATERFOWL .

- Missouri tests AI-powered drones for waterfowl monitoring.
- 90% bird ID accuracy, cheaper & less disruptive than planes.
- Drones capture habitat & migration changes between surveys.
- AI processes images for same-day analysis of water, habitat & hunting plans.
- Can ID other wildlife from camera traps, saving staff time.
- No impact on animal behavior, giving faster, detailed insights.



AI ADVANCEMENTS

ACCELERATING MATERIALS INNOVATION WITH AI.

- New materials drive advances in electronics, robotics & medical devices.
- Traditional development is slow, costly, and trial-and-error, taking 10–20 years to reach market.
- AI can predict, discover, and optimize materials much faster & more efficiently.
- Google's GNoME tool predicted 2.2M new crystals, identifying 380K as stable; 736 have been synthesized.
- AI-driven autonomous systems created 41 new compounds in just 17 days.

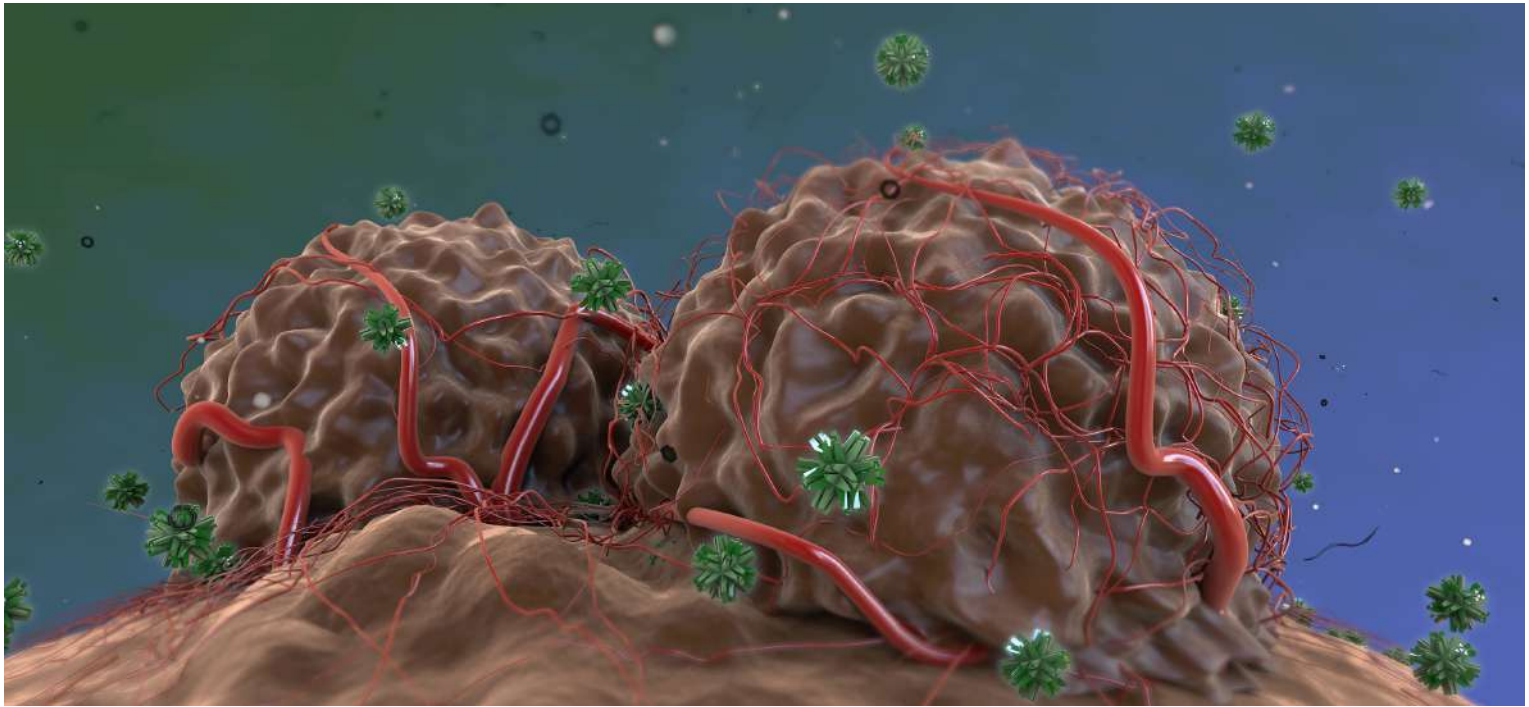


PRESCIENT EDGE: FROM STARTUP TO 'PROGRAM OF THE YEAR' — HOW AI INNOVATION IS RESHAPING NATIONAL SECURITY.

