CRYSTALLOGRAPHY

Overview of Solutions

Cutting-edge Structure Determination with D8 QUEST and D8 VENTURE

Innovation with Integrity

Exceeding Expectations

Scientific lineage and innovation

Founded by scientists, Bruker's scientific lineage is rooted in academic excellence and sustained innovation. For more than six decades, this foundation has shaped the development of precision instrumentation trusted by researchers worldwide. Today, with over 8,500 employees and more than 4,000 patents granted or pending, Bruker continues to advance scientific discovery through reliable, high-performance technologies that reflect a deep and enduring connection to the research community.

Within this science-driven environment, Bruker has developed a comprehensive and continuously evolving portfolio of crystallography solutions.

Superior technology and performance

Your diffractometer should adapt to your research, not the other way around. Bruker systems are built on modular, upgradeable architectures that support both current requirements and future applications. Advanced X-ray sources, large area detectors, precision goniometers, and flexible accessories provide high-quality data, fast acquisition, and reliable uptime.

Workflow excellence

Bruker's flagship solutions reflect decades of combined hardware and software expertise. Our software suites provide intuitive interfaces, robust algorithms, and integrated workflows that support everything from experiment setup through structure publication. Automation, smart sample handling, and modern data management tools help increase productivity and reduce hands-on time.

Trusted by leading scientists worldwide

Bruker is a long-term partner in scientific success, offering worldwide consultation, installation, training, and service. Systems are designed for durability, energy efficiency, and low maintenance, helping reduce operating costs over their lifetime.

Trusted by leading academic and industrial laboratories worldwide, Bruker SC-XRD solutions support a substantial share of published crystal structures—reflecting longstanding confidence in their performance.

Scientific innovation. Technological leadership. Comprehensive support.

Unambiguous, high-resolution structures provide valuable information whether you are working in materials science, geosciences, chemistry, or structural biology. Defining the best fit for your applications requires careful consideration of your scientific challenges and laboratory settings, both today and in the years ahead.

The modular design of the **D8 QUEST** and **D8 VENTURE** allows you to tailor each system to suit your unique goals. Whatever your application, you will find the perfect solution for your X-ray facility.

Economy solutions

D8 QUEST ECO

An accessible, easy-to-use diffractometer designed for teaching laboratories and routine chemical crystallography, delivering reliable structures with minimal setup and training.

Efficiency solutions

D8 QUEST GX

Compact, walkup system with a high brilliance Mo IμS 3.0 microfocus source for fast, reliable results every day.

Performance solutions

D8 VENTURE MX

Designed for structural biology facilities to accelerate protein to crystal to structure in the home lab.

Find the Perfect Solution for Your Lab

More about Bruker's crystallography solutions

Performance solutions

D8 VENTURE HE

Advanced crystallography powered by dual Mo and Ag IμS DIAMOND II sources and the high DQE PHOTON IV HE detector, enabling high energy experiments for challenging materials applications.

Performance solutions

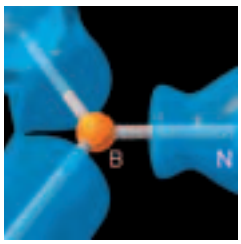
D8 VENTURE VX

The final word in versatility for multidisciplinary facilities—whatever your sample or experiment.

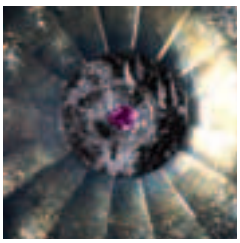
In-house beamline solutions

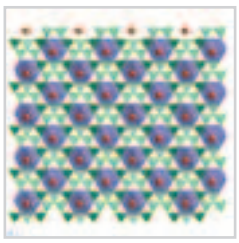
D8 VENTURE METALJET

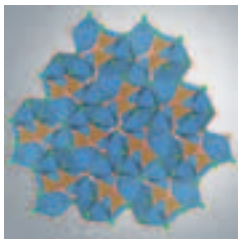
Ultra-bright METALJET MC X-ray source delivers beamline capabilities with home-lab convenience.

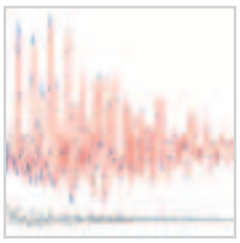


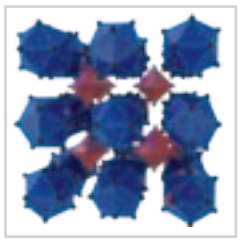
Quantum crystallography

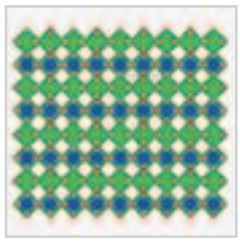

High pressure

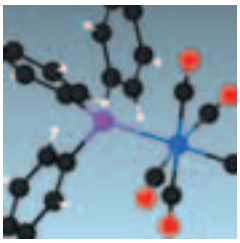

Strong absorbers


Solid state / intermetallic

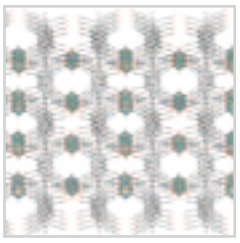

PDF

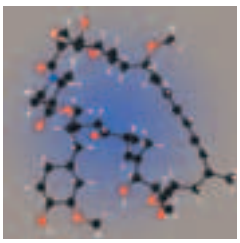

Inorganic compounds


Minerals

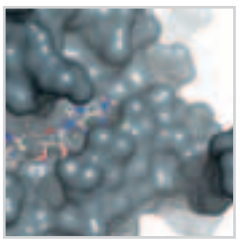

Coordination complexes

Powder


Supramolecular / MOF


Organic

Light atom absolute configuration


Proteins

Strategic decision-making

Selecting the ideal radiation for your system critically influences the success of your research for the years to come.

