

## MS01-02 | A TALE OF TWO SOURCES: SERIAL CRYSTALLOGRAPHY AT SYNCHROTRONS AND XFELS

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It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way—in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only. [1]

There are synchrotrons with a continuous wave available to many; XFELs with a pulsed wave available to few. At both sources it is clear that things in general are settled for ever. Developments at each source can, however, complement and advance experiments at the other. The need for serial delivery at XFELs has driven the emergence of serial synchrotron crystallography for example, while synchrotrons can provide lessons in reducing sample consumption and increasing throughput.

I will describe fixed target serial delivery methods developed and implemented at SACLA and DIAMOND, illustrating the gains that can be realised using a multi-source approach, through its application to identification and tracking of low-dose radiation driven effects in metalloproteins and high-throughput ligand binding studies.

[1] Dickens, C. (1859)