- Prescient Edge partners with NAVCENT Task Force 59 on AI-driven maritime operations.
- Operates a network of 23+ autonomous surface, subsurface & air systems.
- AI enhances maritime domain awareness and deterrence in critical regions.
- Uses AI-enabled sensors, radars & cameras for wide-area monitoring and data collection.



AI ADVANCEMENTS



AI INDELIBLY TRANSFORMS SOLID TUMOR DRUG DEVELOPMENT

- AI is transforming solid tumor drug development, integrating multi-omics, spatial transcriptomics, and advanced computational models.
- Accelerates discovery of therapeutic targets, reducing R&D timelines from 10 years to 2–3 years.
- Generative AI optimizes small molecules, biologics, and mRNA vaccines, tackling tumor heterogeneity, improving efficacy, and predicting resistance.
- Challenges remain: data bias, algorithm transparency & gaps between models and human physiology.
- Highlights need for interdisciplinary collaboration and ethical frameworks to advance precision oncology.

DISRUPTIVE TECHNOLOGIES



ROBOT DOGS AND AI DRONE SWARMS: HOW CHINA COULD USE DEEPSEEK FOR AN ERA OF WAR.

- China's Norinco unveiled an AI-powered military vehicle that autonomously performs combat-support tasks at 50 km/h.
- Vehicle powered by DeepSeek, a leading Chinese AI model.
- China is exploring AI robot dogs for scouting, autonomous drone swarms for target tracking, immersive command centers and advanced war game simulations.