Ag	Mo	Cu	Ga
K_α 0.56 Å	K_α 0.71 Å	K_α 1.54 Å	K_α 1.30 Å

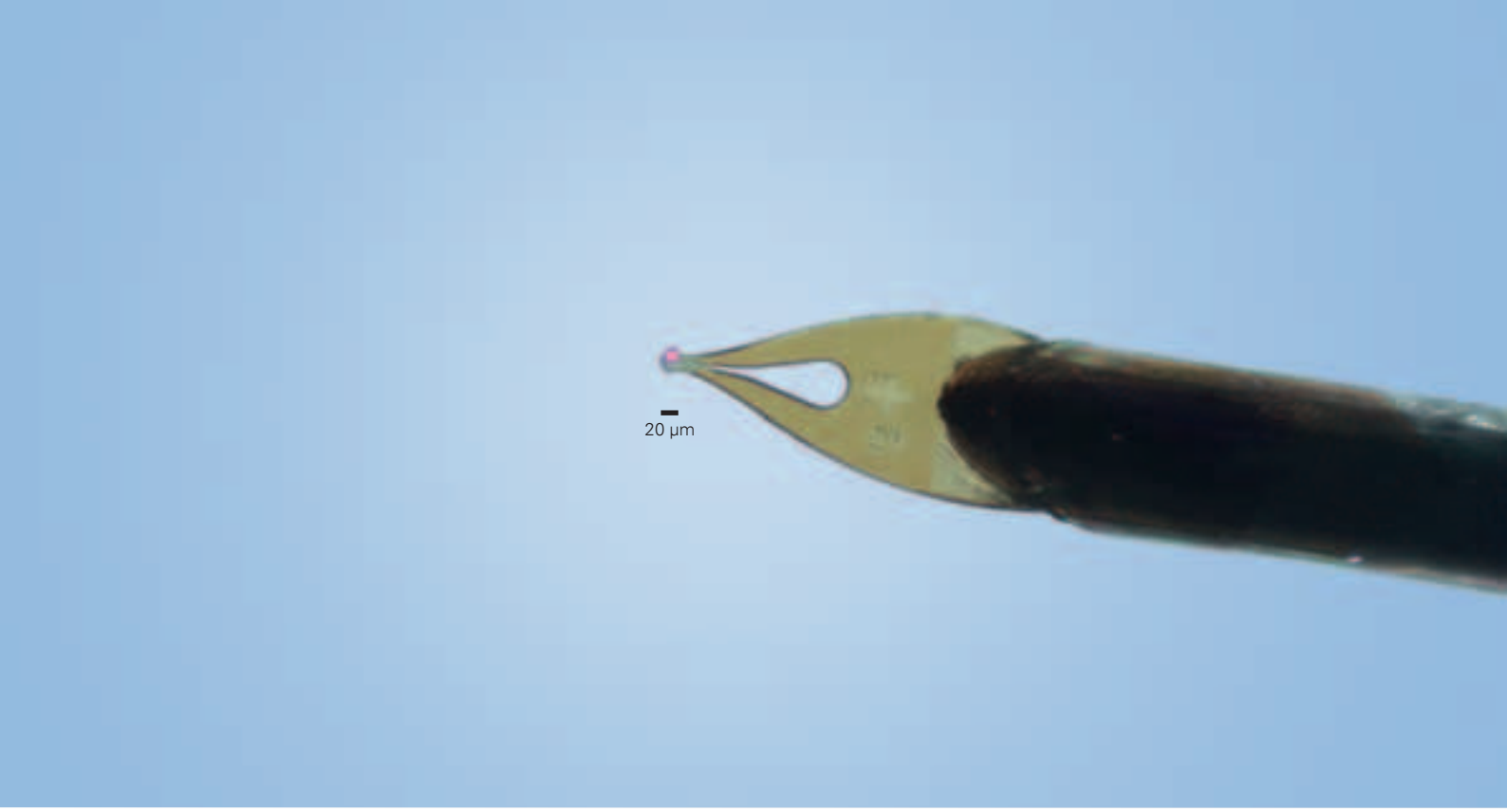
Riding the Perfect Wave

Choosing the best X-ray source for your research more than ever requires a thoughtful evaluation of several important aspects. Start by clarifying your analytical requirements, such as working with organic samples, handling small crystals, or focusing on materials science projects. The type of samples—whether they typically are large or small, stable or delicate—will determine which wavelength and source are most appropriate.

Consider the wavelength that best suits your application. For instance, Molybdenum (Mo) radiation is prized for its versatility, while Silver (Ag) radiation offers superior resolution with reduced absorption and extinction effects, and is now available at remarkable intensities thanks to our latest advancements. Soft radiation, such as Copper (Cu), offers advantages for structural biology and the determination of absolute structures in pure organic compounds.

Also consider the source's lifespan, reliability, and the stability of its beam position and intensity—along with how seamlessly it integrates into your new system. Features such as alignment-free operation simplify use and help maximize productivity.

Exploring innovative solutions beyond traditional choices helps you push the boundaries of your research.



X-ray wavelength [K_α]	Chemical crystallography			Protein and drug discovery			High energy applications			Ultimate versatility		
	Ag	Mo	Cu	Ag	Mo	Cu	Ag	Mo	Cu	Ag	Mo	Cu
Quantum crystallography												
High pressure												
Strong absorbers												
Solid state / intermetallic												
PDF												
Inorganic compounds												
Minerals												
Coordination complexes												
Powder												
Supramolecular / MOF												
Organic												
Light atom absolute configuration												
Proteins												

Best

All about the
X-ray sources

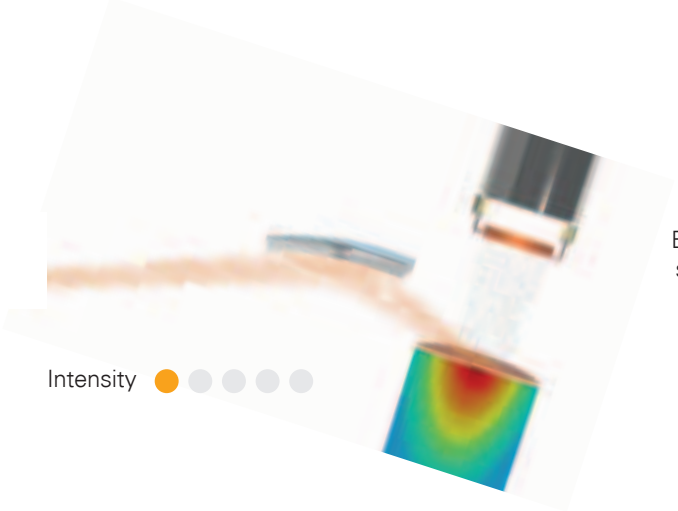
Advanced X-ray Source Technologies

Transform your research with the ultimate X-ray source that combines outstanding performance with unmatched reliability. Whether you choose a single or a dual wavelength solution, unlock new potential in your lab by selecting a solution tailored to your work. Given system lifetimes of ten years and beyond, choosing the right wavelength and investing in advanced technology ensures sustained support for your scientific research well into the future.

Go for excellence: select the X-ray source that propels your research beyond expectations.

Economy—Mo, Cu

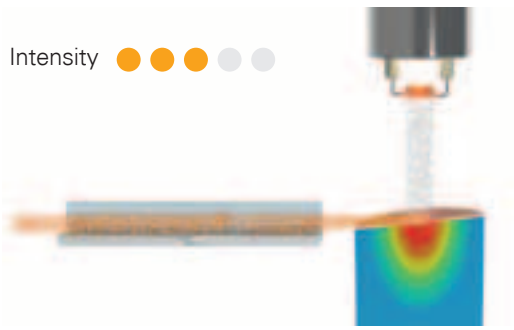
Sealed tube source technology delivers exceptional value and reliable, consistent results. Flat or curved monochromators guarantee excellent beam intensity.



Economy solutions

Efficiency—Ag, Mo, Cu

The IμS 3.0 microfocus source sets the standard for brilliance, sustainability, and innovation, providing efficient performance for demanding laboratories without compromising reliability.



Efficiency solutions

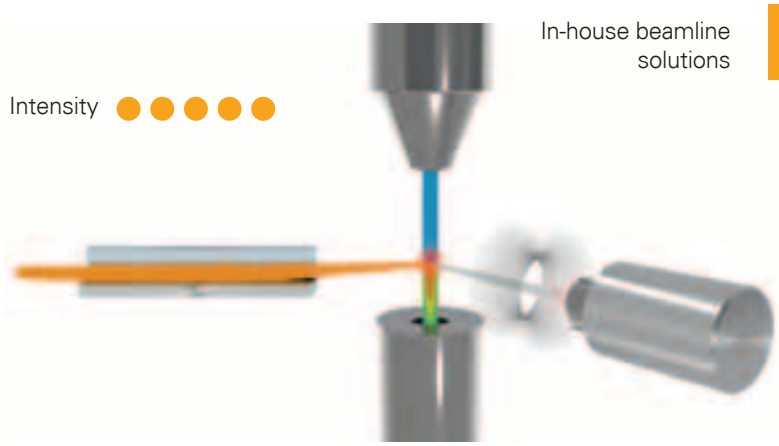
Performance—Ag, Mo, Cu

For applications requiring higher speed and precision, the IμS DIAMOND II leverages patented diamond hybrid anode technology to elevate data quality and accelerate structure determination.

