

HKUST

UNICORN DAY 2024

HKUST Innovation and Enterprise Unlimited



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UNICORN
DAY 2024

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HKUST UNICORN DAY 2024

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About The Hong Kong University of Science and Technology

The Hong Kong University of Science and Technology (HKUST) (<https://hkust.edu.hk/>) is a world-class research intensive university that focuses on science, technology and business as well as humanities and social science.

HKUST offers an international campus, and a holistic and interdisciplinary pedagogy to nurture well-rounded graduates with global vision, a strong entrepreneurial spirit and innovative thinking. Over 80% of our research work were rated “Internationally excellent” or “world leading” in the Research Assessment Exercise 2020 of Hong Kong’s University Grants Committee. We were ranked 2nd in Times Higher Education’s Young University Rankings 2023, and our graduates were ranked 29th worldwide and among the best from universities from Asia in Global Employability University Ranking 2023.

As of September 2023, HKUST members have founded 1,747 active start-ups, including 10 Unicorns and 13 exits (IPO or M&A), generating economic impact worth over HK\$ 400 billion. In the QS World University Rankings by Subject 2024, 12 subjects have been ranked in the top 50 globally, with “Data Science and Artificial Intelligence” securing the 10th position, the highest ranking among the local universities in the field.

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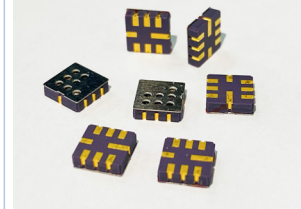
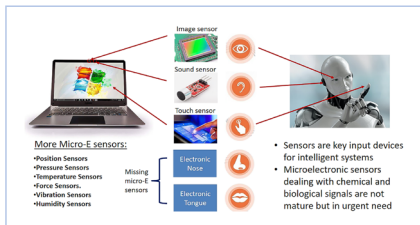
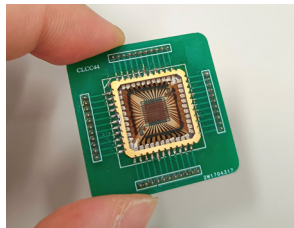
AI Sensing Technology

Biomimetic olfactory chips that offer a high sensitivity to various gases with excellent distinguish ability for distinct odours

Research and Commercialization of Bionic Olfactory Chips and Systems

The Bionic Olfactory Chips are sensitive to low concentrations (ppb level). Its low power consumption and compact size are ideal for Internet of Things (IoT). By artificial intelligence, these can analyze mixture gases in complex scenarios. Innovations in design, materials, and AI-driven analysis underpin these groundbreaking industrial applications, including environmental monitoring, food quality, medical and clinical, etc.

- ▶ Published on Nature Electronics (IF: 38.6) - Biomimetic Olfactory Chips Based on Large-scale Monolithically Integrated Nanotube Sensor Arrays
- ▶ Tencent Xplorer Prize 2022 Awardee, BoCHK Science and Technology Innovation Prize 2022 Awardee
- ▶ Fundraised over US\$4 million investment for business development over the past 5 years

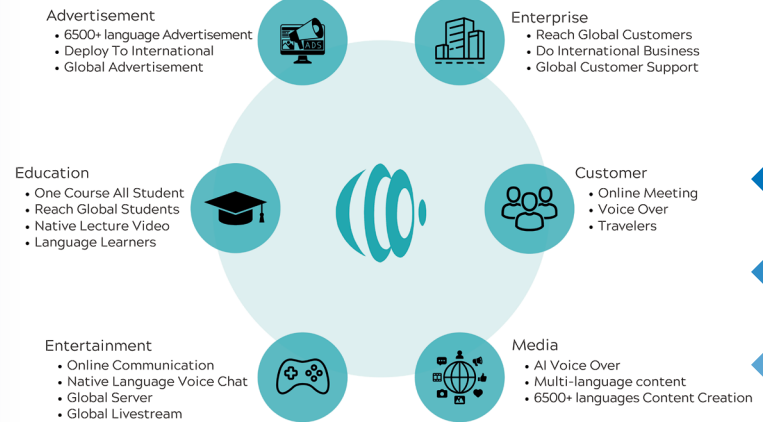


AIVOICE LIMITED

Voice clone, Cantonese text to speech, voice separation, auto subtitle

A Hong Kong-based company specializing in Voice AI research, with a particular emphasis on Cantonese Voice AI Models. Our AI research aims to enhance voice-over efficiency and overcome language barriers.

- ▶ HKSTP Ideation
- ▶ HKUST Dream Builder
- ▶ Hong Kong Techathon



ALL-IN-ONE
同一平台使用所有聲音科技

No.1 Cantonese AI
第一間廣東話聲音科技公司

Research Level Quality
科研級聲音技術

Localised Voice AI
本地化聲音人工智能



Ainfinity Technology (HK) Co., Ltd.

Developing high power GaN devices for medium voltage (5KV) applications based on cost effective, large area Ainfinity smart substrate technology

5KV High Power GaN Devices on 8 inch Novel Substrates

A power semiconductor company of large area Ainfinity smart substrate technology for high performance and high volume power applications. The management team has more than 80 years of combined experience in the industry.

- ▶ Angel round fund of 10 million RMB has been completed

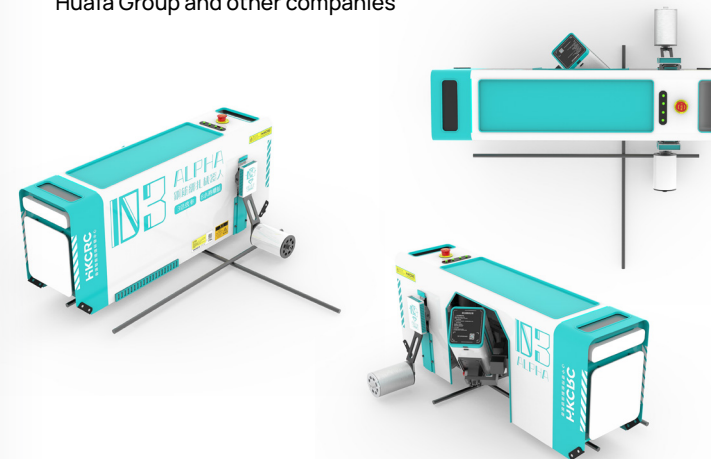


Automate Rebar Tying

Enhance productivity and safety with our robotic solution

Hong Kong Center for Construction Robotics (HKCRC), a scientific research and entrepreneurship platform, was established in 2020 by the Hong Kong University of Science and Technology and the University of California, Berkeley. It is affiliated to the InnoHK project of the Hong Kong government.

- ▶ 49th International Exhibition of Inventions Geneva - Gold Medals with Congratulations of the Jury
- ▶ (Young Innovators- Student) of the CIC Construction Innovation Award 2022 - Merit Award
- ▶ Cooperation with China State Construction, Huafa Group and other companies



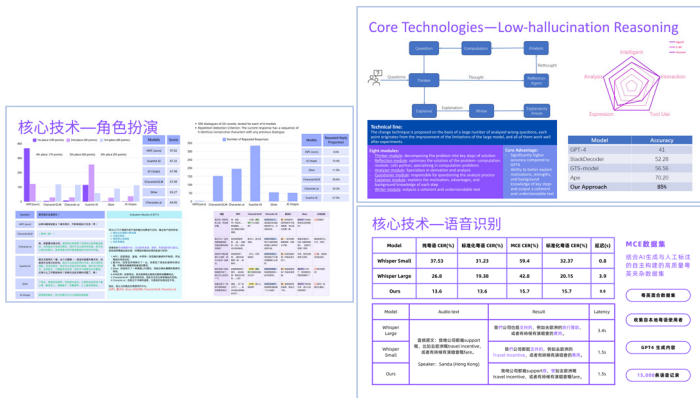


Bauhinia AI

Trustworthy and low-hallucination industry AI agent solutions

Bauhinia AI is the pioneer in industry AI agent solutions, incubated by HKUST Digital Fintech Lab. We consist of PhDs and Masters from top universities and engineers from industry. We specialize in AI agents and multi-agent collaboration, offering solutions across finance, healthcare, and gaming. Our services range from smart document management to expert robots, diagnostic models, companion agents, and iNPC, along with customized AI model development and consultancy.

- ▶ Collaborated with a leading Chinese gaming company to develop in-game NPC Agents
- ▶ Developed AI customer service digital human for a renowned bank
- ▶ Awarded TSSSU funding from the HKUST and ITF



ChargeSpot

Power bank sharing

The world's 1st transnational power bank sharing service. Rent anywhere, return anywhere!

- ▶ Service available in 7-Eleven
- ▶ Official power bank rental service provider at Hong Kong Disneyland
- ▶ IPO on the Tokyo Stock Exchange





D-Engraver Limited

Smart contract platform that offers blockchain plus AI contract-trading services for all types and sizes of businesses

D-Engraver was founded in 2018, and is a leading company in Web 3.0 and aims to make smart contract trading simple and accessible to all, while keeping it honest and reliable and applying it in real industries. We are dedicated to building an ecosystem for smart contract trading and becoming the leader in this field.

- ▶ Fundraised
 - HKUST EFund+ TSSSU HK\$1.2M
 - HKSTP Incubation HK\$1.3M
 - Angel round fundraising HK\$5M
 - HKSTP LEAP \$4.81M
- ▶ 2021 ICT Award Gold Award
- ▶ 2022 Fintech Awards Outstanding Digital Trading Deal Closing Solution
- ▶ Over 500 clients and 10 distributors

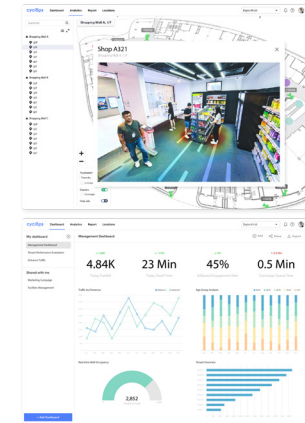
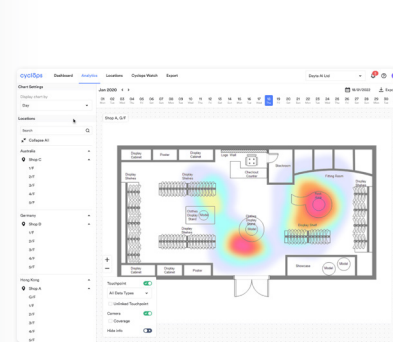



Dayta

Visualise your visitor's behaviour and gather data insights with real-time video analytics

Established in 2018, Dayta AI is a Retail Analytics SaaS company that leverages existing cameras to acquire visitors' behavioural data and generate actionable insights. Its product, Cyclops, enables brick-and-mortar retailers to optimise their sales, traffic and operations under the aegis of Computer Vision and Business Intelligence.

- ▶ Cyclops' applications have been extended to various offline scenarios and established presence in Thailand, Indonesia and Malaysia
- ▶ Dayta AI and itsco-founders were honoured as 'Forbes Asia 100 to Watch' and 'Forbes 30 under 30 Asia' respectively
- ▶ The company raised US\$2.4M in the Pre-A rounds with investors from Hong Kong, Taiwan, Korea, and the UK

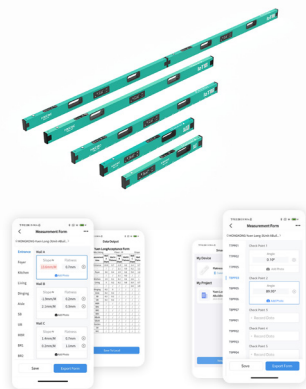
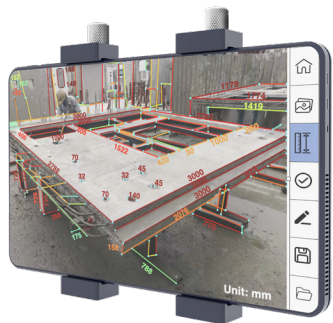


Enightful Limited

Using Computer Vision Technology for a better quality control in the Construction Industry

Enightful aims to create professional and handy AI tools for engineers, enabling them to obtain more insightful engineering data anytime and anywhere. Our team is led by a civil engineering PhD from MIT and consists of talented individuals from various disciplines and prestigious universities worldwide.

