

Very recently we obtained our new D8 QUEST diffractometer. The system is located at the university instrumentation center and has a number of advantages. For us the most important ones are:

- The air-cooled PHOTON 100 detector is very sensitive and has a large active area.
- The sealed-tube X-ray source we purchased enables us to collect data on relatively small, weakly diffracting crystals. Bruker also offers upgrades to stronger sources.
- For non-experts the XPRESSO automation plug-in of APEX2 makes it very convenient to determine high quality structures.

Our new D8 QUEST has replaced a SMART APEX system, which was our workhorse for more than 10 years. When the SMART APEX was introduced there was a paradigm shift with respect to data collection time and quality compared to the 0-D scintillation counter systems we were using previously. Today, our new D8 QUEST again pushes the limits still further and we get



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high quality data from smaller, weakly diffracting samples in shorter space of time. Of course the data collection, processing and structure solution software has also made huge progress since P4 times. In the old days it was a real challenge to investigate twinned, intergrown or modulated samples. With the modern APEX2 software such problems are tackled with ease.

Over the years the number of diffractometers available in Malaysia, Thailand, Singapore, and Vietnam has greatly increased. I want to encourage more researchers, crystallographers but also mineralogists, organic and inorganic chemists, physicist and pharmacists to take advantage of this great analytical method. Today, there are numerous opportunities to exchange experiences not only among scientists in the country but also at a regional and international level. The Bruker users group is an excellent example of such a forum and offers great access to peer users who are happy to provide support, ideas and feedback whenever needed. This has proven to be an invaluable resource.

D8 QUEST

A System That Pushes the Limits

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Crystallography