Performance solutions

In-house beamline—Ga

The METALJET MC brings synchrotron-level performance to your laboratory, enabling new experimental possibilities and opening new frontiers in crystallography.



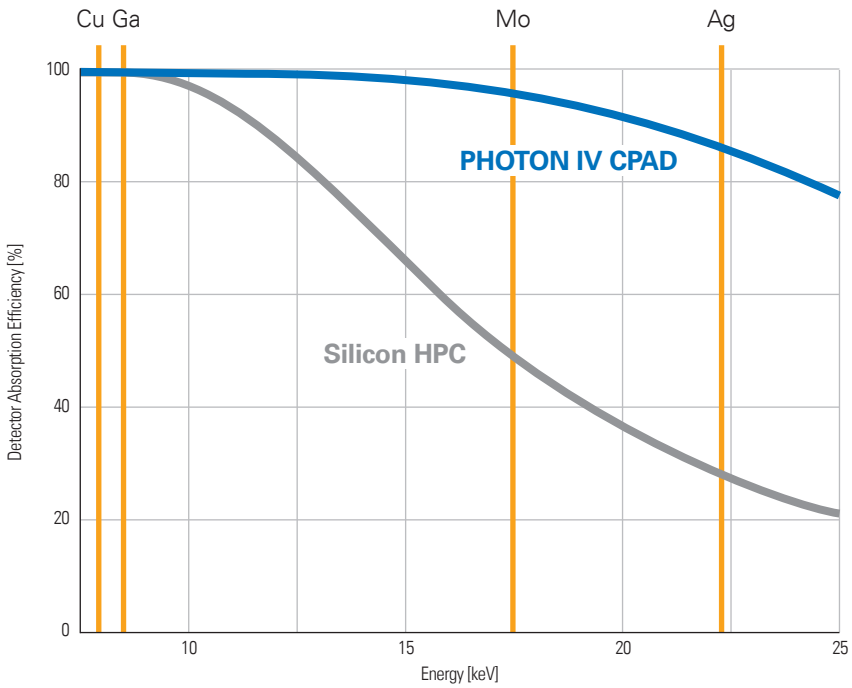
In-house beamline solutions

Choose your source. Count on your detector

The PHOTON IV detector uniquely exploits advanced indirect detection to achieve the highest sensitivity for all home source wavelengths.

Cu	Ga	Mo	Ag
$K\alpha$ 1.54 Å	$K\alpha$ 1.30 Å	$K\alpha$ 0.71 Å	$K\alpha$ 0.56 Å

Comparison of Detector Absorption Efficiency



PHOTON IV—Performance and Versatility

All D8 QUEST and D8 VENTURE systems are equipped with our state-of-the-art photon counting PHOTON IV detectors.

Exclusively combining CMOS active pixel sensors, with advanced photon counting methods, PHOTON IV detectors are unique in providing large active areas, high quantum efficiency, zero noise photon counting, excellent point spread and high dynamic range—perfect for home-labs.

Capture high-quality data from virtually any sample, including the smallest weak crystals, challenging solid-state materials, large protein crystals, and powders.

Unbeatable collection efficiency and versatility

A single, large, uniform sensor with no gaps or inactive regions paired with high quantum efficiency, enables the PHOTON IV to deliver exceptional collection efficiency and versatility. This design sets indirect detection apart from other available technologies.

Next generation X-ray detection

Economy solutions

Efficiency solutions

Performance solutions

In-house beamline solutions

PHOTON IV 8
single sensor
8,000 mm²

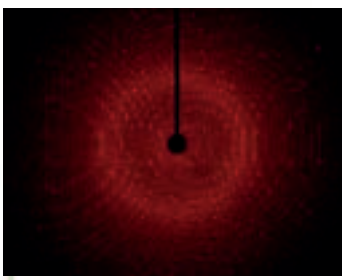
PHOTON IV 16
single sensor
16,000 mm²

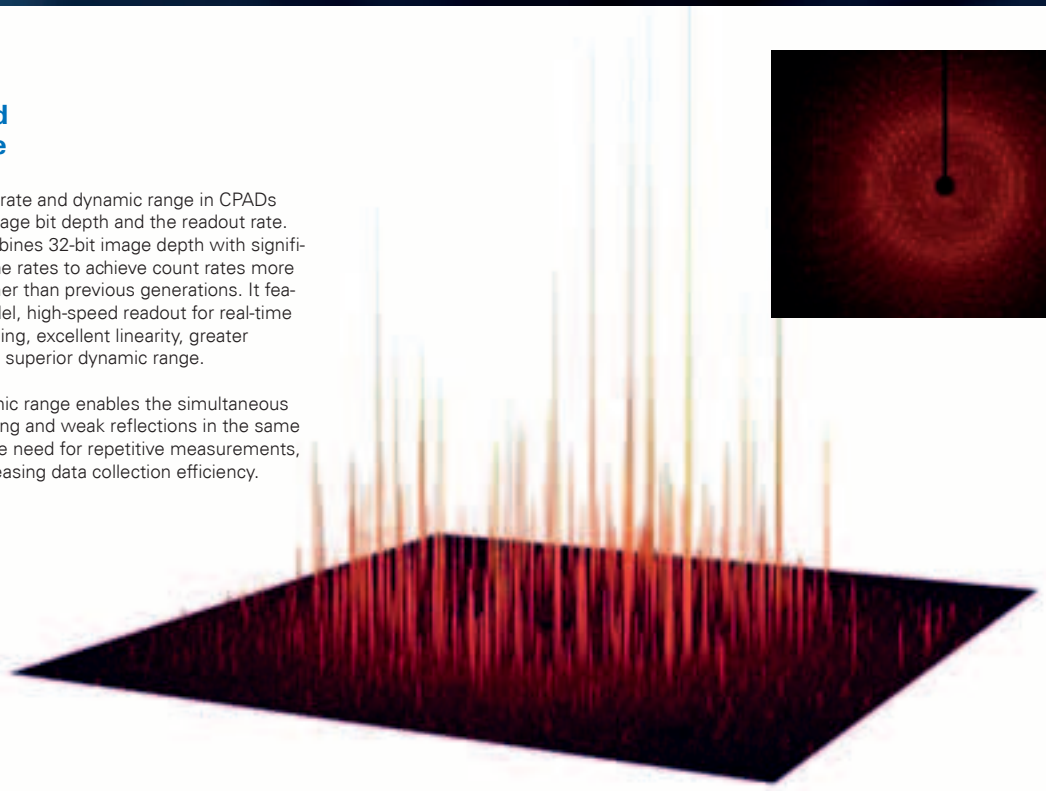
All about the PHOTON IV

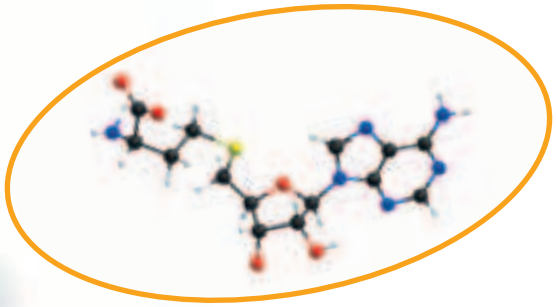
Sensitivity and dynamic range

The maximum count rate and dynamic range in CPADs are defined by the image bit depth and the readout rate. The PHOTON IV combines 32-bit image depth with significantly increased frame rates to achieve count rates more than three times higher than previous generations. It features massively parallel, high-speed readout for real-time off-pixel data processing, excellent linearity, greater full-well capacity, and superior dynamic range.