- ▶ Awarded HKUST TSSSU funding
- ▶ Trial use of products on more than 10 Hong Kong and mainland construction sites
- ▶ Interviewed by CCTV, giving live demonstrations



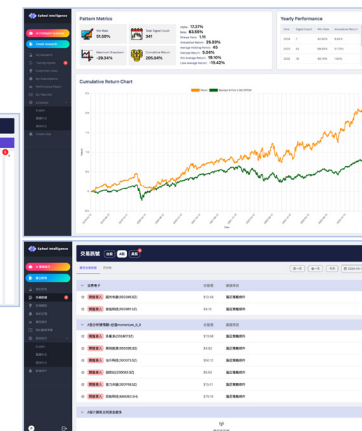
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Ephod Technology Limited

Ephod Intelligence, a SaaS platform, uses quant models to generate personalized trading signals for analysts

Ephod Intelligence is a SaaS platform that helps research analysts validate investment ideas and monitor equity markets. It uses advanced non-linear models tailored to analysts' strategies to recommend effective stock screening factors, generating personalized trading signals.

- ▶ Fundraised \$1.6M in 2023-2024
- ▶ two institutional users generated 30%+ excess return compared to benchmark in 2022 and 2023



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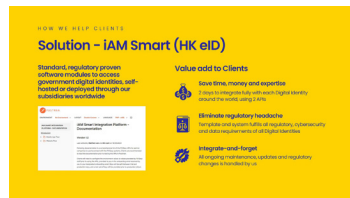


Fill Easy Limited

Digital identity integration and cross border data solution

Fill Easy was founded in 2021 and streamlines the integration process for government digital identity (iAM Smart/Singpass/UAE Pass) - through GovTech. Businesses are able to use these government verified tools to access government data to ensure accuracy and security with an enhanced onboarding experience for customers. Fill Easy also received the OGCIO standard contract license which enabled it to develop solutions for cross border data which tackles the difficulties of limited access to Chinese data.

- ▶ In progress of building the iAM Smart digital signing tool for HKUST
- ▶ Launched iAM Smart ID verification for a MCRA company in HK
- ▶ Part of HKSTP Incubator program



INCREASING EFFICIENCY GAINING IMPROVEMENTS
Benefits - Government Digital Identity

- 80% Reduction in manual data entry
- +20% Increase in customer satisfaction
- +15% Increase in application approval rate
- 100% Elimination of manual data entry

Financial institutions save up to 100,000 per application through using a government digital identity.

90% of applicants provide online applications with 10% of banking to maintain a high level of customer experience.

Mainland China - NFC ID Scan
Clients can top their Mainland ID card to transfer data to Hong Kong, with data sourced from the Ministry of Public Security.

Key Highlights

- Source Data is provided from all Chinese IDs through a NFC tag
- Fully legal under the USA standard contract for processing anywhere in USA and Mainland China
- Information is verified by the Ministry of Public Security 公安部, (MPS) to ensure accuracy

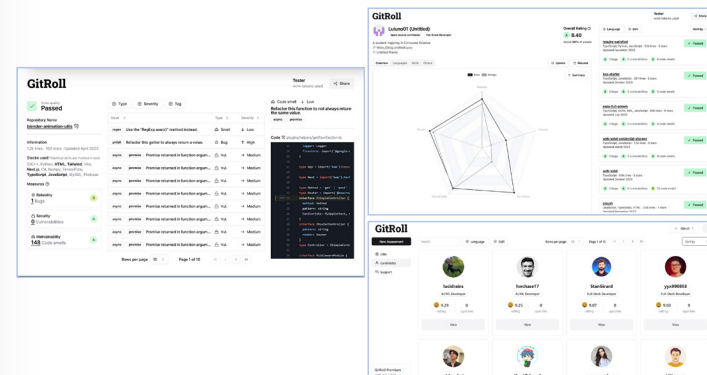
GitRoll

GitRoll

Global talent platform for software engineers, uncovering overlooked talent through data-driven analysis of developers' online activities

GitRoll is a global talent platform for software engineers, aimed at uncovering overlooked talent through data-driven analysis of developers' online activities. By examining GitHub, we provide fair assessments of both hard and soft skills, enabling companies to find top talent cost-effectively. With widespread adoption and positive feedback from developers globally, GitRoll is reshaping the hiring landscape. Our team of experienced developers is dedicated to promoting fairness, efficiency, and transparency in the tech talent market.

- ▶ Our clients include companies in Silicon Valley and YC alumni
- ▶ Top 10 finalist at WOW Summit Hong Kong
- ▶ Merit Award Hong Kong Techathon Trusted AI Open Group





Goba Solutions Limited

Hong Kong's first and only intercity coach platform

Goba Solutions Limited endeavors to use technology to improve the operation and service experience of intercity transport in the Asia Pacific, connect people in the region, and achieve the vision of smart mobility in Hong Kong Smart City Blueprint. Our award-winning product, GoByBus.hk, helps travellers to reserve their coach seats, at the same time improves the efficiency and revenue of the operators.

- ▶ Incubatee of HKSTP Incu-Tech Programme
- ▶ Awardee of WeVenture Youth Entrepreneurship Program by The Y.Elites Association & HKSARG
- ▶ Strategic partnership with digital wallets in Greater Bay Area



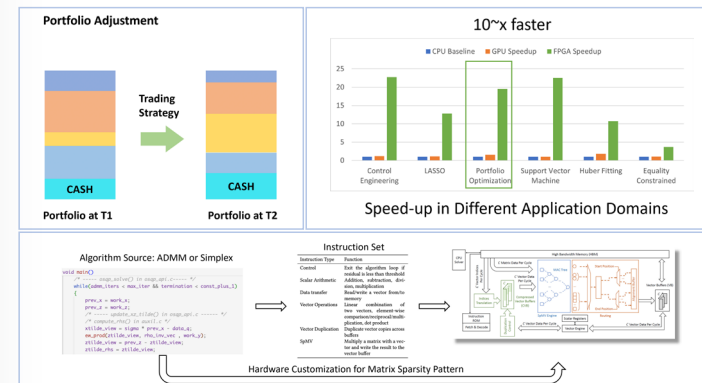
Hardware Accelerator for Financial Computing

AI Chip Center for Emerging Smart System (ACCESS) is a multi-disciplinary research center under the InnoHK

Hardware Accelerator for Financial Computing

We offer a financial computing hardware accelerator (AC-CVXPY) utilizing FPGA and ASIC. It delivers the adaptability of a general software solver and enhanced speed through finance-specific hardware architecture.

- ▶ Customized high-power efficiency and low latency AI core optimized for finance market prediction using co-design technology
- ▶ A hardware solver for fast portfolio optimization and trading strategy suggestion
- ▶ Reconfigurable circuit technology for flexible algorithm adoption



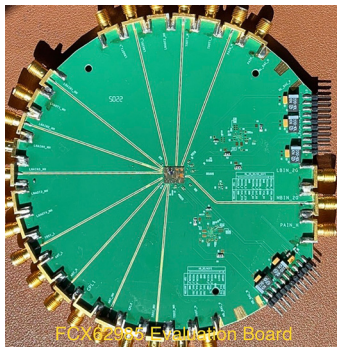


High5 Semiconductor (HK) Ltd.

High-SPLIQ Integrated Circuits and System-in-Packages targeting enterprise communication applications

High5 Semiconductor focuses on enhancing enterprise communication systems through the development of High-SPLIQ (High-Speed, High-Power, High-Linearity, High-Integration, and High-Quality factor) Integrated Circuits (ICs) and Systems-in-Package (SiPs). It aims at advancing next-generation communication technologies, particularly targeting products for B5G/6G satellite communication and laser drivers for optical networks.

- Obtained HK\$35 million investment from Draper Dragon
- Obtained HK\$30 million investment from Chenhui Venture
- Obtained HK\$18 million investment from private investors and industrial partners



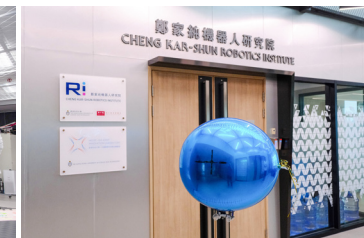
Human-Friendly Miniature Autonomous Blimp (UST-MAB)

Discover the future of indoor aerial robots with our groundbreaking UST-MAB technology

Designed to revolutionize human-robot interaction, the UST-MAB offers a range of innovative features:

- Enhanced safety: Providing a highly secure environment for human-robot interaction, ensuring peace of mind in indoor settings
- Extended operation time: With an impressive maximum operating time of up to 6 hours, the UST-MAB offers exceptional endurance for prolonged missions
- Versatile control systems: The advanced control systems developed for the UST-MAB can be replicated for marine robots, expanding the application areas for this cutting-edge technology

- Provide a highly secure environment for human-robot interaction
- Extremely long operating time (maximum operating time can be up to 6 hours)
- Designed control systems can be replicated for marine robots





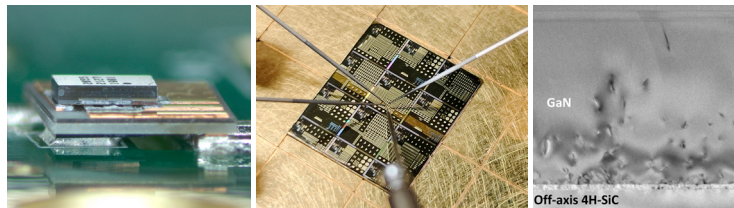
Hybay Semiconductors

Combining the complementary merits of GaN and SiC in a single power switch for electric vehicles and power supply units

Low-Cost High-Performance Heterogeneous Wide BandGap (H-WBG) Power Devices

Our company aims to design and produce high-performance heterogeneous wide bandgap (H-WBG) power devices by combining the complementary advantages of GaN and SiC. Our new H-WBG power devices exceed the performance metrics of conventional SiC Power MOSFETs while reducing the chip area by more than 40%, making the final H-WBG device more than 25% cheaper than conventional SiC power MOSFETs (for EV traction inverters, this translates to a cost reduction of over US\$125 per device).

- ▶ The prototype of GaN/SiC Cascode device has been realized with superior switching performance compared with SiC MOSFETs
- ▶ High-quality GaN epi is successfully grown on commercial off-axis SiC substrate (published in Advanced Materials)
- ▶ The device-level proof-of-concept of HyFET has been demonstrated (published in IEEE IEDM)



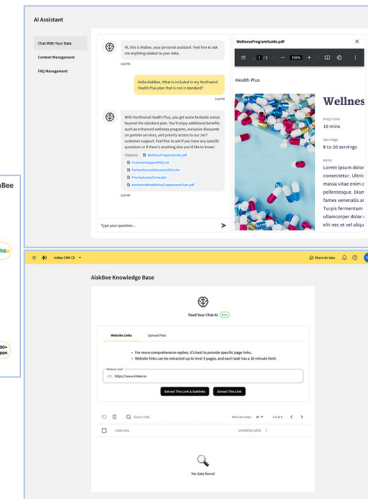
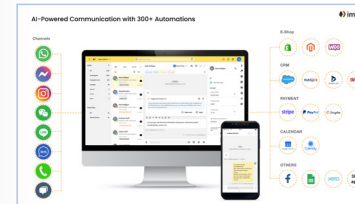
imBee

Enterprise internal AI assistant for employees

The AI assistant will give employees instant answers with summaries, citations, and referencable files from the company's different file systems and knowledge base. This will boost employees' productivity by 2 times at the workplace.

Our average users search 16 times a day, saving them 3 hours a week. It has a clear 6x ROI.

- ▶ Raised US\$6M+ from global investors
- ▶ Hundreds of customers globally
- ▶ Winner of the Deloitte Technology Fast Program



Connects AGI and the physical world

We are dedicated to combining multimodal robotic AI with cross-embodiment motion control technology, to break the boundaries of scenarios and robot bodies, allowing intelligent robots to rapidly enter various industries and households, and bringing AGI to the physical world.

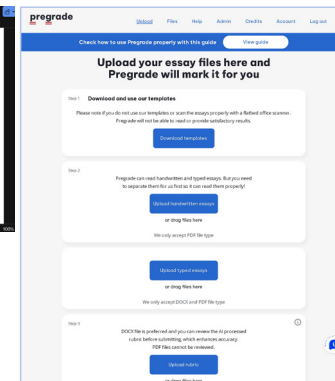
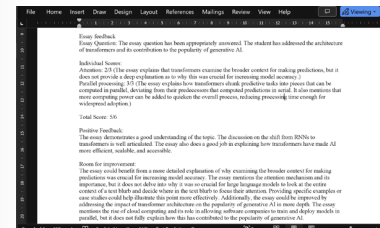
- Received seed round funding of 300,000 dollars, and the investor is Lu Qi, the founder of YC
- Recognized as a Tech SME
- Won third prize in the 2023 New Generation of Artificial Intelligence (Shenzhen) Startup Competition



Pregrade uses AI to pre-grade essays. Like a human TA, Pregrade drafts grades and feedback for teachers to review and finalize

Learnovate leverages AI to improve teaching and learning. Our Pregrade product is deployed and generating revenue. We are also working on products addressing other educational needs, including early career recruiting. Our team includes a HKUST professor working on AI in education, a serial entrepreneur with a record of building leading tech startups, and a team with technical, design, and execution capabilities.