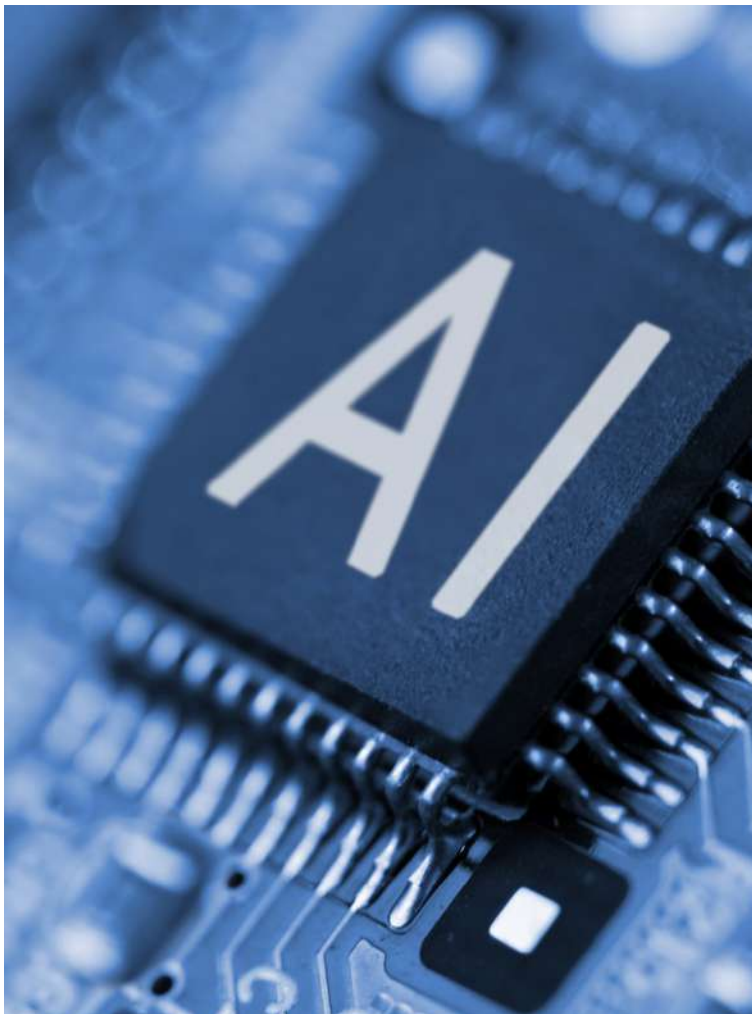
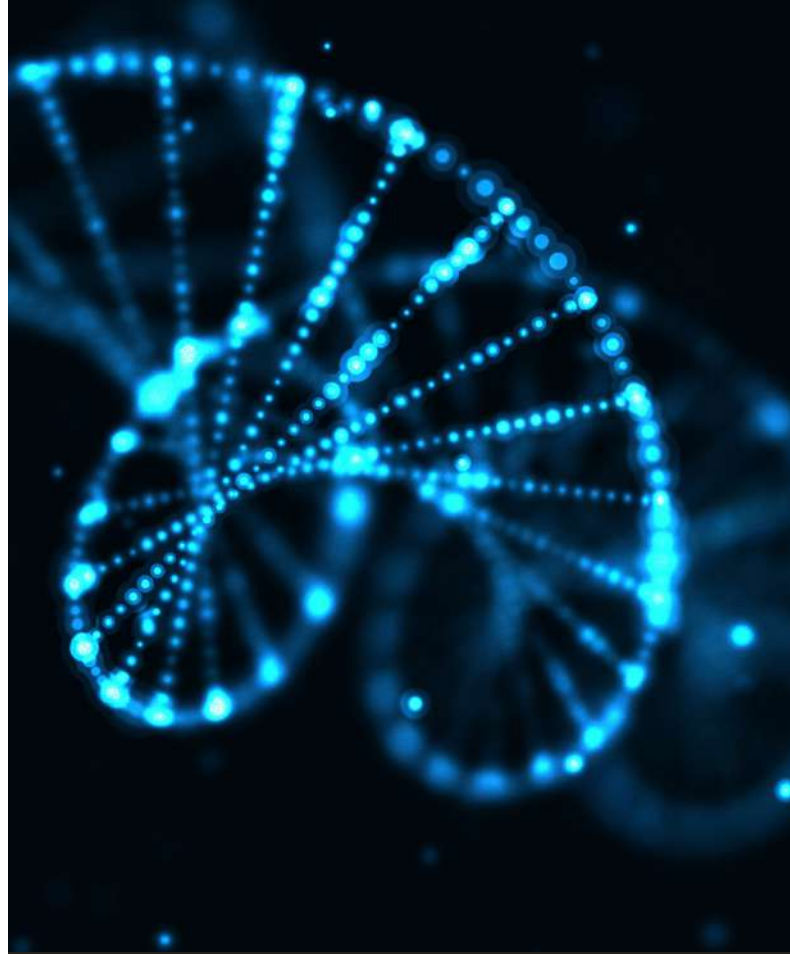
RESEARCHERS MOUNT VISHING ATTACKS WITH REAL-TIME VOICE CLONING.

- AI can clone voices in real time for phishing attacks, researchers show.
- NCC Group successfully used this to extract sensitive info from real organizations.
- Attackers can use pre-recorded sentences (limits conversation) or TTS models on the fly (causes delays).
- Technique routes attacker's microphone through a real-time voice modulator using an ML model.
- Targets hear the cloned voice as the attacker speaks, enabling realistic impersonation.

DISRUPTIVE TECHNOLOGIES

WHERE SCIENCE MEETS SOCIETY: RESPONSIBLE AI & BIG DATA INNOVATION AT GATE

- GATE Institute is Eastern Europe's first Big Data & AI Centre of Excellence, EU- and Bulgaria-funded.
- Joint initiative of Sofia University and Chalmers University of Technology.
- Drives digital transformation and a data-driven smart society.
- Focuses on Future Cities and Digital Health innovations.
- Uses ontological and semantic technologies to handle dynamic and static data across domains.



SPIKEHERO: DEVELOPING AI CHIPS FOR FIBRE OPTIC NETWORKS

- SpikeHERO aims to boost Europe's digital infrastructure and tech sovereignty via improved fibre optics.
- Developing an AI processor combining optical and electrical spiking neural network chips.
- Networks monitor channels, analyze signals, and correct interference in real time.
- Maintains signal quality, enabling higher data rates in fibre optic systems.