This expanded dynamic range enables the simultaneous measurement of strong and weak reflections in the same image, eliminating the need for repetitive measurements, and significantly increasing data collection efficiency.







Economy solutions

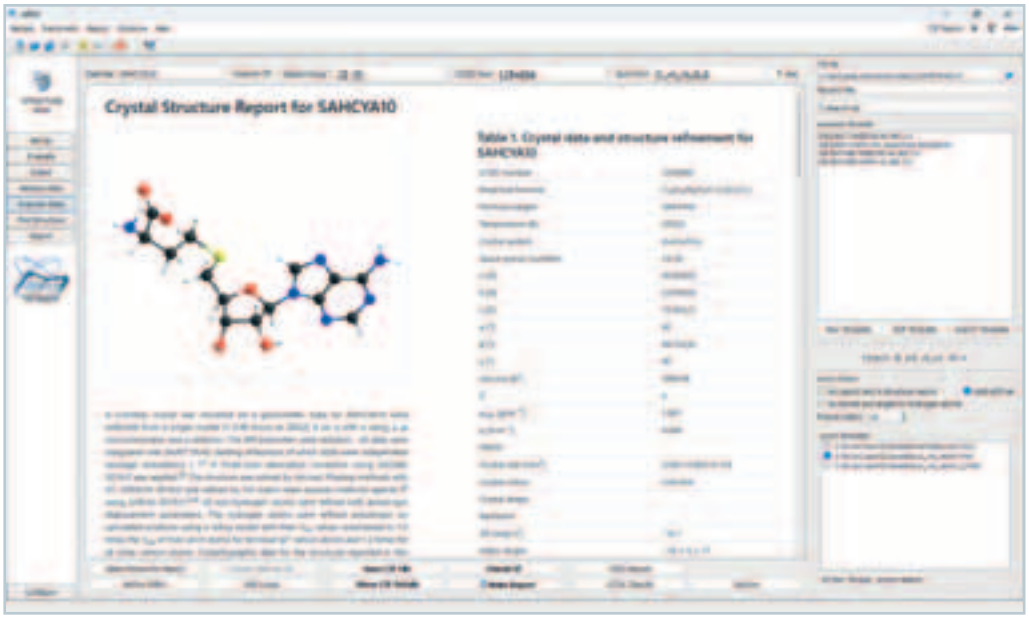
Efficiency solution

Performance solutions

In-house beamline solutions

Integrated Workflows for Modern Crystallography

Software that Unifies Experiment, Data, and Structure



Our software is built for stability and performance, making it a natural fit for demanding high-throughput environments such as shared facilities and industrial settings. It supports complex analytical workflows with the reliability required for routine measurements and the flexibility needed for more advanced applications.

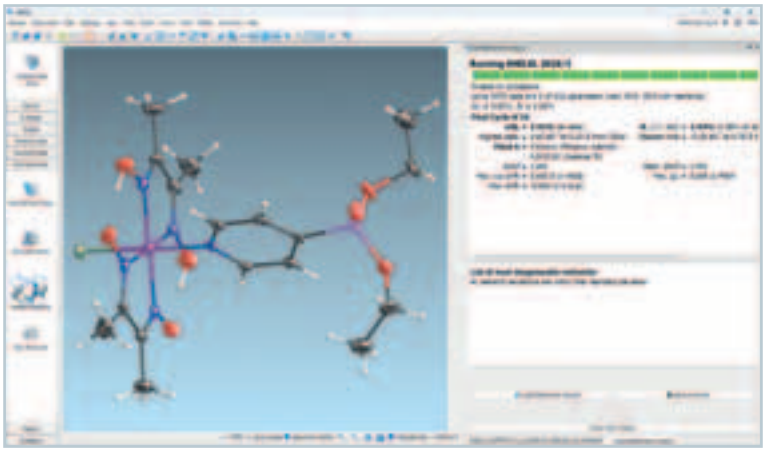
A clear, intuitive user interface mirrors the natural progression of the experiment, guiding users logically from one step to the next. reflecting the structure of the underlying workflow. This design simplifies analysis, makes the rationale behind each step transparent, and builds confidence in the results while keeping workflows efficient.

Traceability and documentation are of great importance in scientific workflows. Therefore, creating complete and consistent reports for publications, archiving, and downstream use is straightforward, flexible, and intuitive. Reproducibility is supported through comprehensive metadata capture and standardized exports, ensuring seamless interoperability with downstream tools and external analysis environments. By tightly integrating instrument control, data handling, and analysis within a coherent workflow, the software keeps the focus where it belongs: on interpretation and decision making, without sacrificing the level of control required for demanding applications.

Reliability and user experience, designed into every step.

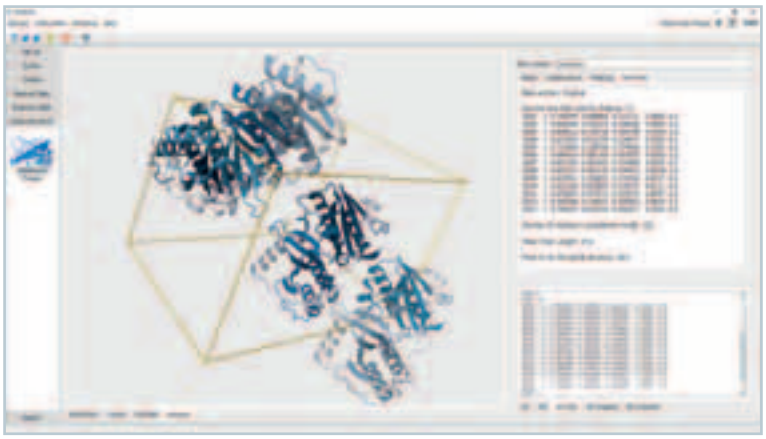
APEX software—the central hub for advanced crystal structure determination

The APEX software suite delivers a complete workflow for crystal structure determination, from instrument control to publication ready CIFs. Its modern, multi core optimized architecture enables fast, reliable processing of demanding datasets, including twinned and modulated structures. Seamless compatibility with third party crystallographic software preserves data integrity and supports publication quality results trusted by leading laboratories worldwide.



PROTEUM software for macromolecular crystallography

The PROTEUM software suite is dedicated to macromolecular crystallography, offering intuitive and automated workflows from crystal screening to structure validation. Compatibility with CCP4 and Phenix ensures smooth integration into established academic and industrial workflows, supporting crystallographers at every experience level.

