



NEWS RELEASE

## Bruker Makes Routine Magnetic Resonance Spectroscopy More Broadly Accessible for Chemical Analysis Outside Central Labs

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At ENC 2021, Bruker Showcases Enhanced Benchtop Fourier 80™ FT-NMR, Affordable AvanceCore™ 400 NMR, and Versatile Benchtop MagneTech™ ESR 5000

BILLERICA, Mass.--(BUSINESS WIRE)-- Just prior to the 2021 Experimental Nuclear Magnetic Resonance Conference ([www.enc-conference.org](http://www.enc-conference.org)), Bruker Corporation (Nasdaq: BRKR) is making chemical analysis by magnetic resonance spectroscopy more broadly accessible beyond the central lab. Bruker's new magnetic resonance systems are intended for pharma, chemical and food research and analysis, as well as for teaching and chemistry research in any academic lab, university department or college.

This press release features multimedia. View the full release here:

<https://www.businesswire.com/news/home/20210326005044/en/>

Gradient-spectroscopy Fourier 80 with PAL sample changer (Photo: Business Wire)

Specifically, Bruker announces the US/Canadian launch of the

convenient, permanent-magnet **Fourier™ 80** system, a next-generation, high-performance 80 MHz Fourier Transform Nuclear Magnetic Resonance (FT-NMR) benchtop spectrometer for multinuclear gradient spectroscopy, and with industry-standard automation options. The Fourier 80, together with the **AvanceCore 400**, an affordable 400 MHz NMR, plus the versatile Bruker **MagneTech ESR 5000** benchtop EPR (Electron Paramagnetic Resonance) broaden the magnetic resonance analytical solutions for academic, pharma and chemical industry - beyond central labs.

The permanent-magnet based Fourier 80, which does not require cryogenics, has been meticulously designed for

highest data quality and stability at 80 MHz, with excellent lineshape, resolution and sensitivity in homonuclear  $^1\text{H}$  or heteronuclear gradient-spectroscopy FT-NMR experiments. The latest developments include a heteronuclear  $^1\text{H}/^{31}\text{P}$  configuration for food analysis, biological or medicinal research applications, organometallic chemistry and more.

As previously announced, the Fourier 80 offers even greater sensitivity and 20% improved resolution performance. It can be operated by the easy-to-use **GoScan™** software for NMR beginners, or by Bruker's **TopSpin™** NMR software with the extensive TopSpin library of 1D and 2D homonuclear and heteronuclear experiments and pulse programs.

The Fourier 80 is routinely equipped with a pulsed gradient, which has been used in high-field NMR gradient spectroscopy for decades to obtain essentially artifact-free spectra. The optional, industry-standard **PAL® sample changer** can run up to 132 samples, including 12 reference samples, thereby dramatically increasing throughput.

The Fourier 80 allows any chemistry lab to utilize the power of NMR without the higher cost, space requirements, cryogen handling or expertise needed for mid- or high-field NMRs.

Bruker is also pleased to announce the addition of its newest supercon FT-NMR spectrometer, the **AvanceCore**. This streamlined two-channel 400 MHz NMR system offers high-quality NMR at an affordable price, making high-resolution, mid-field NMR more accessible. The AvanceCore leverages Bruker's extensive NMR expertise and is designed for customers with limited budgets who nonetheless need the analytical power of a 400 MHz NMR instrument.

Lastly, with the recent acquisition of the Magnettech EPR business from Freiberg Instruments, Bruker can now offer high performance in a compact benchtop EPR system. Weighing only 45 kilograms, the Magnettech ESR 5000 can fit on a bench or in a fume hood, and can detect, quantify and characterize paramagnetic species, unpaired electrons, free radicals, reactive oxygen species and transition metal complexes.

Dr. Falko Busse, President of the Bruker BioSpin Group, commented: "With the Fourier 80, AvanceCore, and Magnettech ESR 5000, we now can offer high-quality magnetic resonance instruments to more labs and more researchers than ever before. We appreciate the support of the MR community and we are committed to continue to innovate with high-value chemistry and life science research and analytical solutions."

Please join Bruker during the ENC conference starting on March 26th at our **virtual hub**. Watch exclusive content relating to Bruker magnetic resonance products and hear from experts. Visitors can ask questions and interact with members of the Bruker NMR, EPR and MRI teams.

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## About Bruker Corporation (Nasdaq: BRKR)

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