DISRUPTIVE TECHNOLOGIES

X-BAT—AN AI-POWERED FIGHTER THAT NEITHER NEEDS A RUNWAY NOR GPS

- Shield AI unveiled the X-BAT, an AI-powered fighter jet that flies without a runway or GPS.
- Part of Silicon Valley's push for smarter AI military tools for the US and allies.
- X-BAT is Shield AI's second hardware product; the company also makes V-BAT drones & Hivemind software.
- Shield AI, founded 10 years ago, was last valued at \$5.3 billion.



3D-PRINTING SOFT ROBOT DELIVERS HYDROGELS TO THE VOCAL CORD SURGICAL SITE TO RECONSTRUCT TISSUES

- Post-surgery vocal fold stiffness can impair speech; hydrogels aid healing but are hard to deliver.
- Researchers developed a 3D-printed soft robot to deliver hydrogels precisely to vocal cords.
- Printhead is 2.7 mm, the smallest bioprinter reported to date.
- Compact, flexible design integrates with surgical workflows and allows real-time manual control.

DISRUPTIVE TECHNOLOGIES

UNLOCKING MEMORY: THE ROLE OF EPIGENETICS IN MEMORY EXPRESSION

- Memories are stored in small brain cell groups called engrams, reactivated during recall.
- EPFL team led by Prof. Johannes Gräff combined CRISPR gene control with engram tagging in mice.
- Focused on Arc, a gene regulating neuron connections.
- Tested whether flipping Arc's epigenetic "switch" could directly alter memory.



TOYOTA REDEFINES CENTURY AS ITS TOP BRAND, UNVEILS SIX-WHEEL CONCEPT CAR

Japan's largest auto show opened to media on Wednesday with carmakers showing off the latest in environmental technology and concept vehicles. Toyota Motor announced its new Century brand and luxury Lexus' six-wheel vehicle, while China's BYD unveiled its first kei minicar designated for the Japanese market.

BLUETOOTH HELMETS OFFER CALLING AND MUSIC ENJOYMENT DURING RIDE

Bluetooth helmets are growing in popularity, offering safety, hands-free calling, and music on the go. They enhance comfort on long rides, provide a car-like experience, and full-face models ensure protection and comfort in all weather.



IP INSIGHTS

ON VERSATILE VIDEO CODING (VVC)



WHAT ARE THE MAIN APPLICATIONS OF VVC?



**360-degree video and
immersive media
(VR/AR)**



Streaming services



**Automotive
and IoT video**

WHAT IS VERSATILE VIDEO CODING (VVC)

Versatile Video Coding (VVC) or ITU-T H.266 coding standard has developed as a successor to HEVC standard providing high compression efficiency and reducing the bit rate for coding purposes i.e. it uses much lesser amount of data for streaming high quality videos. VVC supports higher resolutions and superior visual performances.

FEATURES OF VVC

- **Coding Tree Units and flexible block partitioning:** VVC supports larger CTU's i.e. maximum number of 128×128 CTU whereas HEVC only supported maximum number of 64×64 CTU
- **Advanced Intra and Inter prediction:** VVC uses more advanced and improved intra and inter prediction techniques
- **vEnhanced Transform Tools:** VVC supports multiple transformation tools that improve compression for different textures.
- **Improved Parallel Processing:** VVC supports 360-degree video viewing option with viewport dependent streaming
- **Versatile Application Support:** VVC supports wide range of video types like 4K-16K, WCG video, AR/VR and supports various functionalities like OTT streaming, video conferencing, cloud gaming etc.