- Pregrade is now post-revenue, being used by UNESCO's e-learning initiative to assess learning. It is being piloted by several universities
- Pregrade has developed technologies complementing LLMs by overcoming their shortcomings. We are now preparing patent applications
- Learnovate raised funding from private investors, matched by a non-dilutive TSSSU+ grant. We are looking to add to this round



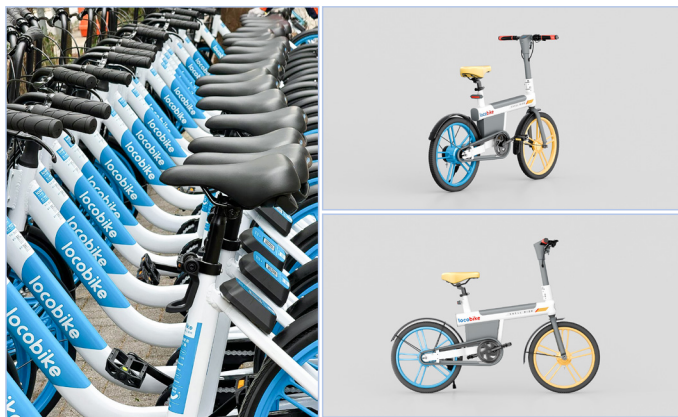
locobike

Locolla Limited

World-first net zero carbon emission micro-mobility network powered by solar energy and wireless charging

LocoBike is Hong Kong's leading eco-friendly transportation platform, committed to reducing carbon emissions and promoting sustainable travel. With our convenient bike-sharing service, powered by innovative IoT technology, we provide a green and efficient way to commute. Join our community of over 500,000 users and ride towards a greener future!

- ▶ Hong Kong ICT Awards 2020-Smart Mobility (Smart Transport) Silver Award
- ▶ Hong Kong ICT Awards 2022-Smart Mobility (Smart Transport) Certificate of Merit
- ▶ CityU HK Tech 300 Angel Fund 2022



元交互



MetaHCI

Empowering content ideation, creation, and promotion to usher in a new era of AI-driven content

Leveraging a proprietary multifunctional large model library, we build super apps and toolchains for the era of large models in pan-entertainment, fully empowering content ideation, creation, and promotion to usher in a new era of AI-driven content.

- ▶ Secured over 4 million RMB in funding
- ▶ Won first place in the Human-Computer Interaction track at the Pazhou World Algorithm Competition
- ▶ Featured and covered by multiple mainstream media outlets

打造新一代交互内容智能推荐系统

全新的用户交互行为
区别于短视频的点赞、收藏、转发，下一代交互系统行为的复杂度更高，需要全新的智能推荐系统

情绪行为识别
娱乐化内容天然具有好的情绪行为触发

Agent 互动行为
基于用户Agent使用过程中产生的行为数据



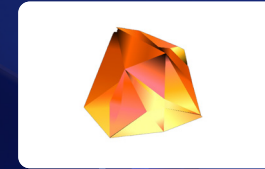
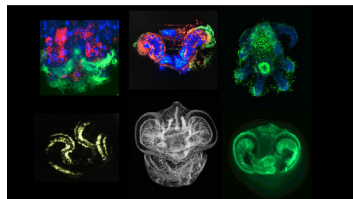


MMSTAR

Use technology to empower the global aquaculture industry

A technology start-up company jointly launched with professors from the Hong Kong University of Science and Technology. Use technology to empower the global aquaculture industry.

- ▶ HKUST TSSSU Fund
- ▶ HKSTP Incubation Programme Fund



ONYX

A 24/7 AI assistant coach

A sports technology company aims to integrate technology into sports areas, to help athletes improve their performance by providing customizable and quantitative feedback. Not only maximizes the training impact but also empowers potential players with competition and premier education regardless of background.

- ▶ Best final year project in HKUST Department of Computer Science and Engineering 2023 and HKUST Hult Prize 2024 Finalist
- ▶ Collaborated with world-leading squash players and coaches (former world no.1 Jonathon Power, current world no.7,14 and 21)
- ▶ Obtained angel investment offer from Prof. Li Zexiang and Venture Capital



Table Tennis



Badminton



Basketball



Tennis



Squash



Basketball

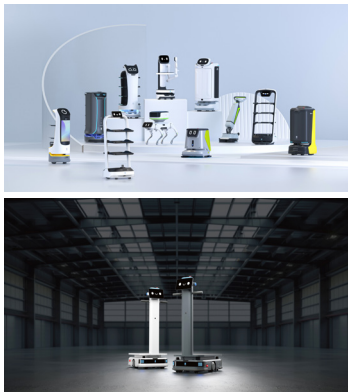


Pudu Robotics

Global leader in service robotics

With a focus on R&D, manufacturing, and sales of service robots, Pudu Robotics holds nearly a thousand authorized patents worldwide, encompassing a wide range of core technologies. The company's robots have been widely adopted in various industries, including dining, retail, hospitality, healthcare, entertainment, education and manufacturing. To date, Pudu Robotics has successfully shipped over 70,000 units to a variety of markets, with a presence in more than 60 countries and regions worldwide.

- ▶ Raised more than 1.4B RMB and backed by tier-1 strategic and financial investors, including Meituan, Tencent, Sequoia Capital, and SIHC, etc.
- ▶ Highly recognized achievements as the only player with global presence with top 1 market share
- ▶ Recipients of the prestigious IF Design Award, Reddot Design Award, Industrial Design Excellence Awards and Good Design Award



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Raysolve Technology Company Limited

Raysolve provides quantum dot-based, high brightness full-color micro-LED microdisplays, which will be the core display components in AR glasses

Raysolve is a research-focused company established in Hong Kong and Suzhou, China. It is a spinoff of HKUST and specializes in researching and manufacturing of miniaturized full-color micro-LED microdisplays for AR glasses. The team has over 17 years of experience in this field and has achieved a major milestone by producing a full-color micro-LED microdisplay.

- ▶ Display Week 2024 People's Choice Award Winners (Best MicroLED-Based Technology)
- ▶ 2024 SID China Display Industry Awards (CDIA) - Bronze Award for Best Innovation of the Year
- ▶ 2023 Deloitte Technology Rising Star of the Guangdong-Hong Kong-Macao Greater Bay Area
- ▶ 2023 Deloitte Technology Rising Star of Hong Kong



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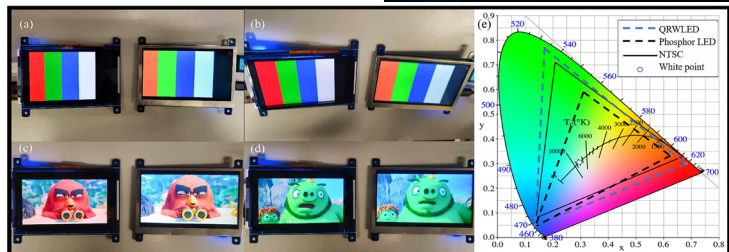
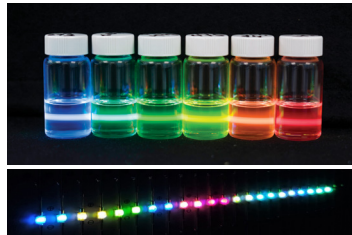


Roumei (Hong Kong) Technology Limited

New generation of LEDs for display and lighting application using innovative quantum rod nanomaterial

Using patented Quantum Rod Technology from HKUST, our young team pioneers nanomaterial on-chip LED application, enabling customizable light spectra for superior color performance, reducing adverse blue light impact by 50-100%, saving up to 60% in power, and lowering QLED display costs. Our innovative designs cater to display and lighting needs.

- Received the prestigious I-zone Innovation Prize at the International Conference on Display Technology (ICDT-2023)
- Quantum Rod Lighting Technology (QRLT) trademark registration
- Securing funding from ITC (Hong Kong) through the renowned Incu-Tech program, supporting technological startups



Sitan Semiconductor International Co. Limited

Pioneering developer of Micro-LED turn-key solutions. We focus on the development, production, and sales of Micro-LED

Sitan stands at the forefront of innovation, dedicating itself to the research and mass production of Micro-LED displays. Holding prestigious national-level certifications and boasting a provincial-level R&D platform for Micro-LEDs, we offer comprehensive solutions for Micro-LED displays across various applications, including AR/XR, wearable devices, and flat panel displays.

- Our 0.13" Micro LED Display Module won the CES 2024 innovation award
- We have developed a new 0.2-inch full-color demo
- New fundraising in progress



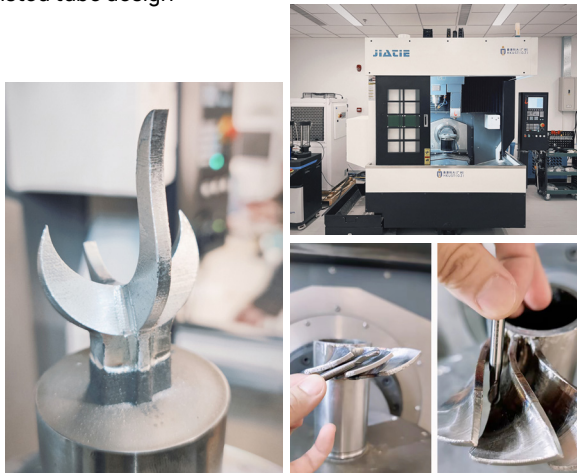


SmarTech

Comprehensive solutions for additive and subtractive manufacturing, strengthening, and repair throughout the product's entire lifecycle

SmarTech Automation Technology Co., Ltd., founded by three professors and three PhDs in HKUST, engages in laser additive manufacturing, hybrid manufacturing, and applied laser processing technologies. We endeavor to provide highly automated manufacturing system solutions and services, which helps the customer to improve product quality and reduce manufacturing costs.

- ▶ Craft a metal red bird model using HM solutions
- ▶ 3D print a metal hollow blade
- ▶ Print a twisted tube design

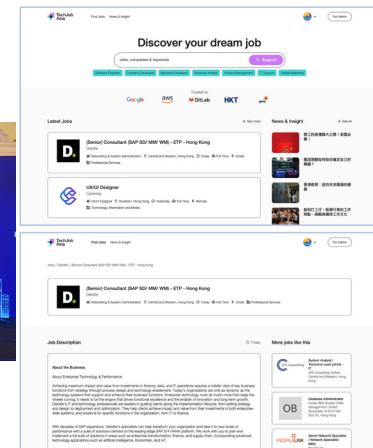


Talentlabs Limited

AI-powered career and recruitment platform

TalentLabs helps professionals find jobs and grow careers in Asia. Our recruitment platform uses AI technologies and industry expertise to connect companies with top talent. We also build our talent pool by offering career resources and training through our upskilling platform. Together, both platforms provide a comprehensive ecosystem for professionals and companies alike.

- ▶ Won the Asia Pacific ICT Alliance Awards 2023, Gold Award
- ▶ Our platform powered the Cyberport Career Fair 2024, featured by over 70 media coverage
- ▶ Signed official partnerships with Google, AWS, GitLab and PwC for their talent and training initiatives



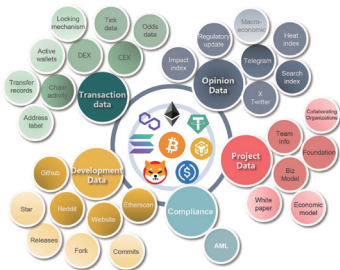
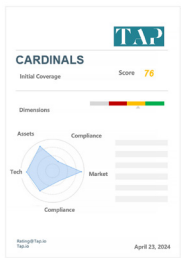


TAP

A token evaluation report produced by large language model, guided by financial economics research, and supported by real-time data

Web 3.0 ecosystem development requires a professional evaluation system. We provide such a solution through comprehensive and research-driven token evaluation reports. The reports, based on massive on-chain and off-chain data from developers and users, evaluation framework supported by research and region-specific characteristics, and multi-modal large language model, facilitates Web 3.0 project and token issuers, virtual asset service providers, investors, and regulators.