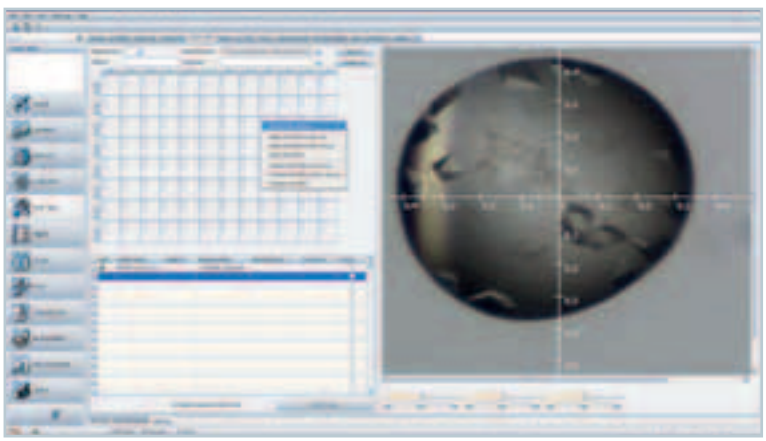


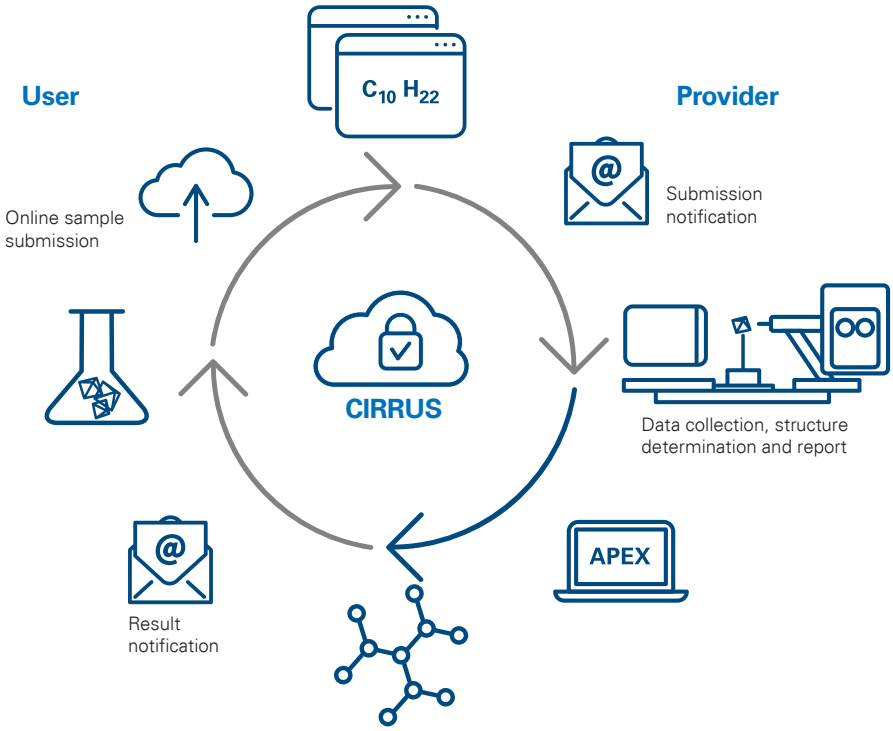
SCOUT software: streamlining SC-XRD sample management

The SCOUT software facilitates automated cryogenic sample. It integrates robotic control, sample centering, and diffraction-based crystal screening. Users can configure workflows, monitor system status, and export structured reports. SCOUT features access-level customization, enabling reproducible, high-throughput crystallographic data acquisition.

ISX software for *in situ* crystallography

The ISX software enables automated *in situ* crystal screening directly in crystallization plates, preserving the integrity of delicate crystals such as proteins or MOFs by eliminating harvesting and cryo-protection. It integrates optical sample selection, job queuing and automated measurement to streamline crystal identification and characterization. It is ideal for screening and room-temperature structure determination of single crystals or powder diffraction.





Crystallographic Software for SC-XRD and Beyond

Focused on users' needs: Developed by leading crystallographers, Bruker's software solutions are designed to support efficient collaboration in modern laboratories. A robust multi–user environment with site licenses and individual accounts provides flexibility and transparency for diverse teams. Real–time graphical feedback and progress monitoring deliver immediate, actionable insights, giving users confidence at every stage of structure determination.

Integrated data resources and interoperability: Instant access to multiple databases covering small molecule, solid state, and macromolecular crystallography supports rapid validation and informed decision making. Seamless interoperability ensures reliable data exchange and smooth integration with third party crystallographic tools, extending analytical capabilities across platforms.

Enhanced safety and sample analysis: Smart Motion Protection continuously monitors the instrument ensuring reliable and safe operation. Automated twin handling supports simultaneous processing of up to eight domains, enabling deeper insight into demanding samples such as modulated, twinned, or intergrown crystals.

Continuous innovation: Regular software updates with multiple releases per year introduce new features, performance improvements, and workflow enhancements—ensuring users stay at the forefront of crystallographic science and technology.

Empower your crystallography workflow with CIRRUS: CIRRUS revolutionizes crystallography services by simplifying sample submission, communication, and data access. Intuitive digital submission forms and seamless integration with APEX enable complete, standardized data transfer while minimizing errors and delays.

CIRRUS is an amazing tool that lets crystallographers get rid of lots of paperwork and focus on what they love—crystallography!

Beyond Conventional SC-XRD: For powder or total scattering applications, PHOTON IV data can be analyzed seamlessly with our XRD software suites. DIFFRAC.EVA or DIFFRAC.TOPAS enable phase identification, PDF analysis and Rietveld refinement.

Extend the capabilities of your system.

Preferred Configuration

Mo 1kW sealed-tube X-ray source
FIXED-CHI three-axis goniometer
PHOTON IV 8 detector
APEX software

Enhancements

Cu alternative wavelength
Automated goniometer head
Low temperature device
High-pressure kit

D8 QUEST ECO—Crystal Structures for Chemical Research and Education

Mo, Cu radiation

An accessible, easy-to-use diffractometer designed for teaching laboratories and routine chemical crystallography, delivering reliable structures with minimal setup and training.

The D8 QUEST ECO is a crystallography system that is designed around simplicity without sacrificing data quality. Its workflow is structured and intuitive, guiding users from crystal mounting through data collection, structure solution, and refinement. The APEX software provides clear feedback at each step, making it easy to understand and control the experiment.

The system enables rapid access to reliable structural information. Preliminary structures can be obtained within seconds to confirm sample identity, while complete datasets suitable for publication are collected within practical timeframes. Automated features such as STRUCTURE NOW streamline routine measurements by reducing operational complexity and supporting consistent results.

With its compact footprint and low operating costs, the D8 QUEST ECO integrates easily into a wide range of laboratory environments. It is suitable both as an entry level SC-XRD instrument and as an additional system to expand capacity in established labs. Overall, the D8 QUEST ECO provides efficient, reliable access to quality crystallographic data for everyday research and teaching applications.

D8 QUEST ECO—Crystallography has never been easier

D8 QUEST GX—Chemical Crystallography Made Effortless

The compact, walkup system with a high brilliance Mo IμS 3.0 microfocus source for fast, reliable results every day.

The D8 QUEST GX is ideal for chemistry and materials research laboratories and crystallographic service facilities that require reliable, routine single crystal X-ray diffraction results from an instrument with a compact footprint. It supports a wide range of applications, from standard structure determination to more demanding measurements on small or weakly diffracting crystals, making it suitable for both occasional and experienced crystallographers.

Ag, **Mo,** Cu radiation

Designed for everyday research workflows, the system consistently delivers publication-ready data with high productivity. Rapid data collection increases throughput and supports reliable structure analysis, enabling advanced crystallography to be performed efficiently in routine laboratory environments.

These benefits are delivered through the combination of the high brilliance IμS 3.0 Mo microfocus source, a large area, photon counting PHOTON IV 8 detector, and the APEX software suite. APEX integrates intuitive experiment setup, automated data reduction, and expert level control in a single workflow.