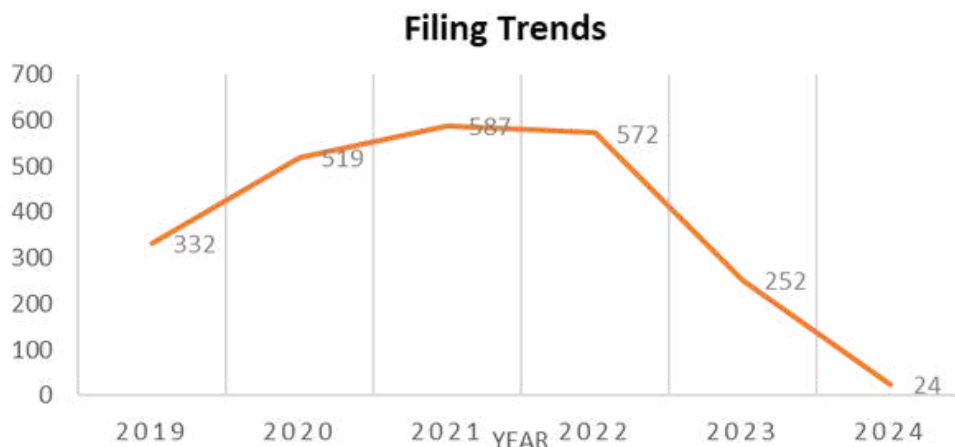
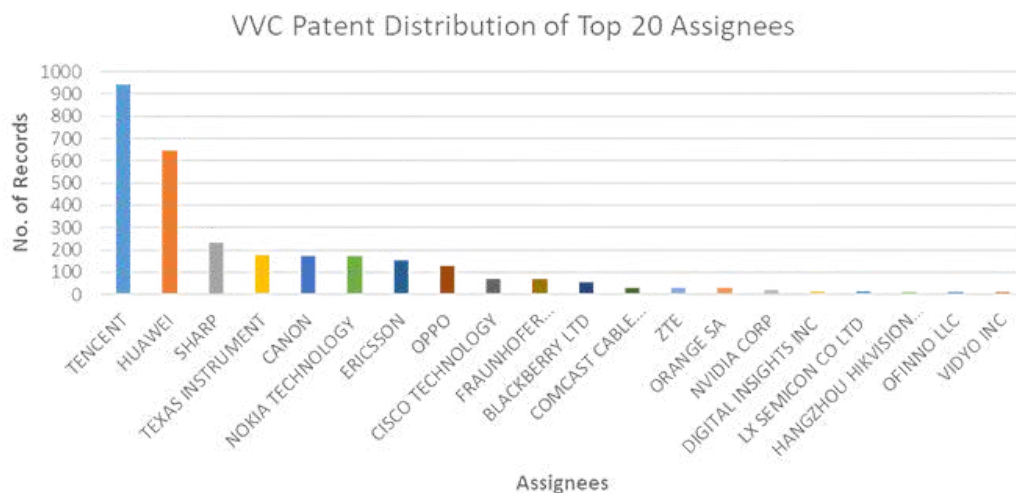
IP INSIGHTS

ON VERSATILE VIDEO CODING (VVC)

WHAT ARE THE BENEFITS OF VVC?

- **Improves storage requirements and helps in bandwidth saving:**
 - VVC cuts data rate significantly while providing high resolution streaming quality.
- **Offers higher compression efficiency:**
 - VVC makes streaming of 8K, 16K and HDR more feasible on constrained networks.
- **Reduced Bit-rate:**
 - Bit rate is significantly reduced in VVC when compared with its predecessor to deliver the same quality of high resolution videos.

TOP ASSIGNEES BY PATENTS/PUBLICATIONS



IP NEWS



USPTO LAUNCHES NEW STREAMLINED CLAIM SET PILOT PROGRAM TO FURTHER REDUCE PATENT PENDENCY

- USPTO launches Streamlined Claim Set Pilot to reduce patent backlog and pendency.
- Eligible applications: max 1 independent claim and 10 total claims, can get expedited first Office action.
- Applicants can file a preliminary amendment to meet pilot requirements.
- Streamlined claims allow examiners to work faster, with applicants trading extra claims for quicker feedback.
- Each Technology Center will accept ~200 applications; participation requires filing a petition on Form PTO/SB/472.

USPTO LAUNCHES NEW AI PILOT FOR PRE-EXAMINATION UTILITY APPLICATION SEARCH

- USPTO launches the Artificial Intelligence Search Automated Pilot (ASAP!) to improve examination quality, response time & efficiency.
- Tests an internal AI tool for conducting pre-examination prior art searches.
- Provides applicants with a “top ten” list of potential prior art issues via an AI-Assisted Search Results Notice (ASRN).
- Gives early opportunity to assess claims and take first-action steps like filing amendments, gathering evidence, requesting deferrals, or abandoning applications for fee refunds.
- AI searches use CPC classification, specification, claims, and abstract for context.
- Pilot results will help assess search outcomes, scalability of ASRN generation & guide future initiatives.
- Participation requires filing a specific petition with a fee.