- Decades of experience in financial institution, Web 3.0 startup, with Distributed Data Processing Framework with Million TPS LLM in Financial Domain
- A comprehensive framework to evaluate token that leverages extensive research across technological and financial economic domains and tokenomics
- Strong industry support from credit rating agencies, law firms, and other stakeholders in the Web 3.0 ecosystem



Vidi Labs Ltd.

Seekr is an AI wearable device to make spaces accessible

Seekr is a first-of-its-kind compact AI wearable device ever to be designed for and with the visually-impaired community. Deviating from medical and bulky looking form factors, we pack our machine learning algorithm into a camera equipped clip-on device no bigger than a match box, which collects visual data and sends a curated audio feed of information to users through any Bluetooth-enabled earpiece.

- AIA creator Fund (HK\$1 million)
- ICT Silver Award
- Alibaba Entrepreneurship Fund - Inclusivity and Diversity Award
- SelectUSA Champion



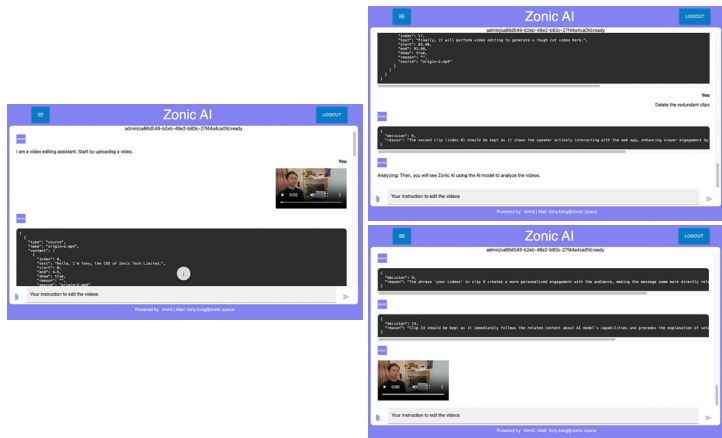


Zonic Tech Limited

Zonic AI Video Editor: auto edit, enrich, and fine-tune videos with storyline-based arrangement

Zonic AI, founded by three HKUST students specializing in AI research, offers a groundbreaking video editor using state-of-the-art video understanding models and AI agents. Our AI solutions frees video editors from mundane tasks, enabling them to unleash their creativity.

- ▶ HKSTP Ideation Program
- ▶ HKUST-Sino One Million Dollar Entrepreneurship Competition 2022: HKUST Student Team Award
- ▶ Closely cooperate with NowTV, One Media Group, MM2 Entertainment

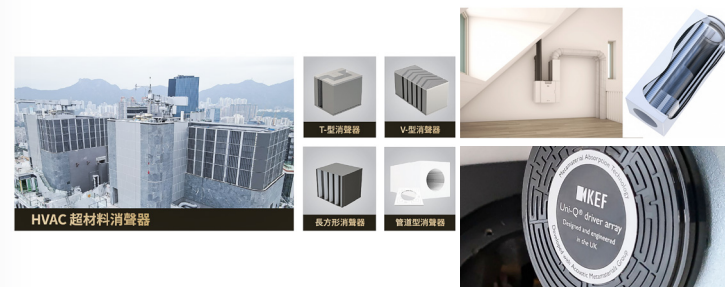


Acoustic Metamaterials Group Limited (AMG)

Implementing acoustic metamaterials technology to enhance the absorption of noise and solve the acoustic problem, using recycled plastic

Acoustic Metamaterials Group Limited (AMG) is an innovation and technology company that utilizes cutting-edge acoustic metamaterials technology to develop next-generation noise control and audio products. Since 2014, AMG has achieved a series of commercial applications of acoustic metamaterials in multiple industries including Hi-Fi, smart wearable devices, automobile, consumer electronics, construction, electrical and mechanical systems, home appliances, and more. As a new type of basic material, acoustic metamaterials have shown a superior performance over the conventional acoustic materials, bringing innovation to the way people interact with sound.

- ▶ 2021-22 Hong Kong Awards for Industries: Equipment And Machinery Design Certificate of Merit
- ▶ 2019 Hong Kong Awards for Industries: Technological Achievement Certificate of Merit
- ▶ 2017 The International Exhibition of Inventions Geneva Gold Medal



CoolStar Innovation Technology Limited

Disruptive heating/cooling technology with high COP (Coefficient Of Performance) to replace the existing high-global-warming-potential vapor-compression-based refrigeration technology

Space cooling accounts for 20% of global electricity consumption, yet the market-dominant vapor-compression-based refrigeration technology is a low energy efficiency solution which relies on high global-warming-potential (GWP) chemical refrigerants.

We developed a high energy efficiency solid-state elastocaloric cooler using graphene nanofluid to transfer heat from tubular Shape Memory Alloy (SMA) in a multi-cell architecture. Using our green cooling device, over 3 trillion kWh of electricity and 1200 million tonnes CO2 equivalence can be reduced per year on a worldwide scale.

- ▶ Disruptive heating/cooling technology with high COP (Coefficient Of Performance) to replace the existing high-global-warming-potential vapor-compression-based refrigeration technology
- ▶ Giant specific cooling power with high energy efficiency enabled by innovative "SMAs in series - fluid in parallel" multi-celled architecture
- ▶ The material is enduring for over 100 million cyclic operation, accounting for a 10-year service time

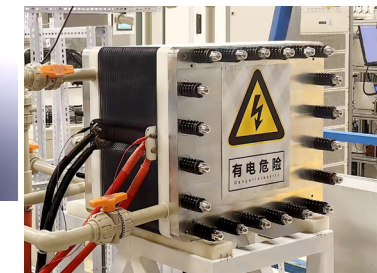
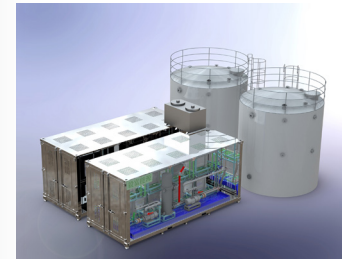
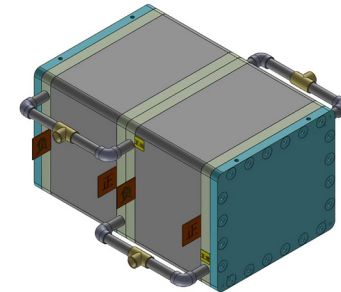


E-Fuel Energy Technology

Advanced flow battery energy storage technology for high-performance, scalable, and sustainable energy storage solutions

E-fuel Energy Technology is a leader in advanced flow battery systems, known for its high-performance, cost-effective, and safe energy storage solutions. The company leverages proprietary technology to offer products with nearly 90% energy efficiency, low system costs, and a lifecycle exceeding 25 years, positioning itself strongly in the expanding global energy storage market.

- ▶ Product certified by a leading independent authority, outperforming all competitors in performance metrics
- ▶ Successfully secured angel round funding to boost research and production capabilities
- ▶ Secured a significant order from a major state-owned enterprise



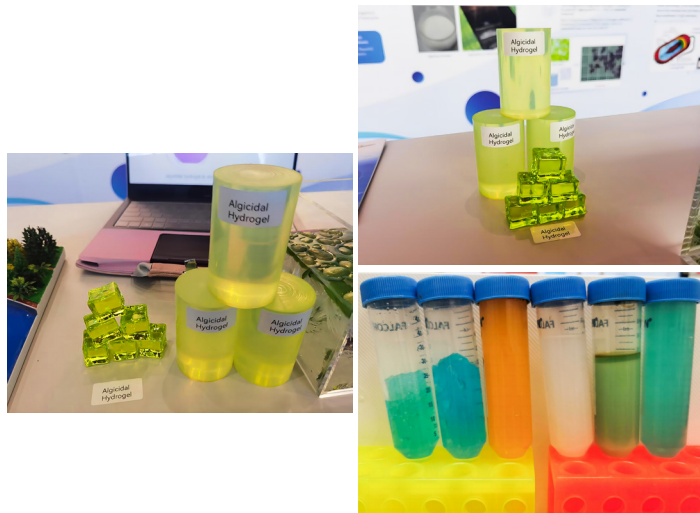


EcoTech (HK) EnviroProtect Technology Limited

One-stop long-term drug delivery platform and integrated services to keep water resources in a healthy condition

EcoTech is a HKUST-based environmental technology company dedicated to the preservation of water bodies and sustainable development. We specialize in providing comprehensive water conservation solutions, encompassing expert planning and customized remedies, along with the provision of corresponding products.

- ▶ HKSTP-incubation program
- ▶ Angel round investment
- ▶ 48th International Exhibition of Inventions Geneva - Silver Medal

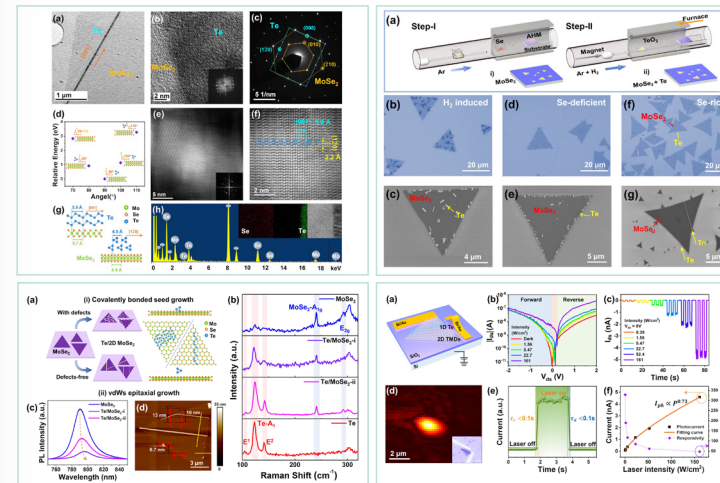


Epitaxial Growth of Mixed-Dimensional Heterostructures for High-Efficient Self-Powered Photodetector

A controllable epitaxial growth of highly aligned 1D/2D mixed-dimensional heterostructures with an ultraclean interface and defect-free vdW contact

The technology offers a controllable epitaxial growth of highly aligned 1D/2D mixed-dimensional heterostructures with an ultraclean interface and defect-free vdW contact, allowing efficient transfer of photogenerated carriers and self-driven behavior with high performance, including high responsivity, high external quantum efficiency, competitive specific detectivity, and rapid response rate.

- ▶ Published in Advanced Functional Materials





ESGuardian

Using silica capsule technology to advocate a waste less and zero carbon but healthy living style

We are eager to spread the awareness, sensitivity and operational capacity concerning the low carbon city to society. By incorporating silica capsule technology into our daily products, we aim to reduce excessive packaging in the market, the reliance on plastic bottle containers and provide an alternative product that is compact, environmental friendly, sustainable and long lasting with significant reduction in waste generation. We have developed and launched Soapie (gel Soap) as an alternative soap product and are developing more household/personal/environmental hygiene products and creating a bundle of products to expand our product coverage in the market.

- ▶ Gold Award, 49th Geneva Exhibition of Inventions
- ▶ Best Social Impact Pioneer, Environmental Sustainability Guardian Limited, Y-LOT Hong Kong SciTech Pioneers Award, Hong Kong
- ▶ Bright Future SME's Youth Creative Entrepreneurship Grand Award, Environmental Sustainability Guardian Limited, The Hong Kong General Chamber of Small and Medium Business, Hong Kong

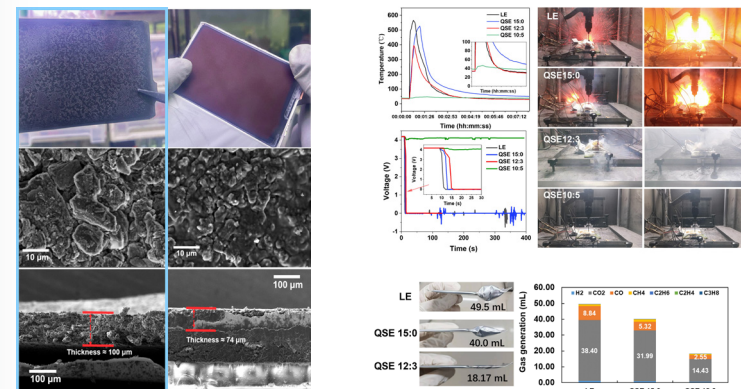


High-Performance Polymer-Based Quasi-Solid Electrolytes for Commercial High-Energy-Density Batteries

This innovation has been successfully implemented in commercial high-loading batteries, addressing critical issues such as graphite exfoliation and silicon pulverization

Our technology outperforms liquid electrolytes, achieving 2000+ cycles with over 90% capacity retention in Graphite/NCM811 batteries. It's compatible with commercial electrodes and ideal for high mass loading batteries. The quasi-solid electrolyte's unique properties prevent electrode damage, distinguishing it from liquid electrolytes. Removing free liquid molecules minimizes the risk of fires and explosions, especially in harsh conditions.