D8 QUEST GX—Trusted results, crystal after crystal

Preferred Configuration

Mo IμS 3.0 microfocus X-ray source
KAPPA four-axis goniometer
PHOTON IV 8 detector
APEX software

Enhancements

Mo IμS DIAMOND II high-intensity X-ray source
Cu or Ag alternative wavelength
Automated goniometer head
Low temperature device
High-pressure kit

D8 VENTURE MX—From Protein to Crystal to Structure, Faster

Ag, Mo, **Cu** radiation

Designed for structural biology facilities and combines the Cu IμS DIAMOND II with the PHOTON IV detector to deliver reliable, high quality protein structures in the home lab.

The D8 VENTURE MX will help structural biology facilities deliver reliable protein structures at higher throughput while supporting users with a wide range of crystallographic requirements. By moving effective screening and data collection into the crystallization laboratory, it directly addresses key bottlenecks such as obtaining well-ordered crystals, small or weakly diffracting crystals, and growing volumes of screening experiments.

By combining high performance diffraction with integrated, automation-ready workflows, D8 VENTURE MX enables early assessment of crystal quality, efficient screening and optimization, and reliable collection of complete data sets directly in the home laboratory, reducing manual effort and ensuring you get the most from your beamtime.

These benefits are delivered through a Cu IμS DIAMOND II microfocus X-ray source, the PHOTON IV 16 photon counting detector, a spacious design with optional ISX Stage for convenient screening directly in plates, all supported by the PROTEUM software suite. PROTEUM serves as a comprehensive toolbox that seamlessly integrates data collection, processing, and structure solution into a consistent and reproducible workflow.

D8 VENTURE MX—Where performance meets convenience

Preferred Configuration

Cu IμS DIAMOND II X-ray source
KAPPA four-axis goniometer
ISX Stage
PHOTON IV 16 detector
APEX and PROTEUM software

Enhancements

Low temperature device
Automated goniometer head
SCOUT Automation
2nd IμS 3.0 or IμS DIAMOND II source

Preferred Configuration

Dual Mo & Ag IμS DIAMOND II X-ray sources
KAPPA four-axis goniometer
PHOTON IV 16 HE detector
APEX software

Enhancements

Automated goniometer head
Low temperature device
High temperature device
Ultra-low temperature device
High-pressure kit

D8 VENTURE HE—High-Energy Crystallography for Materials Science

Advanced crystallography powered by dual Mo and Ag IμS DIAMOND II sources and the high DQE PHOTON IV HE detector, enabling high energy experiments for challenging materials applications.

The D8 VENTURE HE is designed for materials scientists and chemical crystallographers working in solid state, intermetallic, and inorganic chemistry who investigate demanding samples and complex structures. It supports advanced applications including high energy and high-pressure crystallography, quantum crystallography, and total scattering/PDF analysis, even in geometrically constrained experimental environments.

Ag, Mo, Cu radiation

Combining Mo and Ag radiation, the system delivers higher resolution and improved X-ray penetration. Reduced absorption and extinction improve data accuracy, enabling confident structural insight across challenging materials and geoscience research.

High intensity IμS DIAMOND II Mo and Ag X-ray sources, and the PHOTON HE photon counting detector combine to provide a small, intense beam, extended resolution and q-range, and robust performance for the most demanding crystallography experiments.

D8 VENTURE HE—Unlock high energy crystallography

Preferred Configuration

Dual Cu & Ag IμS DIAMOND II X-ray sources
KAPPA four-axis goniometer
PHOTON IV 16 detector
APEX software

Enhancements

Automated goniometer head
Low temperature device
High temperature device
High-pressure kit

D8 VENTURE VX—Ultimate Versatility for Advanced Facilities

Ag, Mo, **Cu** radiation

Dual Ag and Cu IμS DIAMOND II sources deliver performance across the widest range of crystallographic experiments.

The D8 VENTURE VX is ideal for central X-ray service laboratories and advanced research facilities supporting the greatest variety of crystallographic applications. It uniquely serves the complete spectrum of chemistry, materials science, and structural biology, enabling high quality studies from biological macromolecules, small molecules and metal complexes to challenging solid state and charge density studies on a single platform.

Ultra-bright Cu radiation enables crystallography on even the smallest or weakest-diffracting crystals and offers strong anomalous signals for light atom structure determination. The high-intensity Ag source complements Cu, delivering excellent data for crystals historically measured with Mo, increasing data completeness in diamond anvil cells, and extending the resolution limits in charge density studies.

The D8 VENTURE VX combines IμS DIAMOND II Ag and Cu microfocus X-ray sources with a high sensitivity PHOTON IV photon counting detector, a flexible KAPPA goniometer, and advanced APEX software with automation and AI centering. This results in a solution optimized for high quality data collection and high throughput across the complete range of crystallographic applications.

D8 VENTURE VX—The must-have system in modern X-ray service laboratories

D8 VENTURE METALJET—Beamline Capabilities In-House

Unmatched METALJET MC intensity in a microfocus beam delivers results from the most challenging samples typically only achievable at synchrotrons.

