

Recent advances in instrumentation and methodology for XFEL structural studies from the SPB/SFX team at the European XFEL

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This presentation will highlight the opportunities which are made possible due to the properties of the newly operational European XFEL [1], in particular focusing on the capabilities of the SPB/SFX Instrument [2] which is the European XFEL's only purpose-designed instrument to support biological structure studies. The suite of instrumentation and techniques supported at SPB/SFX will be presented including beam conditioning and characterization as well as sample delivery technology and the capabilities of its 2D detector, with relevant examples and highlights from the instrument commissioning and the first experiments which have taken place since September 2017.

References

- [1] T. Tschentscher, C. Bressler, J. Grünert, A. Madsen, A. P. Mancuso, M. Meyer, A. Scherz, H. Sinn, and U. Zastra, *Applied Sciences* 7, 592 (2017).
- [2] A. P. Mancuso, N. Reimers, G. Borchers, A. Aquila, and K. Giewekemeyer, Technical Design Report: Scientific Instrument Single Particles, Clusters, and Biomolecules (SPB) (European XFEL, 2013).