

Press Release

Issue 70 of *The Bridge*, the Materials Science newsletter from Rigaku, is online

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The April 2019 edition of The Bridge newsletter from Rigaku focuses on materials science and is now available from the company's website

April 26, 2019 – The Woodlands, Texas. The April 2019 edition of [The Bridge](#), the materials science newsletter from [Rigaku Corporation](#), is now available online on the company's global website. *The Bridge* presents current news and analysis techniques related to X-ray based materials science, including articles, scientific papers and news reports.

The featured article introduces the new [Rigaku CT Lab HX](#) high-performance benchtop X-ray micro computed tomography (CT) system for materials science system, featuring the most powerful X-ray source in its class (130 kV, 39W).



Rigaku CT Lab HX
high-performance benchtop
X-ray micro CT system

This month's featured X-ray diffraction ([XRD](#)) technical note discusses the limit of quantification (LOQ) of trace impurities in active pharmaceutical ingredients (APIs). Some API materials are difficult to quantify, but a novel quantitative analysis method called "Direct Derivation (DD)" was developed by Rigaku requiring only the XRD data and chemical formula.

The wavelength dispersive X-ray fluorescence ([WDXRF](#)) application note explores semi-quantitative analysis of recycled solid fuel. This application note demonstrates the analysis of refuse derived fuel (RDF) by the semi-quantitative analysis program "SQX" with the [Rigaku Supermini200](#) benchtop WDXRF spectrometer.

The energy dispersive X-ray fluorescence ([EDXRF](#)) brief covers the analysis of nickel laterite ore. The analysis is demonstrated using empirical calibration for monitoring the major elements and using FP (Fundamental Parameters) for general screening and characterization, and includes trace elements.

The book review covers *The Big Nine: How the Tech Titans and Their Thinking Machines Could Warp Humanity* by Amy Webb. The Big Nine refers to the nine big tech companies around the world at the forefront of artificial intelligence research and development. The book explores the nature of artificial intelligence, and the powerful corporations that are upending the human-machine relationship.

A featured video shows how the Event Horizon Telescope has provided a real picture of a supermassive black hole at the center of a galaxy called M87.

As always, links to the latest news stories and recently published scientific papers related to materials analysis are presented, along with a schedule of conferences and workshops – including 17 planned events for May - and other information covering the latest developments in materials science.

Readers can subscribe to the newsletter or view the current issue online at <https://www.rigaku.com/subscribe>



Leading With Innovation

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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