- ▶ Compatible with commercial electrodes, suitable for high mass loading batteries. Samples sent to the top 3 battery companies for testing
- ▶ The quasi-solid electrolyte possesses unique mechanical properties that prevent electrode pulverization, distinguishing it from conventional liquid electrolytes
- ▶ By eliminating free mobile liquid molecules, the risk of battery firing and explosions is significantly reduced, particularly under harsh conditions



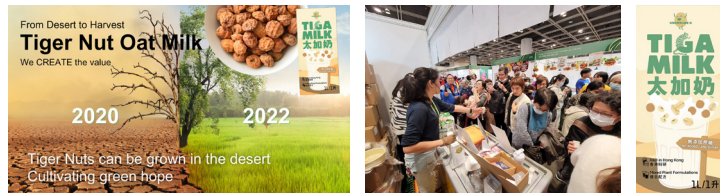


Meat the Next Company Limited

Alternative protein solutions and new generation food to combat climate change

Meat the Next is a New Generation Food Enabler founded by HKUST alumni hoping to develop and provide delicious, nutritionally balanced and affordable alternative protein product solutions. We have launched our dairy-free ice cream and Tiger nut oat soy milk which does not contain added sugar. Their exclusive raw material tiger nuts are to enhance the smoothness of their dairy-free products. By creating New Generation Food, we aim to solve food shortage problems and deal with climate change. From global to local, we focus on Asian alternative protein applications. We advocate ESG and implement SDG, believing that New Generation Food can bring positive impacts to the planet, the environment and the climate.

- ▶ Our newly launched tiger nut oat soy milk has achieved remarkable sales feedback and is launched in over 40 sales channels, eg. Pret A Manger, The Matcha Tokyo, Godiva Cafe etc. with repeated purchases
- ▶ As an innovative food technology start-up, we have received extensive media exposure, such as: HK01, Hong Kong Economic Journal, Headline Daily, and HKET, and have received a lot of good feedback
- ▶ We had many good results in competitions and showcase events. We won "the Greatest Potential for Social Impact award" at Global LaunchPad and the first runner up in HKSEC2023. Our Tiger nut oat soy milk has won the "Winners of experts' choice award" in VFA 2024

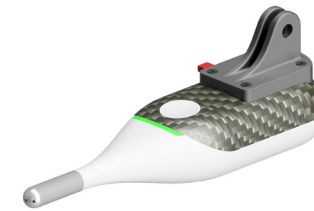


MOTEX Technology Limited

Smart devices and skinsuits for cycling and sports

Founded by cycling-enthusiast PhD students, Motex integrates advanced aerodynamics testing methods and smart sensors to enhance cyclists' performance. With over 7 years of experience in developing cycling-related testing systems, innovations of Motex have been utilized by the Hong Kong cycling team and the China national team. Motex's technology empowers cyclists to understand their physical state and unlock their unlimited potential.

- ▶ 2023 HKUST-HKSTP Co-ideation program (HK\$100,000) graduate
- ▶ 2024 HKUST TSSSU-O program (HK\$400,000) shortlisted
- ▶ 2024 HKSTP incubation program conditional offer granted



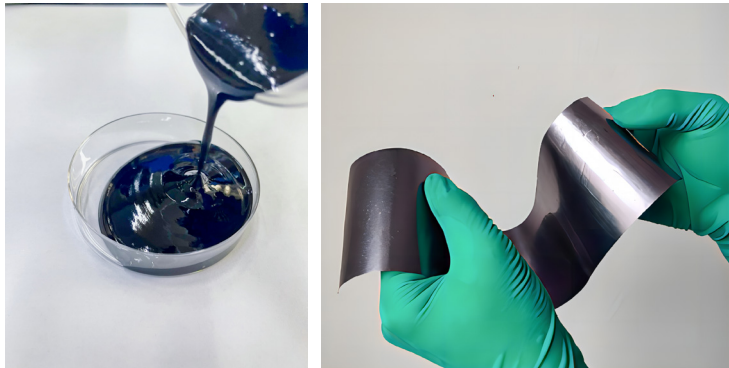


New Era Technologies Limited

Redefining the 2D materials industry as 2D material product suppliers and technical service providers

The team has developed a high-performance two-dimensional material that surpasses graphene. They have also mastered the core technology for its industrialization process, with all related techniques being globally pioneering. The team comprises members from HKUST and HIT, who have published 13 academic papers in top-tier international journals and hold 9 patents.

- ▶ The Gold award in the Prestigious International Design Competition
- ▶ The National Grand prize of Challenge Cup
- ▶ The national Gold award of the "Internet +" Competition
- ▶ Established collaborations with technology enterprises and research and development institutions. Received support from ITC, HKUST, HKSTP



New Materials Intelligent Technology Co., Ltd.

Innovative microcapsule solutions for adhesives, self-healing, thermal management, and fragrances, aiming for technological independence and large-scale production

Founded in 2019, Guangzhou New Materials Intelligent Technology Co., Ltd. (NMI) specializes in innovative microcapsule technologies originated from HKUST, offering high value-added solutions for industrial adhesives, corrosion protection, thermal management, and daily used chemicals, etc. Led by Professor YANG Jinglei, the company aims to replace key imported products, and is gearing up for large-scale production and new products development with significant investment interest.

- ▶ Successfully replaced 3* & Preco** products with proprietary eco-friendly microencapsulated thread locking adhesives, achieving import substitution
- ▶ Completed pilot runs, demonstrating capacity for ton-level supply of microcapsule products
- ▶ Secured investment interest from notable agencies, including CAS Star and Midas VC



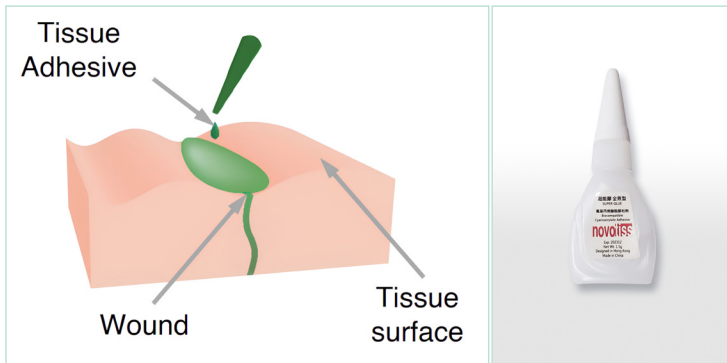


Novotiss Technology Limited

Simply close and protect a wound with glue

Novotiss strives to replace suturing in surgical procedures with tissue adhesives to enhance patient recovery. It explores and implements new technologies to overcome the long-standing limitations of liquid adhesives, particularly poor flexibility, which helps to penetrate the market and expand its market potential.

- ◆ Two patent applications filed
- ◆ Scaled-up production
- ◆ TSSSU Awardee Year 2



Plasticvore Chain Ltd.

The Greenest and Friendly scent to protect your area from Rodent

We offer an environmentally friendly method to upcycle wasted rubber into pest repellent, aiming to reduce tire waste in Asia.

Our business focuses on green and biochem technologies, transforming waste into various value-added products. Our primary product is ScentedGuard, which provides long-lasting, safe pest protection for private owners, with a pleasant scent.

We operate on a B2B model, offering services and product subscriptions to clients in need of pest control solutions.

- ◆ Rat-Free construction site for over 12 months
- ◆ Sole service provider in Hong Kong public estates's civil engineering sites
- ◆ Served Grade A commercial buildings including Bank of America Tower and Melbourne Plaza



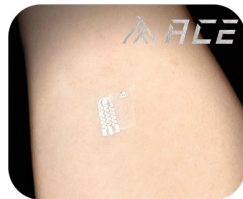


PointFit Technology Limited

Skin patch sweat sensor for non-invasive & continuous health monitoring

PointFit Technology is developing a one-of-a-kind skin patch that tracks health condition through sweat biomarkers and sends a real-time alert when users are approaching their dangerous threshold level. Its objective is to bring global adoption of non-invasive, real-time and continuous health monitoring system for everyone. Accessible for elite athletes (US\$5.2B), sports lovers, high-stress workers or even the elderly so people can understand their bodies better and adjust their lifestyle accordingly.

- Grand Winner of ASICS Accelerator 2022
- Forbes Asia Top 100 To Watch List 2022
- HK ICT Startup 2022 (Hardware and Device) - Gold Award

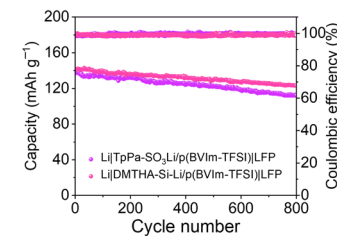
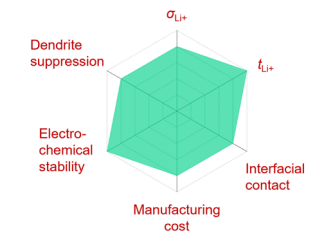
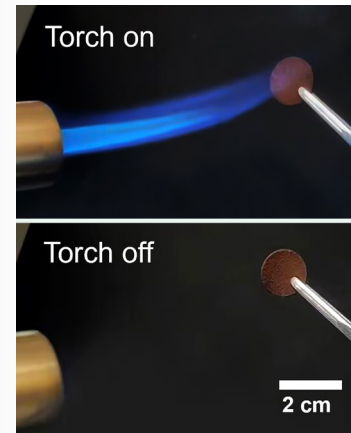


Revolutionizing Energy Storage: Tube Transport-Inspired All-Solid-State Electrolytes for Li-Based Batteries

Composite all-solid-state electrolytes selectively transport Li⁺ rapidly and reliably. This technology can enable smaller and lighter Li-based rechargeable batteries

We undertake research at the Department of Chemical and Biological Engineering at HKUST. We focus on innovation in the chemical perspective of solid-state electrolytes. We strive to develop and deliver the next-generation electrolytes.

- Our electrolytes' Li⁺ conductivity and transference number outperform liquid electrolytes and sulfides
- These all-solid-state electrolytes are fire-proof and economical in large-scale production
- Prototype coin cell, paired with Li metal anode and LCO cathode, shows a capacity of 150 mAh g⁻¹



Smart Polymer Processing Plant (S-P3) - Open Collaborative Intelligent Platform

The next-generation intelligent injection molding with real-time material and quality monitoring using breakthrough sensors, award-winning control algorithms for superior precision, and a dedicated big-data system for intelligent collaboration

Key Technology Edges:

- ▶ Breakthrough and world-first sensor for capturing material and quality changes online
- ▶ Award winning control algorithms for superior precision for injection molding
- ▶ Dedicated big-data open system for collaborative intelligent molding

- ▶ Technologies won numerous academic, society, and state awards
- ▶ The development has been funded with HK\$180 million in grants/contracts
- ▶ Proven 0-1 prototype applications over hundreds companies nationwide



In-Mold Capacitive Sensor System

Long-life sensor tip

High-precision capacitive signal transmitter

Intelligent signal interpretation software

IMM MES Platform

Item No.	Item Name	Item Code	Item Description	Item Status
0001	SENSOR	0001	SENSOR	OK
0002	SENSOR	0002	SENSOR	OK
0003	SENSOR	0003	SENSOR	OK
0004	SENSOR	0004	SENSOR	OK
0005	SENSOR	0005	SENSOR	OK
0006	SENSOR	0006	SENSOR	OK
0007	SENSOR	0007	SENSOR	OK
0008	SENSOR	0008	SENSOR	OK
0009	SENSOR	0009	SENSOR	OK
0010	SENSOR	0010	SENSOR	OK

Waste Heat Harvesting by Phase Transformation

Energy conversion from heat to electricity by phase transforming ferroelectrics

We seek new ferroelectric materials undergoing first-order phase transformation, which potentially boosts the pyroelectric coefficient by orders of magnitude, known as the giant pyroelectric effect. We develop high-quality pyroelectric capacitors exhibiting the giant pyroelectric effect, enhanced figure-of-merit and phase-stability under the guidance of lattice compatibility. We develop a compact chip that integrates all functional parts and build a prototype that generates micron to milliamperes pyroelectric current, converted directly from small thermal fluctuations and/ or from the shine/shadow switching of solar energy.