IP NEWS

AUSTRALIA SUES MICROSOFT OVER AI-LINKED SUBSCRIPTION PRICE HIKES

- Australia's ACCC sued Microsoft for allegedly misleading 2.7M customers over Microsoft 365 Copilot pricing.
- Users faced 45% (personal) and 29% (family) price hikes to access Copilot.
- Cheaper plans without Copilot existed but weren't clearly disclosed, only revealed during cancellation.
- ACCC says this violated consumer law by hiding material information and limiting choice.



10X SUES RIVAL ILLUMINA OVER GENE-SEQUENCING PATENTS

- 10x Genomics filed two lawsuits against Illumina in Delaware, accusing it of patent infringement.
- Alleged that Illumina's genomics kits and new gene-analysis platform copied 10x's RNA analysis innovations.
- Illumina denied claims and vowed to "vigorously defend" itself.
- 10x pioneered single-cell genomics and spatial transcriptomics to study gene activity in cells and tissues.
- Lawsuits seek monetary damages and court orders to stop the alleged infringement.



IP NEWS

LAW FIRM MINTZ LEVIN, EX-CLIENT TRADE LAWSUITS OVER VOICE TECH PATENT CASES

- Parus sued Mintz Levin for malpractice, claiming negligence caused a key patent's invalidation and potential losses of hundreds of millions.
- Filed in Texas, citing mishandling before the U.S. Patent Trial and Appeal Board.
- Follows Mintz's lawsuit against Parus for over \$2M in fees.
- Earlier 2019 cases handled by Mintz led to invalidation of Parus's patent on voice-based internet search technology.



VIASAT FENDS OFF SANDISK PATENT LAWSUIT OVER IN-FLIGHT ENTERTAINMENT SYSTEMS

- California court dismissed Sandisk's patent suit against Viasat, ruling its Wi-Fi and in-flight systems don't infringe.
- Judge criticized Sandisk for including a subsidiary without patent rights.
- Viasat's attorney said the ruling confirms the products reflect Viasat's innovations.
- Part of ongoing broader patent disputes with Sandisk's former parent, Western Digital.

IP NEWS

MUSIC PUBLISHERS SCORE COURT WIN AS ANTHROPIC FAILS TO DISMISS COPYRIGHT CLAIMS

- Anthropic lost a bid to dismiss a copyright lawsuit over its AI chatbot Claude reproducing song lyrics.
- Lawsuit covers 500+ songs by artists like Beyoncé and the Rolling Stones.
- Publishers claim Anthropic knew of infringements and profited, citing contributory/vicarious infringement.
- Part of broader AI copyright disputes; Anthropic earlier settled a related \$1.5B authors' case.

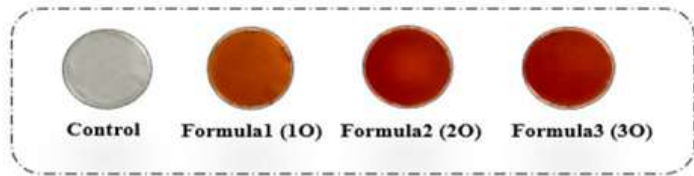


SUPREME COURT DECLINES TO HEAR PURDUE PHARMA APPEAL IN OXYCONTIN PATENT DISPUTE

- The US Supreme Court declined Purdue Pharma's appeal on its OxyContin abuse-deterrent patents, allowing generics to enter the market.
- Lower courts had invalidated the patents, ruling Purdue's evidence of commercial success and public health benefit didn't support patent claims.
- The decision ends years of litigation and reduces Purdue's market dominance.
- Purdue and the Sacklers continue facing thousands of opioid-related lawsuits; a \$7.4B settlement with states and victims is still under review.