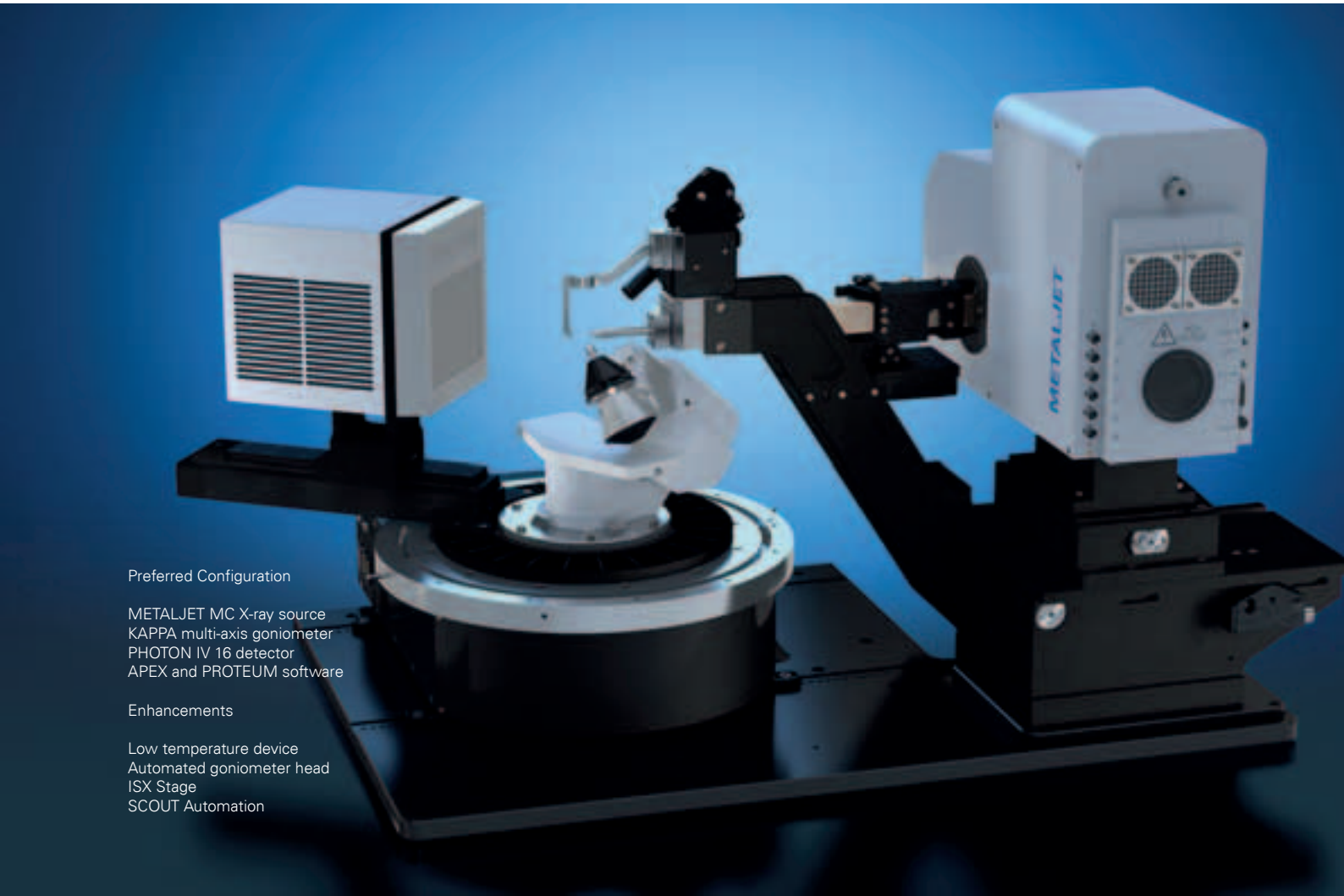
Ga radiation

The D8 VENTURE METALJET delivers exceptional performance for the most demanding single-crystal X-ray diffraction applications. Combining the proven D8 VENTURE platform with a high-brightness METALJET MC X-ray source, the system sets a new benchmark in X-ray intensity compared to high-KW rotating anodes. This enables faster data collection, improved signal-to-noise, and reliable measurements from very small, weakly diffracting crystals.

Enhanced intensity is particularly valuable for the investigation of challenging crystals such as porous compounds or proteins. These samples are typically characterized by small crystal size, high solvent content, and complex disorder resulting in weak diffraction. Fully integrated with Bruker's data collection and analysis software, D8 VENTURE METALJET supports automated workflows while retaining full flexibility for expert users.

With its modular design, 4-circle KAPPA goniometer, and high-performance detectors, the D8 VENTURE METALJET extends the scope of in–house crystallography while reducing dependence on external facilities and enabling high–impact structural research.

D8 VENTURE METALJET—Beamline discoveries, home-lab convenience



Preferred Configuration

METALJET MC X-ray source
KAPPA multi-axis goniometer
PHOTON IV 16 detector
APEX and PROTEUM software

Enhancements

Low temperature device
Automated goniometer head
ISX Stage
SCOUT Automation

Performance solutions

In-house beamline solutions

SCOUT with D8 VENTURE METALJET

6-axis robot for high-precision sample transfer
Advanced gripper for safe, reliable sample transfer
Dual-dewar refill system minimizes LN_2 consumption
Bar code reader for sample tracking (optinal)
SCOUT software for sample management, queuing and ranking

SCOUT Automated Sample Management

SCOUT with D8 VENTURE MX

Maximize your productivity by combining automation, reliability, and ease of use

SCOUT transforms single crystal X-ray diffraction by automating one of the most time-consuming parts of the workflow: sample handling and tracking. By enabling fully unattended, sequential measurement of multiple crystals, SCOUT significantly reduces hands-on time while maximizing instrument productivity.

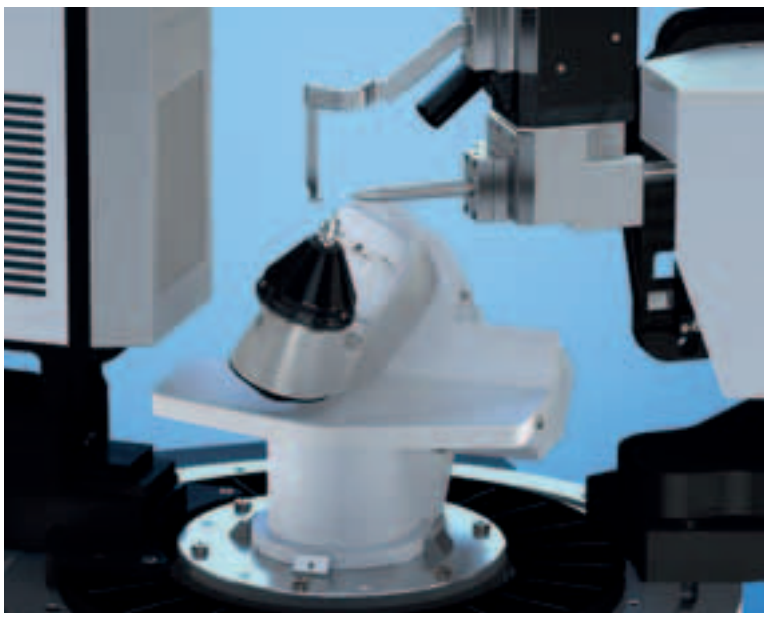
Instead of repeatedly loading, centering, and exchanging samples, crystallographers can rely on SCOUT to manage routine experimental tasks automatically. This frees valuable expert time for evaluating crystal quality, solving structures, and interpreting results, while the instrument continues collecting high quality data.

Automated sample mounting, centering, and retrieval not only accelerate throughput but also improve consistency and reproducibility across measurements. Reduced manual handling helps protect small, fragile, or temperature sensitive crystals, supporting reliable data collection even in demanding research environments.

SCOUT—More data. More time for science.

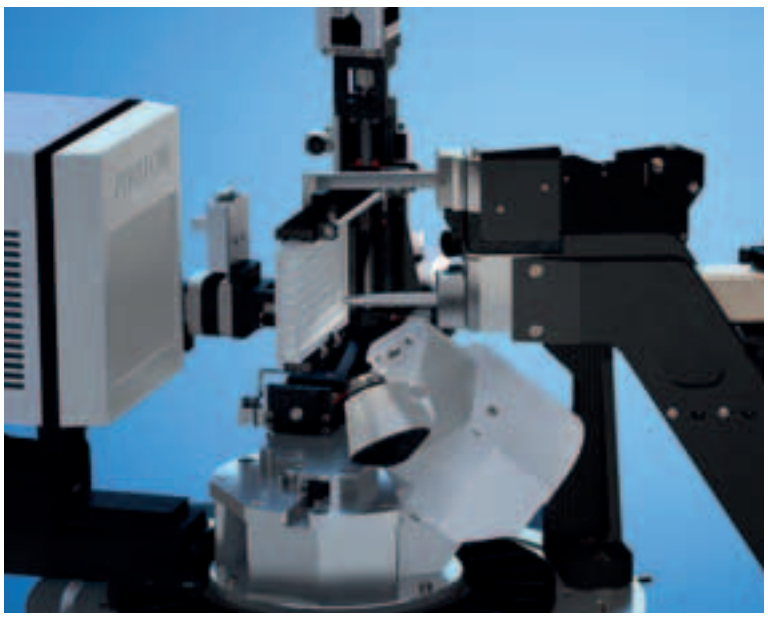
Enhance Your Productivity

Reduce hands-on time, increase measurement reliability, and accelerate crystal screening and data collection.



Automated goniometer head

The AGH (Automated Goniometer Head) automatically centers and aligns crystals on the diffractometer. It replaces manual centering with precise, motorized control. The AGH improves reproducibility, reduces hands-on time and user bias, accelerates throughput, and enables reliable measurements in busy, multiuser-laboratories. Users benefit from the advanced deep learning technology for automatic crystal centering.