- ▶ ITF Fund
- ▶ Bridge the Gap Fund
- ▶ US Patent

(a) Fixing zone

(b) on-green ZnO:05 Co:0.05

(c) X-ray Line diffraction - orientation distribution

Previous achievements: review

Chenbo et al. Phys Rev Applied, (2019), (2020) and (2021)

Chenbo et al. Appl. Phys. Lett., (2020)

Chenbo Zhang and Xian Chen, US patent, 20200330997A3

Patent

Core technology: Phase-transforming capacitor

Energy converter from heat to electricity

- Direct energy conversion - material is an engine
- Conversion by small thermal fluctuations around 100 °C - energy harvesting from waste heat
- Solid state energy conversion - clean, simple and compact

Material development for performance enhancement: grain engineering method

Using grain engineering method, we have successfully get optimized materials with bigger grains and better performance in a further step:

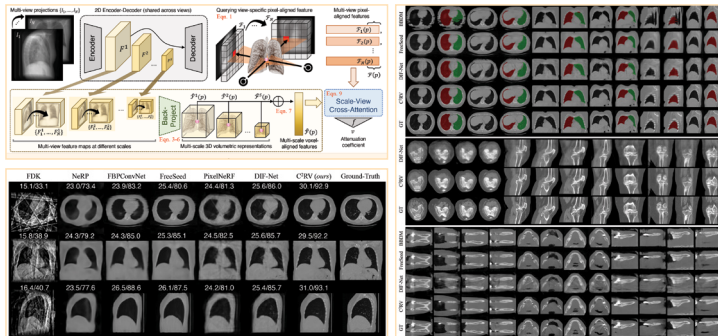
- Antifatigue** - The material with larger grains exhibits better mechanical property in both mechanical and electrical characterization.
- Twice output** - The output current density of coarse grain bulk samples is about twice of that fine grain area near to get enhanced performance in phase transformation temperature.
- Patent applying** - Our corresponding patent of using grain engineering method to get enhanced performance is being applied.

A Real-Time Ultrasparse-View X-Ray Driven CT Reconstruction Toolkit

A fast low-dose few-view X-ray-driven CT reconstruction toolkit for preoperative 3D printing and intraoperative clinical applications

A high-quality Computed Tomography (CT) typically requires hundreds of X-rays, which in turn results in high radiation doses. However, this can be a practical concern, particularly in scenarios such as interventional radiology. Our technology addresses this issue by significantly reducing the number of required projections for CBCT reconstruction (≤ 10), resulting in substantially reduced radiation doses. This not only improves patient safety but also enhances the efficiency of 3D printing and enables intraoperative usage.

- ▶ PI, Auto-Bone: An Artificial Intelligence-based Automated X-ray to 3D Model Reconstruction Platform for the 3D Printing of Orthopaedic Implants, Partnership Research Programme from Innovation and Technology Commission (01/07/2023 – 30/06/2026)
- ▶ One paper about CT reconstruction has been accepted in MICCAI 2023
- ▶ One paper about CT reconstruction has been accepted in CVPR 2024



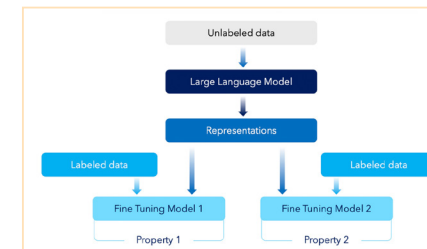
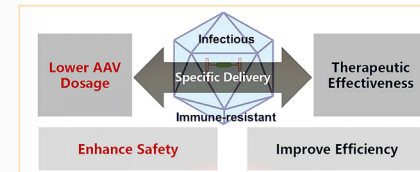
ADVENT

AI-Driven Vector Engineering for Gene Therapy

Developing tissue/cell specific AAV capsids by AI- and data-driven approaches

Current clinically approved AAV vectors are predominantly based on natural AAV types, which have limitations including poor delivery efficacy and the inability to target specific cells or regions. We've developed a new technology for cell-specific capsid engineering using AI-based protein design approaches.

- ▶ Foundational model (100B) built from evolutionary databases in human virome (largest atlas of life sciences data in pre-trained model)
- ▶ Experimental screenings in multiple animal species with high-quality labelled dataset generated from 500 million to 1 billion sequence reads.
- ▶ Novel AAV capsids designed with faster production time (6X) and better qualities (20X efficiency and 10X specificity)



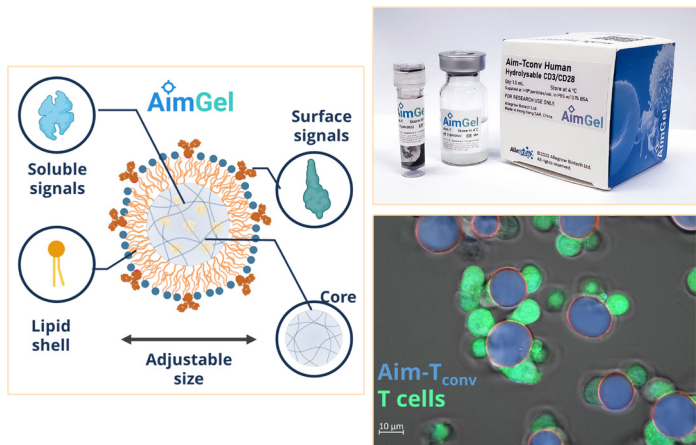


Allegrow Biotech Ltd.

An artificial cell-based system for ex vivo live cell growth and manipulation in cell therapy

Allegrow Biotech innovates biomaterial-based solutions for R&D and production of therapeutic cells. Developing versatile "AimGel", a cell mimetic microgel platform formulated with synthetic polysaccharides, lipids and recombinant proteins. AimGel platform has wide applications, facilitate R&D and clinical translation of immune cell therapies.

- ▶ Launching T cell (RUO) product in 2024, other 2 MVPs to be ready.
- ▶ T cell reagent MVP has been validated by 5 cell therapy Biotechs
- ▶ Awarded TSSSU 2023 & 2024, Gold medal in Geneva inventions exhibition 2023



Arctic Vision

Provide innovative therapies in China, Asia and globally to address unmet clinical needs and benefit ophthalmic patients at large

Arctic Vision is a China-based ophthalmic biotech focusing on breakthrough therapies, with a leading portfolio covering pre-clinical stage to commercial stage products. Our vision is to provide innovative therapies in China, Asia and large. Arctic Vision is supported by top-tier life sciences investors and led by an elite team of ophthalmic industry veterans with substantial regional and global experiences in R&D and commercialization of ophthalmic products.

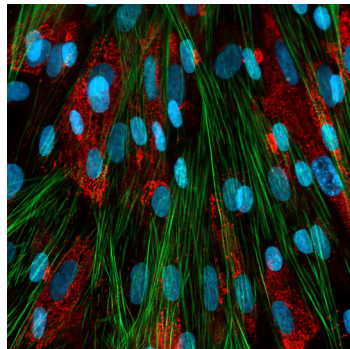
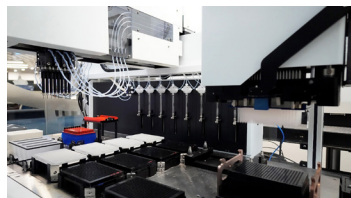
- ▶ Over 10 products announced covering pre-clinical stage to commercial stage products, providing innovative therapies from gene theraph, cell theraph, drug, devies to consumer products
- ▶ Completion of ~US\$150 Million financing in total from seed round to series B from inverstors including Nan Fung Life Sciences, Pivotal Bioventure Partners, Morningside Ventures, Loyal Valley Capital, Tecent Investment, Octagon Capital and K11
- ▶ A recognized true innovator with significant momentum and multiple awards received



Development of novel treatment to target Leigh Syndrome and other mitochondrial-related diseases by upregulating CPEB4 protein

Our company vision is to enhance human health for a thriving future by developing novel therapeutic interventions. We have identified a new target, CPEB4, for targeting age-related and mitochondrial-related diseases by boosting mitochondrial functions. Our data supported that upregulating CPEB4 can restore mitochondrial functions in aged mice and Leigh Syndrome cell model, which is the most frequent inherited childhood mitochondrial disease.

- ▶ Novel target CPEB4 protected by IP to boost mitochondrial functions and prevent senescence
- ▶ CPEB4 is effective in rescuing the disease phenotype in Leigh Syndrome cell model
- ▶ CPEB4 can restore mitochondrial functions in aged mouse model



Blood-based biomarker panels for early detection of Alzheimer's disease

Cognitact utilizes a world-leading proteomic technology to detect the level changes of blood proteins that are associated with Alzheimer's disease (AD). Combining with machine-learning algorithms, Cognitact is able to achieve accurate prediction of AD risk and evaluation of disease status.

- ▶ Providing PlasmarkAD[®] blood test in Hong Kong market
- ▶ 48th International Exhibitions and Inventions of Geneva - Gold Medal with Congratulations of Jury
- ▶ Collaborating with private clinicians and hospitals in Hong Kong

Our Technology - PlasmarkAD[®]



Accuracy above 96%

Early detection before symptoms appear

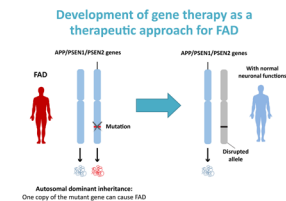
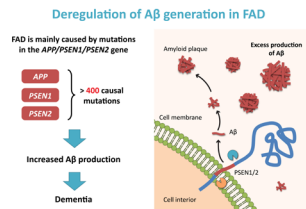
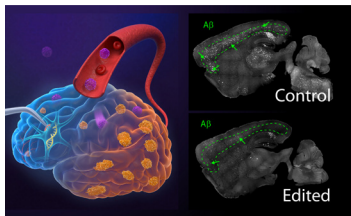
Editact Therapeutics Ltd.

Editact Therapeutics Ltd.

CRISPR genome editing-based strategy to treat Familial Alzheimer's Disease and permanently rescue disease pathologies

Our technology has the potential to revolutionize treatment for over 160 million patients suffering from 370 autosomal dominant diseases. Our innovation lies in our groundbreaking one-for-many genome-editing strategy, which can treat a given disease in many patients with different mutations, with our first focus being Familial Alzheimer's Disease, a disease with no specialised treatment available.

- 49th International Exhibition of Inventions Geneva – Gold Medal
- Secured several million US\$ in funding
- In collaboration with a major mainland Chinese pharmaceutical company

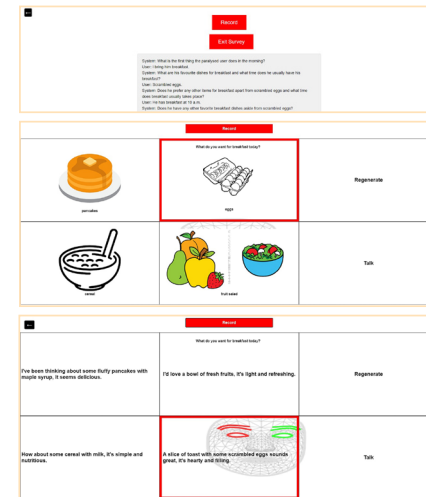


Eleuto

AI-powered, customizable communication software for individuals with speech and language impairments

Founded at HKUST, Eleuto specializes in developing intuitive assistive communication tools powered by cutting-edge AI, aimed at enhancing the lives of those with communication challenges.

- Awarded HK\$57,000 from ChangDang social entrepreneurship competition
- Recipient of HK\$20,000 Dreambuilders fund
- Granted HKD100,000 by HKSTP for technological innovation





EnKang Pharmaceuticals (Guangzhou), Ltd.

Highly efficacious first-in-class broad-spectrum anti-cancer drug candidates

EnKang Pharmaceuticals is a pharmaceutical R&D enterprise dedicated to innovative anti-cancer drugs targeting DNA replication-initiation proteins (DRIPs) and advanced drug formulations. EnKang has applied for more than 40 international invention patents, with 17 granted.

