**PRESS RELEASE**

**Safer batteries reducing the risks of fire and explosions in electric vehicles: Chinese scientist selected as a finalist at the European Inventor Award 2023**

* **Wu Kai and his team developed a light-weight lithium-ion battery with faster charging capacity and lower heat generation**
* **Their technology eliminates the risk of battery overcharging, lowering the risk of fire or explosion**
* **Wu and his team are among the pioneers in the research and development of lithium-ion batteries**

**Munich, 9 May 2023 –** In order to ensure the safety of vehicles equipped with lithium-ion (Li-ion) batteries containing a flammable electrolyte, Chinese inventor Wu Kai, who together with his team developed a **Li-ion battery with a top cover that acts as a barrier** to mitigate battery safety risks. **Wu and his team are finalists in the ‘Non-EPO countries’ category of the European Inventor Award 2023,** in recognition of their promising work. They were selected from over 600 candidates for this year’s edition.

**Eliminating the risk of battery overcharging**

Li-ion batteries are more sustainable with their lighter weight, faster charging capacity, and lower heat generation, **ultimately providing cleaner energy.** As explained by Wu, *“all markets that are conducive to the reduction of carbon emissions and demand for smart development will benefit from the development of lithium-ion battery technology. In the energy storage industry, lithium-ion batteries have a broader application scenario and development space*.”

To ensure the safety of high-performance NCM cells required for long driving range, Wu Kai and his team systematically revealed the pattern from gas generation, heat generation to battery failure, and invented the safety short circuit device (SSD), a protection device integrated into the top cover of the cell. The invention would stop battery charging when it is triggered by gas pressure inside the cell, which results from gas generation due to overcharging, thus eliminating the risk of battery failure caused by overcharging.

**A pioneering team for Li-ion batteries**

Wu's career started in 1992 as a lecturer at Wuhan University of Technology, and he later became a leader in metal technology and energy companies in Dongguan, China. By 2012, he started his career at CATL as Chief Scientist of the company.   
  
The journey to more safe and sustainable batteries began in 1999 when Wu started working on Li-ion batteries with Robin Zeng, founder and Chairman of CATL, **making them one of the pioneering teams in batteries for electric vehicles. Overcharging Li-ion batteries has been an issue for decades in the car industry, but Wu and his team were able to deliver their solution to a leading car maker, in just two and a half years.**

The Chinese inventor and his team have been named among the three finalists in this year’s European Inventor Award in the ‘Non-EPO Countries’ category, which recognises the work of outstanding inventors from outside the EPO's 39 member states who have been granted a European patent. The winners will be announced at a hybrid ceremony on 4 July 2023 in Valencia (Spain). This ceremony will be broadcast online [here](https://inventoraward.epo.org?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press) and is open to the public.

Find more information about the invention’s impact, the technology and the inventors’ stories [here](https://new.epo.org/en/news-events/european-inventor-award/meet-the-finalists/kai-wu-and-team?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press&mtm_group=press).

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**About the European Inventor Award**

The European Inventor Award is one of Europe's most prestigious innovation prizes. Launched by the EPO in 2006, the award honours individuals and teams, who have come up with solutions to some of the biggest challenges of our time. The finalists and winners are selected by an independent jury comprising former Award finalists. Together, they examine the proposals for their contribution towards technical progress, social and sustainable development, and economic prosperity. All inventors must have been granted a European patent for their invention. Read more [here](https://new.epo.org/en/news-events/european-inventor-award?mtm_campaign=EIA2023&mtm_keyword=EIA-pressrelease&mtm_medium=press) on the various categories, prizes, selection criteria and livestream ceremony to be held on 4 July 2023.

**About the EPO**

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