

ID01 in light of the ESRF-EBS

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The ID01 beamline was built to combine Bragg diffraction with imaging techniques to produce a strain and mosaicity microscope for materials in their native or *operando* state[1]. Conceived with the upgraded ESRF-EBS source in mind over the past four years it has been optimised to exploit the new source to the maximum, typically delivering coherent focused x-ray beams of 50nm – 1 micron in dimension [1,2].

The ESRF-EBS source will deliver increased coherent flux (x40), providing not only throughput and/or resolution gains but coherent diffractive imaging up to 35keV[3]. We will demonstrate the cutting edge available on ID01 today and our perspective on the opportunities made available by ESRF-EBS source.

References

- [1] S. J. Leake *et al.*, J. Synchrotron Rad. 26, 571-584 (2019) <https://doi.org/10.1107/S160057751900078X>
- [2] S. J. Leake *et al.* Mat. & Design, 119, 470-471 (2017) <https://doi.org/10.1016/j.matdes.2017.01.092>
- [3] S. Maddali *et al.*, arXiv:1903.11815 (2019) <https://arxiv.org/abs/1903.11815>