

NEWSLETTER

HI-TECH & INNOVATION

15 - 21 December 2025



China has amassed 5 million invention patents, emphasizing quality over quantity

China has surpassed 5 million valid invention patents, with PCT (Patent Cooperation Treaty) filings leading globally for six years, the IP regulator said. By June 2025, high-value patents reached 15.3 per 10,000 people, beating national targets. Patent industrialization rose to 53.3% in 2024, reflecting a shift from quantity to quality and supporting innovation-driven growth for the next planning period. (**Xinhua**)

Robots horn their skills in Shanghai

The Global Developer Pioneers Summit 2025 and the International Embodied Intelligence Competition opened in Shanghai on Dec 13, showcasing full-scenario applications of embodied intelligence. Covering industrial production, social services, home assistance, emergency rescue, medical care and performance, the event features six thematic tracks and 19 sub-events highlighting robots' integration into daily life. (**China Daily**)

China's CH-7 high-altitude, high-speed drone makes maiden flight

China's CH-7 high-altitude, high-speed drone has successfully completed its maiden flight in Northwest China, entering the flight-testing phase. Featuring a tailless flying-wing design, long endurance and strong stealth, the drone can carry multiple mission payloads for surveillance, reconnaissance and data support in complex combat environments, its developer said. (**People's Daily**)

Chinese scientists achieve breakthrough in seawater hydrogen and magnesium co-production

Chinese researchers have developed a technology to directly electrolyze natural seawater, producing hydrogen while extracting magnesium. Led by Hainan University, the team created a novel anti-fouling electrode that enables stable operation for over 5,000 hours. Producing one kilogram of hydrogen can yield about 15 kilograms of magnesium hydroxide, sharply reducing hydrogen costs and supporting low-cost green hydrogen production. (**Xinhua**)

Chinese researchers achieve precise broadband control of nanoscale light fields

A Chinese-led research team has proposed a "phonon engineering" strategy to realize ultrabroadband, near-diffraction-free directional propagation of polaritons. Published in *Nature Nanotechnology* on Dec 15, the study harnesses anisotropic phonon vibrations to actively control polariton bandwidth, phase and direction, opening new pathways for compact, high-performance photonic circuits. (**Science and Technology Daily**)