The company's first innovative DRIPs inhibitor, the first-in-class EN002-gel, has completed phase I clinical study for non-melanoma skin cancer and precancerous lesions in China and Australia, and the phase II clinical study will be launched in May 2024. Meanwhile, a prodrug of EN002, EK4-106, has entered preclinical studies targeting cervical cancer and precancerous lesions.

- ▶ The first-in-class EN002-gel has completed phase I clinical study for non-melanoma skin cancer and precancerous lesions in China and Australia
- ▶ EK4-106 vaginal gel has entered preclinical studies targeting cervical cancer and precancerous lesions
- ▶ Awarded the highest prize in the National Paradigm-Shifting Innovation Technology Competition of The Ministry of Science and Technology of China

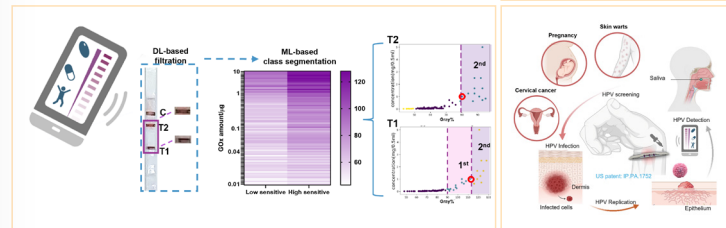
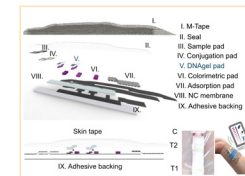


Girls & Gene Biotech Limited

At-home, body-wear smart tape, AI-assisted diagnosis of chronic infectious diseases

Aiming to build a bridge to move the barrier from lab to home, our team has patented a simple, skin-adherent wearable nucleic acid sensor for semi-quantitative viral load detection. As an interdisciplinary study encompassing NAAT, CRISPR-Cas technology, and machine learning, it offers high sensitivity and accuracy. With easy sample collection and operation akin to RAT (2 mins), it enables decentralized, equipment-free at-home testing without environmental control requirements, and eliminates potential amplicon-derived contamination, a common drawback in NAAT for at-home testing.

- ▶ Used in clinical scenarios at Prince of Wales Hospital in Hong Kong for the SARS-Cov-2 clinical test. Own-built AI model gains 98% sensitivity trained by the raw result
- ▶ Future clients include medical centers with HPV-positive customer cervical swab testing such as Uni-medica Ltd in Shenzhen, Prince of Wales Hospital in Hong Kong
- ▶ HKSTP x HKUST Co-ideation funding: with our patented technology, from building business to finding investment

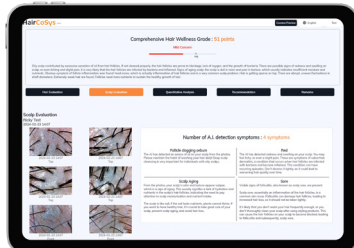
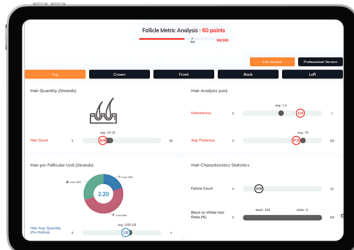


HairCoSys Limited

World-first macro and micro AI hair and scalp analysis platform providing quantitative reports on hair health and recommending personalized solutions

With extensive expertise in AI and haircare, HairCoSys launched the world's first portable AI solution to detect hair and scalp issues with photos. Users receive personalized hair care tips and product suggestions and trace the hair health improvement progress on mobile. Use with a smart comb "CombAI" to capture scalp image and perform hair therapy at the same time.

- ▶ Gold Medal, International Exhibition of Inventions Geneva, 2024
- ▶ Expanding globally with corporate clients in Middle East, China, Asia, and EU
- ▶ Use cases in Hong Kong and GBA



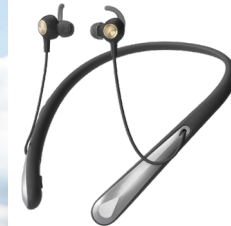
Incus Company Limited

Making high-performance hearing aids accessible

Incus Company Limited was founded in Hong Kong in 2016 with the mission to use sound and technology to keep people connected.

It develops next-generation hearing aids powered by Intelligent Noise Reduction Technology to automatically reduce background noise and amplify speech, providing superior performance and listening comfort - even in noisy environments.

- ▶ Raised Series A financing
- ▶ Obtained Class II NMPA Certification for hearing aids
- ▶ Solutions were integrated into a major listed Chinese medical device manufacturer's hearing aids





INFitech Limited

Pioneering traditional Chinese medicine for neurodegenerative diseases, restoring hope through innovation

INFitech translates over 20 years of research on synaptic function and neurodegenerative diseases into innovative herbal therapies. Founded by university neuroscience experts and licensed from HKUST, INFitech aims to bring new treatment options for Alzheimer's and Parkinson's patients. With patented technology and published studies, INFitech is at the forefront of neurodegenerative disease treatment.

- ▶ Raised over HK\$10 million in angel round funding for R&D and market expansion
- ▶ Awarded TSSSU+ by HKITC and Bronze at The 48th International Exhibition of Inventions in Geneva
- ▶ Products now available at renowned Hong Kong retail store CRcare



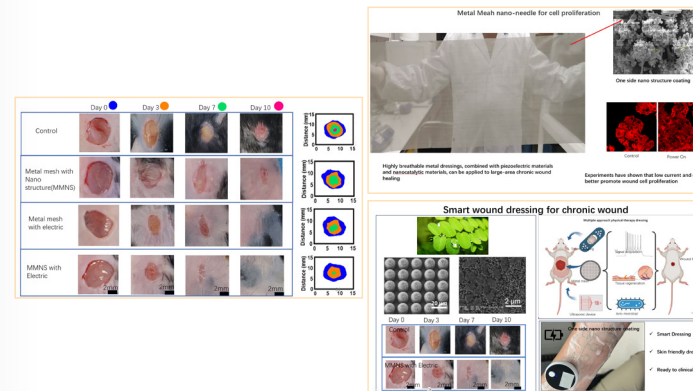
One Healing

Innovative smart dressings utilizing nanostructures and microcurrents to accelerate wound healing

Smart Wound Healing Dressing

A leading-edge medical technology innovator specializing in advanced wound care solutions. It develops smart dressings that integrate nanotechnology and bioelectronics to significantly enhance healing rates, reduce infection risks, and improve patient outcomes through precision treatment and continuous monitoring.

- ▶ HKUST x HKSTP Co-ideation Program participant
- ▶ Merit Award of the 9th Hong Kong Student Innovation and Entrepreneurship Competition
- ▶ Medical Partners including Peking Union Medical College Hospital, Sun Yat-sen University Hospital

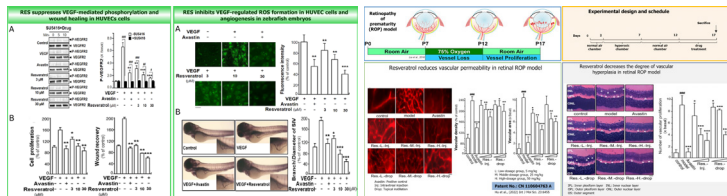


Optic Therapeutics Against wAMD

Development of anti-angiogenic eyedrop for eye disease

Therapeutic identification of resveratrol, polydatin and/or its analogues as an eyedrop treatment against age-related macular degeneration (AMD) by inhibiting VEGF-mediated angiogenesis.

- Solid discovery and clinical applications of VEGF-targeted drugs derived from Traditional Chinese Medicines (TCMs) [7 publications and 2 Chinese patents]
- Phytochemicals targeting VEGF protein with easy administration, low-cost manufacturing, long-term administration and handy ocular instillation
- Novel treatment and non-invasiveness therapeutic strategy compared with standard clinical options such as argon laser photocoagulation and photodynamic therapies



Orange Biotech Limited

CRISPR-based DetectChip for convenient and sensitive at-home nucleic acid testing with PCR performance

Orange Biotech, founded in 2022, develops CRISPR-based diagnostic reagent kits. Their flagship product, DetectChip, combines our exclusive CRISPR technology and microfluidics to create a user-friendly Point of Care Testing (POCT) solution for accurate and simplified nucleic acid amplification tests. Initially focused on STDs and respiratory infections, DetectChip aims to provide accessible and precise diagnostics for small health centers and eventually home use, becoming a PCR-level resolution consumable.

- Fundraised more than HK\$300,000 including HKSTP and Shenzhen Qianhai Authority
- Awards: International Exhibition of Inventions Geneva, Asian Innovation Exhibition
- Clients: HK\$60,000 sold since last December including companies and universities



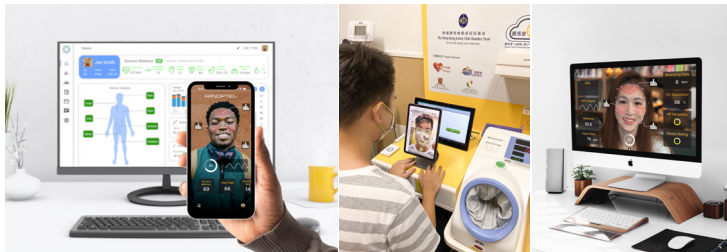
PANOPTIC^{AI}

Panoptical Limited

Take control of your health simply with a smile

Panoptical provides contactless technology for the acquisition, analysis, and interpretation of health information. Vitals™, powered by Panoptical, is an award-winning camera-based health and wellness monitoring solution that makes measuring, interpreting and managing personal health contactless, affordable and as easy as smiling at a camera. Vitals™ delivers comprehensive digital biomarkers with medical grade accuracy within 30 seconds.

- ▶ Forbes Asia 100 to Watch 2023 & Forbes 30 under 30 2024
- ▶ Funded by Alibaba Hong Kong Entrepreneurs Fund, Gobi Partners GBA, HKUST E-Fund and other renowned investors
- ▶ Gold Award, Social Impact, ICT Startup Award 2023



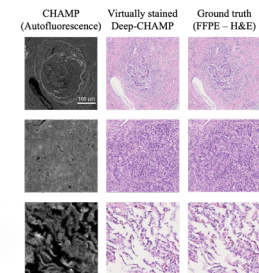
PhoMedics

PhoMedics Limited

CHAMP Microscope revolutionizes cancer surgery with fast and accurate on-the-spot histological imaging

PhoMedics Limited is a medtech startup founded in 2020 by Prof. Terence Wong and his team at HKUST. We aim to revolutionize how cancer cells are detected before, during, and after surgery. CHAMP Microscope, our flagship product, is a fast, accurate, and holistic solution for on-the-spot histological imaging enabling a more efficient and agile workflow during surgeries.

- ▶ Received E-fund from HKUST
- ▶ Gold Award, Qianhai - Guangdong - Hong Kong - Macau - Taiwan Youth Innovation and Entrepreneurship Competition
- ▶ Prototype is placed in Prince of Wales Hospital for on-site trial



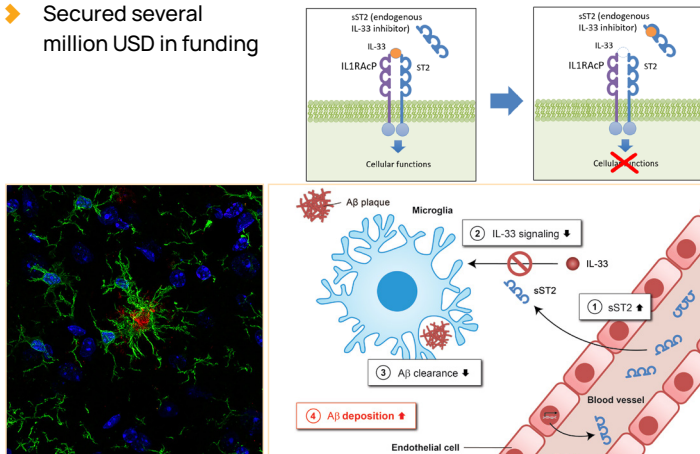
Plasmotact Therapeutics Ltd.

Plasmotact Therapeutics Ltd.

Development of novel drugs targeting causal factor soluble ST2 for Alzheimer's disease

We have identified a novel drug target for Alzheimer's disease (AD): a plasma protein known as sST2. We uncovered a strong association between increased sST2 levels and AD pathology and risk, which we are addressing through the development of sST2-inhibiting therapeutics. Our unique therapeutic target means that our therapeutics will be safer and less invasive compared to current AD therapies.

