

## Press Release

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# Summer 2019 Edition of the Rigaku Journal Features Latest X-ray Analysis Techniques and Applications

*The latest issue- Vol. 35 No. 2 - of the Rigaku Journal is available to download from the company's website.*

**August 26, 2019 – The Woodlands, Texas.** [Rigaku Corporation](#) has published its latest edition of the [Rigaku Journal](#), which is available for download from the company's global website.

The Rigaku Journal is a scientific and technical journal published by Rigaku to serve the X-ray analysis community. It is a semiannual journal, publishing articles covering a wide range of X-ray diffraction ([XRD](#)), X-ray fluorescence ([XRF](#)) and other analytical applications.

The latest issue features five new technical articles, including a feature about the plugin for texture and orientation analysis for the [Rigaku SmartLab Studio II](#) software suite. The Texture plugin is a full-featured module for analyzing the texture of materials. Because of its ability to analyze both pole figure data measured with 0D detectors and data obtained from 2D detectors, this Texture plugin is capable of analyzing pole figure data measured using diffractometers in a variety of system configurations.

Another article includes a profile of newly developed software that enables accurate and reliable semi-quantitative analysis results by wavelength dispersive X-ray fluorescence (WDXRF). This new feature for ZSX Guidance, unique to the [Rigaku ZSX Primus IV](#) tube-above WDXRF spectrometer, minimizes interference and improves peak identification and analysis results.

Other items in the new issue include a paper describing the analysis of refractory products—materials that can withstand high temperatures, such as those used to line furnaces that perform melting and heating processes—and highlights the



*Rigaku ZSX Primus IV sequential WDXRF spectrometer with advanced Guidance system*

use of new quantitative application packages, which include instructions and materials to enable the performance of quantitative analysis, without specialized technical skills.

X-ray computed tomography ([CT](#)) is a nondestructive imaging technique that can be used to examine the internal features of an object in three dimensions. Another Journal article in the current issue shows how the [Rigaku nano3DX](#) X-ray CT microscope has achieved visualization of internal structure and defects of electronic components and has proven to be a promising tool as the first step in failure analysis requiring nondestructive inspection.

With Raman spectrometry having become a common method for identification of hazardous compounds and illicit drugs, the final article examines the identification of such materials with the use of [handheld Raman](#) spectrometers. Advantages include the ability to analyze contents through transparent or translucent containers, and also analyze wet samples.

Finally, an exposition of the basic principles and operation methods of the direct derivation method (DDM) is presented, whereby parameters used to derive the weight ratios of individual component phases in a mixture by X-ray diffraction can be calculated using chemical composition data.

The complete issue, individual articles, and back issues are available for download at no cost at <http://www.rigaku.com/downloads/rigaku-journal>

## **About Rigaku**

Since its inception in Japan in 1951, Rigaku has been at the forefront of analytical and industrial instrumentation technology. Rigaku and its subsidiaries form a global group focused on general-purpose analytical instrumentation and the life sciences. With hundreds of major innovations to their credit, Rigaku companies are world leaders in X-ray spectrometry, diffraction, and optics, as well as small molecule and protein crystallography and semiconductor metrology. Today, Rigaku employs over 1,400 people in the manufacturing and support of its analytical equipment, which is used in more than 90 countries around the world supporting research, development, and quality assurance activities. Throughout the world, Rigaku continuously promotes partnerships, dialog, and innovation within the global scientific and industrial communities.

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