Siemens partners with TIES, a Chinese R&D Center to develop new technologies for electric vehicle batteries

- Advanced Battery Technology Innovation Center (ABTIC) is initiated jointly by Tianmu Lake Institute of Advanced Energy Storage and Siemens to develop advanced battery technologies and help bring them to volume production
- ABTIC aims to develop and provide digital solutions for production chains and innovation chains on next generation batteries

Siemens Digital Industries Software has partnered with Tianmu Lake Institute of Advanced Energy Storage Technologies (TIES), a major Chinese energy storage research and development center, to build an Advanced Battery Technology Innovation Center. The Innovation Center, to be located at the 500 million-yuan, 51,000 square meter TIES facility in Liyang, China, will be dedicated to transforming and upgrading the advanced battery industry, including nurturing advanced battery technology research and development, and the development and introduction of high-end talents in this growing area.

The Innovation Center will provide the advanced battery innovation chain and industry chain with comprehensive digital services, including design and simulation, test and analysis, pilot verification and engineering simulation. Meanwhile, the Innovation Center will also provide manufacturing enterprises, both domestic and abroad, with high-quality professional digital transformation services, including digital construction and digital manufacturing construction consulting services for medium- and large-sized enterprises, implementation of complete solutions for digital enterprises, as well as the development of digital capabilities for and shared
lab leases for small and micro businesses. In doing so, this center can enable advanced research in battery technology, drive collaboration throughout the supply chain, and allow partners to develop the leading-edge battery technologies required for enhanced range with future electric vehicles.

“As the first digital innovation center in battery field we aim to provide comprehensive digital solutions for the innovation chain and production chain, from first principle calculation to digital twin factory, from materials to systems,” said Professor Hong Li, Chief Executive Officer, at TIES. “This target is difficult to be realized but certainly worthy for long-term effort. Based on digital solutions, we believe we can understand the complex batteries and their processing precisely and produce the new batteries with unprecedented quality and reliability.”

“China is fast emerging as a peer to those countries long known as leaders in battery innovation, in part due to much concerted government and private investment, of which this Siemens-TIES partnership is a prime example,” said Pei Huang, CEO and Chief Analyst, at e-works, the leading media and research organization in Smart Manufacturing area in China. “The rise of China as an energy storage powerhouse is part of the much larger story of its dominance in the electric vehicle market, where it accounts for half of all EV sales globally and is expected to lead for decades to come. Given the breadth of Siemens Digital Industries Software, with enabling technologies serving most stages of the battery design, simulation and production process, also its deep relationships with EV market leaders in China and beyond, it’s no surprise TIES leadership selected Siemens as its key partner and supplier supporting this new center.”

Launched in April 2019, TIES was set up jointly by the Institute of Physics, Chinese Academy of Science and Jiangsu Zhongguancun Technology Park (Z-Park) for developing the new battery technologies and providing high quality customized services. The ABTIC Innovation Center is planned to open by the end of 2019. It is the first Innovation Center focused on advanced battery technology, and it is the first center in China to provide comprehensive third-party testing, research and development, verification and technology services to the battery industry. Much of China’s burgeoning battery ecosystem, including both domestic and international
companies like CATL and LG Chem, is clustered within a few hundred kilometers of Liyang.

“Investing in the ABTIC Innovation Center is a key step forward in helping our customers develop advanced battery technologies, said Leo Liang, Country Manager for China at Siemens Digital Industries Software. “Battery design and manufacturing need to be tightly aligned due to product complexity, and the Innovation Center will focus both on the technology incubation and development as well as advanced manufacturing techniques. Bringing these two key drivers together can help our partners have a competitive market advantage in developing batteries for electric vehicles.”

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Contact for journalists
Natalie Navales
Phone: +1 314 264 8671; E-mail: Natalie.Navales@siemens.com

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