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MATERIALS ANALYSIS DIVISION

AMETEK Gatan K3™ Camera Provides First Look at the Coronavirus Structure

BERWYN, PA, February 19, 2020 – Researchers at the University of Texas at Austin and the National Institutes of Health created the first 3D atomic scale map of the 2019 novel coronavirus. This breakthrough will allow for the rapid development of vaccines, therapeutic antibodies, and other medical countermeasures. The researchers used AMETEK Gatan's K3™ camera to map a part of the virus called the spike protein, which it uses to penetrate host cells, allowing it to replicate.

"Through single-particle cryo-electron microscopy, the researchers determined the atomic structure of the spikes," states Christopher Booth, Director of Life Science for AMETEK Gatan. "This helps explain the virus's resistance to antibodies used to disable similar illnesses. The K3 camera was the key detector used to determine the native structure in record time."

"The K3 camera not only gave us great images that provided the atomic-resolution structure, it also prevented data collection from becoming a bottleneck, ultimately letting our team concentrate on getting the structure as quickly as possible," said University of Texas at Austin Associate Professor and lead researcher on the project, Jason McLellan.

"We would like to congratulate all the researchers for their tremendous efforts in driving this impressive breakthrough in such a short amount of time," commented Narayan Vishwanathan, Division Vice President for AMETEK Gatan. "The Gatan team takes great pride in the value our advanced instrumentation provides to critical life sciences research."

AMETEK Gatan's technology is again at the forefront of groundbreaking discoveries to understand virus transmission and disease outbreaks. In 2016, Gatan's K2® Summit camera, the predecessor to the K3, was the key detector used to develop the first three-dimensional structure of the Zika virus, which ultimately helped researchers better understand the illness and potential treatments. Today, Gatan's next-generation direct detection camera technology is once again being employed to solve the most important problems as quickly as possible.

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This research was published this week in the journal Science and more information about this incredible achievement is available from University of Texas at Austin's story here.

About AMETEK Gatan

Gatan is the world's leading manufacturer of instrumentation and software used to enhance and extend the operation and performance of electron microscopes. Gatan's products, which are fully compatible with all brands of electron microscopes, cover the entire range of the analytical process from specimen preparation and manipulation to imaging and analysis. Its customer base spans the complete spectrum of end-users of analytical instrumentation typically found in industrial, governmental, and academic laboratories. The applications addressed by these scientists and researchers include new materials research, semiconductors, electronics, geosciences, biological science, and biotechnology. The Gatan brand name is recognized and respected throughout the worldwide scientific community and has been synonymous with high-quality products and the industry's leading technology. Gatan is a business unit within AMETEK's Materials Analysis Division.

About AMETEK

AMETEK is a leading global manufacturer of electronic instruments and electromechanical devices with annual sales of approximately $5.0 billion. The AMETEK Growth Model integrates the Four Growth Strategies - Operational Excellence, New Product Development, Global and Market Expansion, and Strategic Acquisitions - with a disciplined focus on cash generation and capital deployment. AMETEK's objective is double-digit percentage growth in earnings per share over the business cycle and a superior return on total capital. The common stock of AMETEK is a component of the S&P 500.

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