

Rigaku Introduces New X-ray Diffraction System with Intelligent Workflow Automation

The new XtaLAB Synergy Flow X-ray diffraction system from Rigaku Oxford Diffraction enables unattended data acquisition, enhanced productivity and standardized workflow

August 20, 2020 – The Woodlands, TX. [Rigaku Corporation](#), the world's leading provider of X-ray analytical instrumentation, is pleased to announce the release of a new X-ray diffractometer system with integrated sample-changing automation. The new [Rigaku XtaLAB Synergy Flow](#) system was first announced in the August edition of [Crystallography Times](#), the electronic newsletter published by Rigaku focusing on single crystal X-ray diffraction.

The new diffractometer system features an integrated sample-changing automation platform, designed to improve the workflow. Rigaku XtaLAB Synergy diffractometers are known for high-performance X-ray sources and direct X-ray detection detectors, a combination designed for high throughput. The new XtaLAB Synergy Flow system incorporates a 6-axis UR3 Universal Robot into to the popular XtaLAB Synergy diffractometer, enabling unattended data acquisition.

By incorporating a unique X-ray safe dewar-drawer system that can be accessed from the side of the cabinet during data collection, the XtaLAB Synergy Flow system avoids the problem of having to halt data collection in order to open the enclosure and add more samples. Data collection can continue unimpeded.



Rigaku XtaLAB Synergy-Flow system

The XtaLAB Synergy Flow system is controlled by [CrysAlisPro](#) X-ray diffraction data collection and processing software for small molecule and protein crystallography, designed around an easy-to-use graphical user interface.

The system utilizes the Intelligent Goniometer Head ([IGH](#)), a motorized automated goniometer head with fast response and built in intelligence. Automated sample centering can be as fast as 6 seconds on dual-camera systems.



As concerns about the spread of COVID-19 and other contagions grow, the XtaLAB Synergy Flow system can be used as part of a sample submission protocol that minimizes human contact. The XtaLAB Synergy Flow system was designed to take full advantage of the enhanced performance by minimizing the time that an instrument might sit idle due to lack of human interaction. With automated sample mounting, potential contamination of the diffractometer by human contact is eliminated. A crystal capacity of 48 samples means that unattended data collection can be easily performed, thus minimizing the time required to be in the X-ray laboratory.

More information about single crystal diffraction solutions from Rigaku is available at www.rigaku.com/smc.

About Rigaku Oxford Diffraction (ROD)

ROD was formed as the global single crystal business unit of Rigaku Corporation after the acquisition of the former Oxford Diffraction organization from Agilent Technologies in 2015. ROD is a leader in the field of single crystal analysis, both in the field of chemical crystallography as well as well as macromolecular crystallography. Formed in 1951, Rigaku Corporation is a leading analytical instrumentation company based out of Tokyo, Japan.

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