- 49th International Exhibition of Inventions Geneva - Gold Medal with Congratulations from the Jury in the
- Obtained Honorable Mention from the China Delegation in the 49th International Exhibition of Inventions Geneva
- Secured several million USD in funding



Pleryon Therapeutics

Innovative therapies addressing unmet clinical needs and benefitting ophthalmic patients at large

Pleryon Therapeutics' mission is to address global unmet medical needs through novel polymer-based therapeutics. Led by a top executive team with rich industrial and academic experience, we leverage multiple platform technologies to design and manufacture novel synthetic and modified natural polymers with unique biomedical functions. Our major programs focus on osteoarthritis, ophthalmology, and regenerative aesthetics.

- 2023: Gold Medals with Congratulations of the Jury at the 48th International Exhibition of Inventions Geneva
- 2022: Completed Pre-A round funding closed to 100 million RMB, backed by leaders in early stage biotech
- 2021: Established official residency in JLABS@Shanghai, a premier life science incubator under Johnson & Johnson Innovation



Pleryon's major pipelines

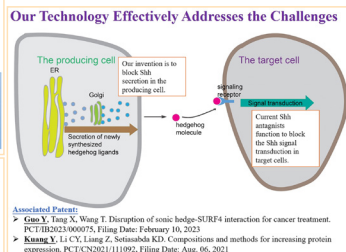
Code	Indication	Discovery	POC	Development	Preclinical	2024 milestones	2025 milestones
PN-P001X	Osteoarthritis	█	█	█	█	GLP	FIH
PN-M001	Dry eye Disease	█	█	█	█	GLP	FIH
PN-M007	Regenerative Aesthetics	█	█	█	█	GLP	FIH

Secretion-Management Targeted Skin Cancer Treatment

Synthetic mRNA inhibitors to reduce sonic hedgehog secretion as novel therapeutic strategies for skin cancer treatment

The Sonic hedgehog (Shh) signaling pathway is a key target for developing skin cancer treatments. Current Shh signaling antagonists, which act on target cells, are ineffective in patients whose cancer progression heavily relies on secreted Shh. Our project aims to develop synthetic mRNAs that target Shh to inhibit its secretion, thereby providing novel therapeutic strategies to effectively combat skin cancer.

- Identified key protein interactions that are important for Shh secretion
- Designed Synthetic mRNAs that effectively reduce Shh secretion and Shh signalling in cancer cells
- Published our findings and strategies in patents and prestigious journals



Shenzhen Biorocks Biotechnology Company Limited

Fully automated vitrification-warming system (Embryo and Ovum)

Welcome to the new era of embryo cryopreservation Biorocks has pioneered microfluidic-controlled fully automated vitrification technology, eliminating the drawbacks of traditional vitrification that require embryologists to perform complex manipulations under a microscope. With no need for specialized laboratories or microscopes, embryos can be rapidly and automatically vitrified and thawed, ready for immediate transplantation after warming.

- Selected by Microsoft Accelerator program
- 2022 China Innovation and Entrepreneurship Competition-Excellent Award
- HKUST Million Dollar Entrepreneurship Competition-Champion



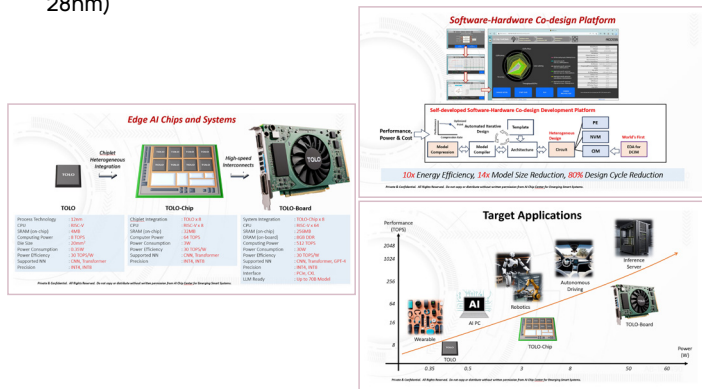


AI Chip Center for Emerging Smart Systems (ACCESS)

High energy-efficient edge chips & systems for large AI models

This program leverages the innovative software-hardware co-design platform developed by ACCESS to enable the efficient compression of large-scale artificial intelligence (AI) models at the edge. By integrating hardware design architectures and heterogeneous circuits, our solution integrates Computing In-Memory modules to facilitate efficient edge inference computing. Our solution utilizes chiplet and high-speed board-level interconnection technologies to provide flexible, energy-efficient, and cost-effective computing systems that cater to the diverse demands of various edge applications utilizing large-scale AI models.

- AC-Copilot: Self-developed Software-Hardware Co-design Development Platform
- AC-Codesign Chip (CNN, 40nm)
- AC-Transformer Chip (Transformer, 28nm)
- AC-DCIM (High power efficiency compute in memory module, 28nm)



Guangzhou HKUST Fok Ying Tung Research Institute (FYTRI)

HKUST knowledge transfer platform in Nansha supports university research commercialization efforts and the growth of early-stage tech startups

As the largest HKUST knowledge transfer platform in mainland China, FYTRI operates the HKUST (GZ) Science & Technology Park fostering innovation and entrepreneurship for both universities. In Nansha, FYTRI has established platforms such as Guangdong, Hong Kong Macao (International) Youth Entrepreneurship Hub, offers workspace, R&D labs, incubation programs and financial backing to startups from China and abroad with cutting-edge technologies.

- Organizing the HKUST One Million Dollar Entrepreneurship Competition Guangzhou since 2016 with a total of 2,000 startups signed up
- Supporting Midas Capital's establishment of RedBird Set-Sailing Fund, a RMB200 million angel fund specifically focused on startups affiliated with HKUST
- Managing various incubation platforms currently support over 90 tech startups, among which 8 have attained National High-Tech Enterprise status



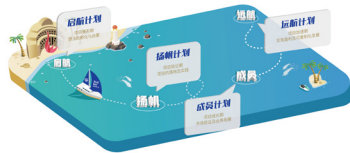
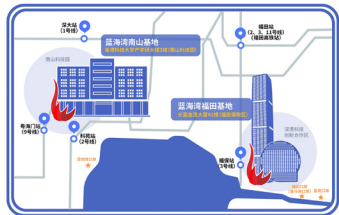


HKUST BLUE BAY

HKUST Innovation and Entrepreneurship Incubator @ Shenzhen

HKUST Blue Bay Incubator was officially established by HKUST in Shenzhen for entrepreneurs. Blue Bay has been upgraded to provide a comprehensive incubation system that covers the entire spectrum of entrepreneurship, and fully integrates the technology and innovation resources to provide multi-dimensional support to nurture and facilitate start-up companies from the HKUST community to grow and flourish in the Greater Bay Area.

- ▶ National-level Maker Space with one-stop services
- ▶ 136 HKUST-affiliated startups incubated
- ▶ Helped 43 startups receive investment in the mainland totalling more than 1 billion RMB
- ▶ Aided 48 startups receive mainland government entrepreneurship funding worth more than 30 million RMB



HKUST Foshan Center for Technology Transfer and Commercialization

Technology transfer and commercialization, entrepreneurship incubation and hosting the HKUST One Million Dollar International Entrepreneurship Competition in Foshan

FCTTC is an innovation and entrepreneurship service platform, mainly responsible for technology transfer and commercialization, entrepreneurship incubation and cultivation of innovative talents. As an incubator located in Nanhai, Foshan, FCTTC aims at assisting HKUST faculties, staffs, students and alumni in the establishment of start-ups in Foshan, as well as providing entrepreneurial support services and funding.





HKUST(GZ) Office of Knowledge Transfer

Office of knowledge transfer

The Office of Knowledge Transfer of HKUST(GZ) was established in April 2023. The office consists of the Industry Collaboration Department, Intellectual Property Department, Entrepreneurship Center, and Training Center. It is responsible for planning, implementing, operating, and regulating knowledge transfer-related issues at all stages.



1. Industry Collaboration Department

- ▶ Technology Research and Development
- ▶ Technology Consultancy and Advisory
- ▶ Joint Laboratory

icd-gz@hkust-gz.edu.cn



2. Entrepreneurship Center

- ▶ Entrepreneur Cultivation
- ▶ Startups Incubation
- ▶ Innovation Ecosystem

ec-gz@hkust-gz.edu.cn



3. Training Center

- ▶ Customized Program
- ▶ Executive Education
- ▶ Tech Acceleration Camp
- ▶ GBA Study Visit

tc@hkust-gz.edu.cn



4. Intellectual Property Department

- ▶ Intellectual Property Management
- ▶ Intellectual Property Operation

ipd@hkust-gz.edu.cn

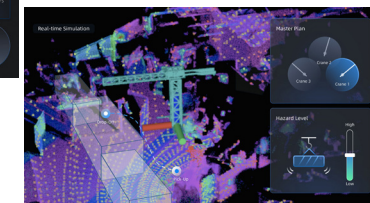
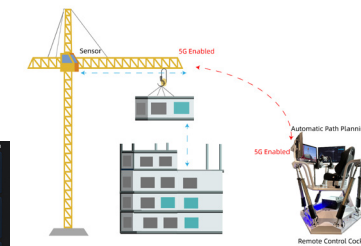
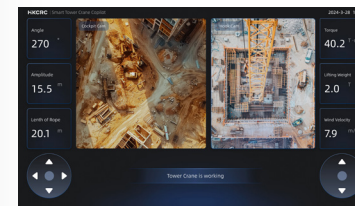


Hong Kong Center for Construction Robotics

Smart Tower Crane allows operators to perform operation from a safe distance, which will vastly improve site safety

Hong Kong Center for Construction Robotics (HKCRC), a scientific research and entrepreneurship platform, was established in 2020 by the Hong Kong University of Science and Technology and the University of California, Berkeley. It is affiliated to the InnoHK project of the Hong Kong government.

- ▶ 49th International Exhibition of Inventions Geneva - Gold medal
- ▶ Cooperation with Hong Kong Housing Bureau, Socam Development and other institutes





Hong Kong Center for Neurodegenerative Diseases
香港神經退行性疾病中心

Hong Kong Center for Neurodegenerative Diseases (HKCeND)

Harness the power of science to actualize innovative diagnostic tools and therapeutic strategies for neurodegenerative diseases

HKCeND was established in 2020 under the government-funded InnoHK initiative. Led by neuroscientist Prof. Nancy Ip, HKCeND brings together a multidisciplinary team of prominent scientists from HKUST, University College London and Stanford University to propel cutting-edge research and deliver promising breakthroughs in diagnostics and therapeutics for Alzheimer's disease.

- Developed a highly accurate universal diagnostic blood test for Alzheimer's disease and mild cognitive impairment
- Discovered a blood protein, soluble ST2 (sST2), as a novel drug target for developing treatments for Alzheimer's disease
- Pioneering a less invasive brain-wide genome-editing technology for treating familial Alzheimer's disease
- Established 4 spin-off companies to develop and translate the R&D outcomes
 - Cognitact Limited
 - Plasmotact Therapeutics Limited
 - Editact Therapeutics Limited
 - Frametact Limited



Multidisciplinary research team



Cutting-edge R&D platforms



香港生成式人工智能研發中心
Hong Kong Generative AI Research & Development Center

Hong Kong Generative AI Research & Development Center

Build responsible foundation models to benefit Hong Kong

The Hong Kong Generative AI Research & Development Center (HKGAI) is one of the research centers under the InnoHK program, a key initiative of the Hong Kong SAR Government, focusing on the research and development of generative artificial intelligence technologies. HKGAI focuses on developing a series of Multimodal, Multilingual Foundation Models, vertical Foundation Models, and also the tailor-made applications for Hong Kong society.

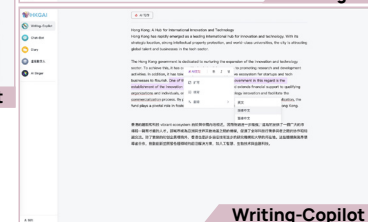
- Foundation Model Research
- Medical Foundation Model System
- Foundation Model Development
- Legal Foundation Model System
- Infrastructure for Foundation Model
- Multimodal Foundation Model
- Data Engineering for Foundation Model
- Multilingual Foundation Model



Chat-bot



AI Singer



Writing-Copilot



Geneva
Invention
Projects 

HKUST
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HKUST Innovation and Enterprise Unlimited

Photo Album 





Contact Us

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