TECHNOLOGY THEMES

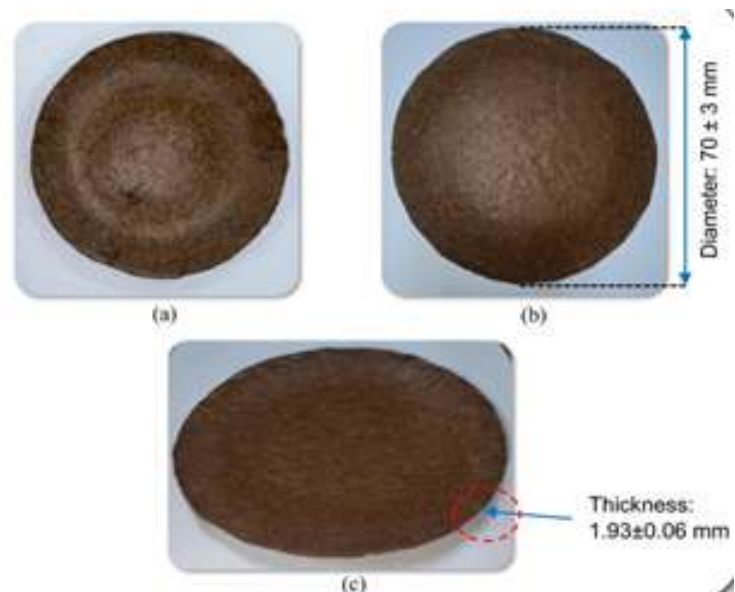


CASSAVA STARCH-ONION PEEL POWDER BIOCOMPOSITE FILMS: FUNCTIONAL, MECHANICAL, AND BARRIER PROPERTIES FOR BIODEGRADABLE PACKAGING

- Cassava starch films enriched with onion peel powder (OPP) showed increased thickness, opacity & strength.
- Moisture, solubility, and flexibility decreased; water vapor permeability increased.
- Films were thermally stable (up to 245 °C) with embedded OPP particles.
- Biodegradable, offering a low-cost, sustainable option for food packaging.

VALORIZATION OF ARECA NUT HUSK & WATER HYACINTH FIBERS INTO BIODEGRADABLE PLATES FOR SUSTAINABLE PACKAGING

- Biodegradable plates were made from alkali-treated areca nut husk and water hyacinth fibers with tapioca starch.
- Optimal 50:50 blend showed best mechanical & water-resistant properties; beeswax coating improved moisture resistance.
- Plates biodegraded 70–75% in 6 weeks, offering a sustainable alternative to plastic while using agricultural waste.
- Commercial scaling challenges include mold durability, production efficiency and coating costs.



GLANCE @EFFECTUAL



8TH

MALAYSIA 2026

GLA ANNUAL ARBITRATION & LITIGATION SUMMIT



22nd – 23rd Jan' 2026



AIAC

GLA is thrilled to announce the opening of nominations for our prestigious awards, which will be presented at the **8th GLA Annual Arbitration & Litigation Summit on 22–23 January 2026** at **Asian International Arbitration Centre** – Kuala Lumpur, Malaysia.

AWARD CATEGORIES

Litigation Awards

- **Individual:** Top Litigator of the Year | Top Legal Leader of the Year | Rising Star in Litigation | Technology & Innovation in Litigation
- **Firm:** Top Litigation Law Firm of the Year | Top Litigation Team of the Year

Dispute Resolution Awards

- **Individual:** Dispute Resolution Lawyer of the Year | Rising Star in Dispute Resolution | Client Service Excellence in Dispute Resolution | Technology & IP Disputes Award
- **Firm:** Dispute Resolution Firm of the Year | Dispute Resolution Team of the Year

Arbitration Awards

- **Individual:** Arbitration Lawyer of the Year | Best International Arbitration Practitioner | Rising Star in Arbitration | Client Service Excellence in Arbitration
- **Firm:** Arbitration Team of the Year | Arbitration Firm of the Year

IP Awards

- **Individual:** IP Lawyer of the Year | Rising Star in IP | Women in IP | IP Practitioner of the Year
- **Firm:** : IP Law Firm of the Year | Best Patent Litigation Team of the Year

Submit Your Nominations Today

Showcase your achievements or nominate peers who are setting benchmarks in the global legal community.



GET IN TOUCH

The sum of human ingenuity and expertise that powers us.

Human interactions that drive innovation.



**Effectual
Services**
Intelligence That Matters

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