

STATUS OF THE FINESTBEAMS BEAMLINE AT MAX-IV LABORATORY

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The MAX IV laboratory is a new synchrotron radiation research center located in Lund Sweden. It was inaugurated in June 2016. Currently seven beamlines have been installed at the MAX IV facility.

The FinEstBeaMS is a materials science beamline located at the 1.5 GeV storage ring of the MAX IV facility. The beamline has two branch lines and three permanent end stations. The gas-phase end station has been mounted at the beamline, the photoluminescence end station is in installation and the solid state end station will be commissioned by the end of 2017. The FinEstBeaMS will receive first light in autumn 2017.

The beamline provides photons in the energy range of 4.3–1000 eV with high flux 8×10^{13} ph/s – 1×10^{11} ph/s and resolving power up to 10000. Dedicated end stations cover wide range of sciences from processes occurring in the upper part of atmosphere, fragmentation pathways of bio- and organic molecules to formation of nanoparticle. It will be possible to characterize luminescent materials, investigate nanomolecular layers on alloy surfaces and electrochemical double layer capacitors *in situ*.

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[1] The parts of M. Huttula, E. Kukkk, and J. Hölsä of the SR-MAXIV project, FIRI2010.

[2] FinEstBeaMS phase II – FIRI2013, University of Turku, University of Oulu and Tampere University of Technology.

[3] MAX IV Infrastructure – FinEstBeaMS Solid State Materials Research, FIRI2014, University of Turku, University of Oulu and Tampere University of Technology.

[4] E. Nõmmiste project "Estonian beamline to MAX-IV synchrotron", University of Tartu.