ISX stage

The ISX Stage for D8 VENTURE systems supports *in situ* crystallography by enabling diffraction data collection directly from crystals grown in plates or capillaries, without harvesting. This approach reduces handling damage, accelerates screening, preserves fragile samples, and improves throughput and success rates for crystallographers in routine and advanced structural studies.

Keep it cool

Integrated temperature control for modern crystallographic measurements

Low temperature devices

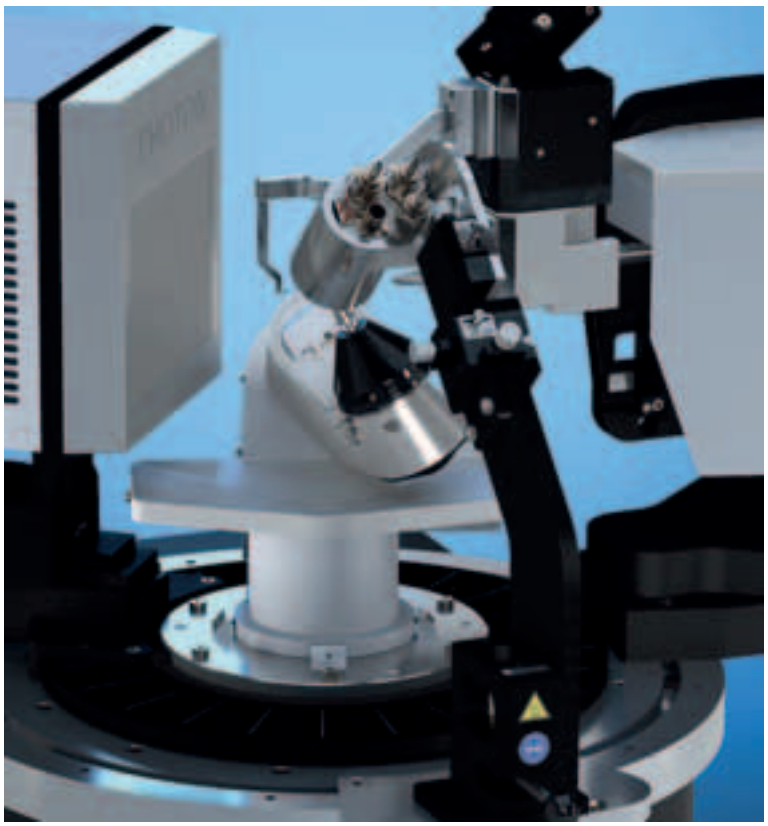
Low temperature devices enhance data quality and uncover structural details by reducing thermal motion, boosting resolution, and revealing subtle disorder, phase transitions, or weak interactions that might be concealed at room temperature. The integration of the CRYOSTREAM 1000 or the liquid-nitrogen-free COBRA allows advanced studies with data collections at multi-temperatures down to 80 K. The device can automatically turn off when the diffraction instrument becomes idle, efficiently conserving resources.

Ultra-low temperature devices

The N-HELIX is a compressor-driven open-flow cooler that allows crystallography experiments to reach temperatures as low as 28 K, surpassing the limits of liquid nitrogen. As with other non-ambient devices, N-HELIX control is fully integrated into our software suites. The N-HELIX is mounted via a dedicated external stand that physically isolates it from the instrument, preventing compressor vibrations from affecting the sample. Inside our spacious enclosure, the N-HELIX can be installed alongside other low-temperature devices for maximum flexibility.

Extreme Conditions for Advanced Crystallography

Dedicated solutions for non-ambient experiments



High temperature device

The new HTD high temperature device is compatible with all wavelengths and enables precise single crystal X-ray diffraction experiments on the D8 VENTURE, with sample temperatures reaching up to 1250 K. This capability supports research on phase transitions, ion movement, and high-temperature PXRD using capillaries. The HTD operates by directing a controlled stream of heated gas onto the sample and is fully software controlled. This makes multi-temperature experiments straightforward while maintaining integrated safety features.

High-Pressure Kits

High-pressure crystallography broadens research opportunities by enabling the examination of crystal structure, bonding, and material properties under extreme environmental conditions. The High-Pressure Kit provides rapid switching between standard and high-pressure modes. It is designed to be compatible with most commercially available Diamond Anvil Cells (DAC). Precise data collection planning and secure DAC positioning are maintained to ensure reliable, high-quality results.

	Economy solutions **D8 QUEST ECO**	Efficiency solutions **D8 QUEST GX**
X-ray source wavelength	**Mo**, Cu	Ag, **Mo**, Cu
X-ray source Intensity	Sealed tube ●	IμS **3.0** ●●●
2nd X-ray source wavelength	—	—
2nd X-ray source Intensity	—	—
Detector, ~ 8.000 mm² or ~16.000 mm²	PHOTON IV **8**	PHOTON IV **8**
Enclosure	**Compact**	**Compact**
Sample stage	**Fixed-Chi**	**KAPPA**
Motorized Detector to Crystal (DX) track	—	✓
AGH – Automated crystal centering *)	✓	✓
ISX – In-situ screening *)	—	—
SCOUT – Automated sample changer *)	—	—
Low and Ultra-low temperature *)	Cryostream 1000	Cryostream 1000 COBRA
High-temperature device *)	—	—
High-pressure kit *)	✓	✓
Typical SM crystal size [µm]	50 – 500	10 – 300
Typical protein crystal size [µm]	—	—
Investment	●	●●
Cost of ownership	●	●

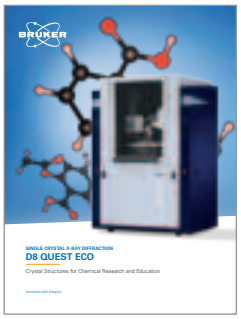
*) Option

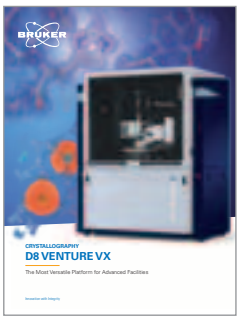
Perfect Solutions for Your Lab

Whatever your application, we provide the perfect solution for your X-ray facility.

Performance solutions **D8 VENTURE MX**	Performance solutions **D8 VENTURE HE**	Performance solutions **D8 VENTURE VX**	In-house beamline solutions **D8 VENTURE METALJET**
Ag, Mo, **Cu**	**Ag**, Mo, Cu	**Ag**, Mo, Cu	**Ga**
IμS **DIAMOND II** ●●●●	IμS **DIAMOND II** ●●●●	IμS **DIAMOND II** ●●●●	**METALJET** ●●●●●
—	Ag, **Mo**, Cu	Ag, Mo, **Cu**	—
IμS **DIAMOND II** (optional) ●●●●	IμS **DIAMOND II** ●●●●	IμS **DIAMOND II** ●●●●	—
PHOTON IV **16**	PHOTON IV **16 HE**	PHOTON IV **16**	PHOTON IV **16**
Large	**Large**	**Large**	**Large**
KAPPA	**KAPPA**	**KAPPA**	**KAPPA**
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
Cryostream 1000 COBRA N-HELIX	Cryostream 1000 COBRA N-HELIX	Cryostream 1000 COBRA N-HELIX	Cryostream 1000 COBRA N-HELIX
✓	✓	✓	✓
✓	✓	✓	✓
2 – 300	2 – 300	2 – 300	2 – 200
50 – 300	50 – 300	50 – 300	20 – 200
●●●	●●●	●●●	●●●●
●	●	●	●●●

Solutions for Cutting-edge Structure Determination





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