



“The most vital aspect for the successful study of metallo-supramolecular self-assemblies is the production of 3D crystal structures. The solid-state 3D structure is the definitive proof of the correctness of the structure, and the chemistry related to it. This is what the single crystal X-ray diffraction analysis (SC-XRD) gives us. So once you have crystals you depend on an instrument that is powerful, reliable and that will get you that all-important 3D structure when it really counts. This is why I opted for the Bruker D8 VENTURE X-ray diffractometer.

The high X-ray intensity of the microfocus $1\mu\text{S}$ Cu source facilitates our investigation of much smaller or much poorly diffracting crystals, than we would have attempted on our older CCD-based system. Indeed, samples that we previously had to discard have often proved perfectly adequate for this new instrument.

Thanks to the second source, a Mo $1\mu\text{S}$, the D8 VENTURE gives us significantly enhanced flexibility: During the initial crystal evaluation we frequently change the wavelength via a simple click in the comprehensive Apex2 software. Thanks to the two generators supplied with the system the switch is accomplished in seconds with no ramping-down or ramping-up of the tubes. The wavelength change also can be set during the data collection set-up. Once this option is chosen, the instrument automatically collects two complete data sets using the different sources.

The shorter wavelength of the Mo-source coupled with the large PHOTON 100 CMOS detector allows data collection in a fraction of the time when compared to other systems or other analytical approaches. Indeed, a full 3D analysis can now be achieved faster than obtaining a ^{13}C NMR, opening up this system to a large variety of users.

Installation of our new D8 VENTURE was very straightforward, particularly as the whole system is air-cooled and water-free, and thanks to its ease-of-use we were quickly collecting real data. The low power consumption of the instrument coupled with the absence of any water cooling makes the system extremely stable and reliable.

Advice and support are points where for me Bruker comes into its own. A quick phone call or email typically results in continuation of the facility with virtually no down-time. In the few cases a visit from the Bruker engineer was required I have experienced fast, efficient and friendly service. Indeed, I do not consider Bruker a company that only provides me with best instrumentation but part of the team that helps me generate those all-important results.



Professor Craig Rice; Huddersfield University, UK

D8 VENTURE

- The reliable, powerful, all air-cooled solution

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Crystallography

Innovation with Integrity