

## Swiss Light Source - Research highlights

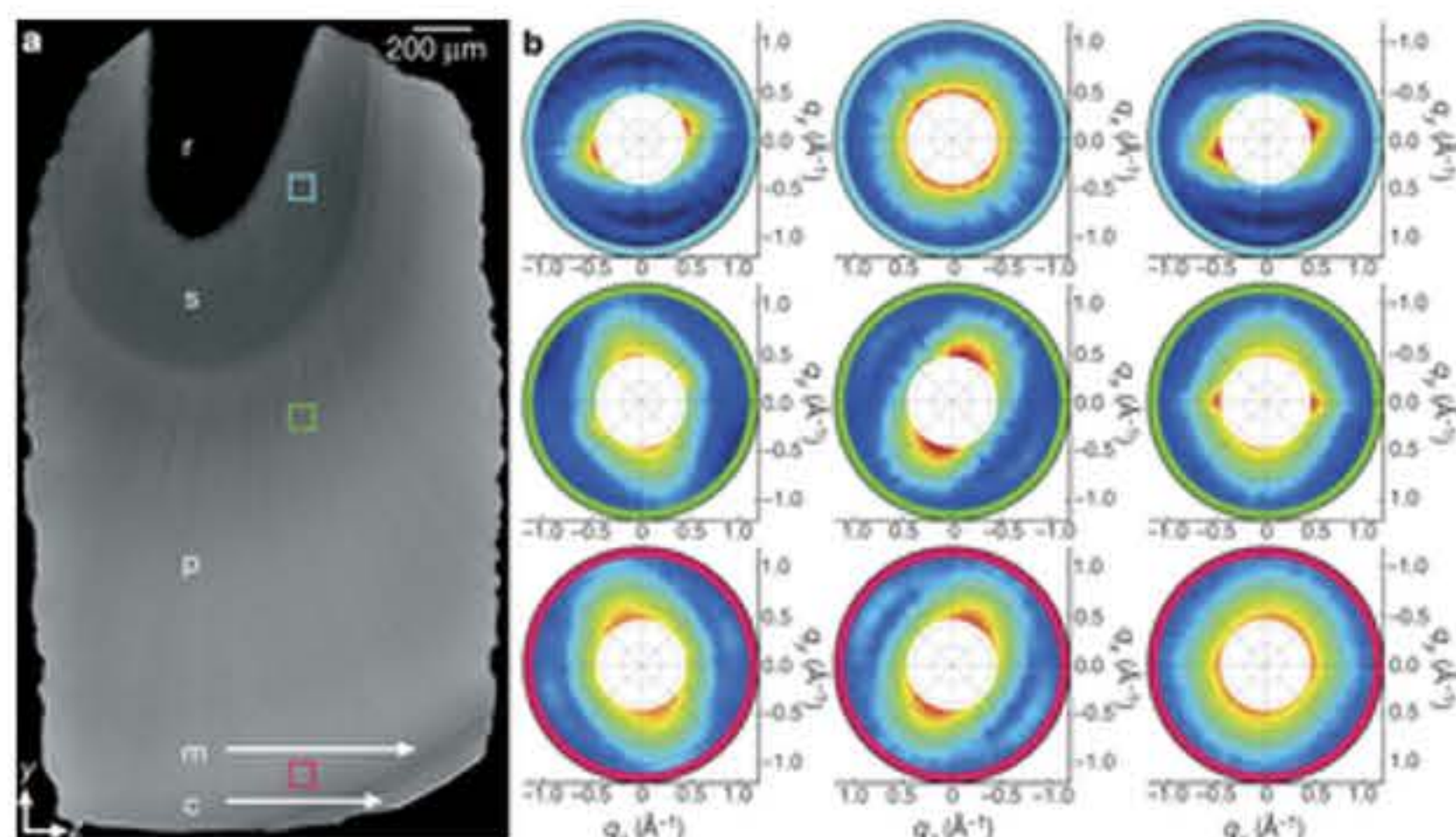
### Nanostructure surveys of macroscopic specimens by small-angle scattering tensor tomography



Marianne Liebi, Marios Georgiadis, Andreas Menzel, Philipp Schneider, Joachim Kohlbrecher+ et al., *Nature* 527, 349–352, published 19 November 2015 (doi:10.1038/nature16056)

An imaging method that combines small-angle X-ray scattering with tensor tomography to probe nanoscale structures in macroscopic samples is introduced and demonstrated by measuring the main orientation and the degree of orientation of nanoscale mineralized collagen fibrils in a human trabecula bone sample.

### Six-dimensional real and reciprocal space small-angle X-ray scattering tomography

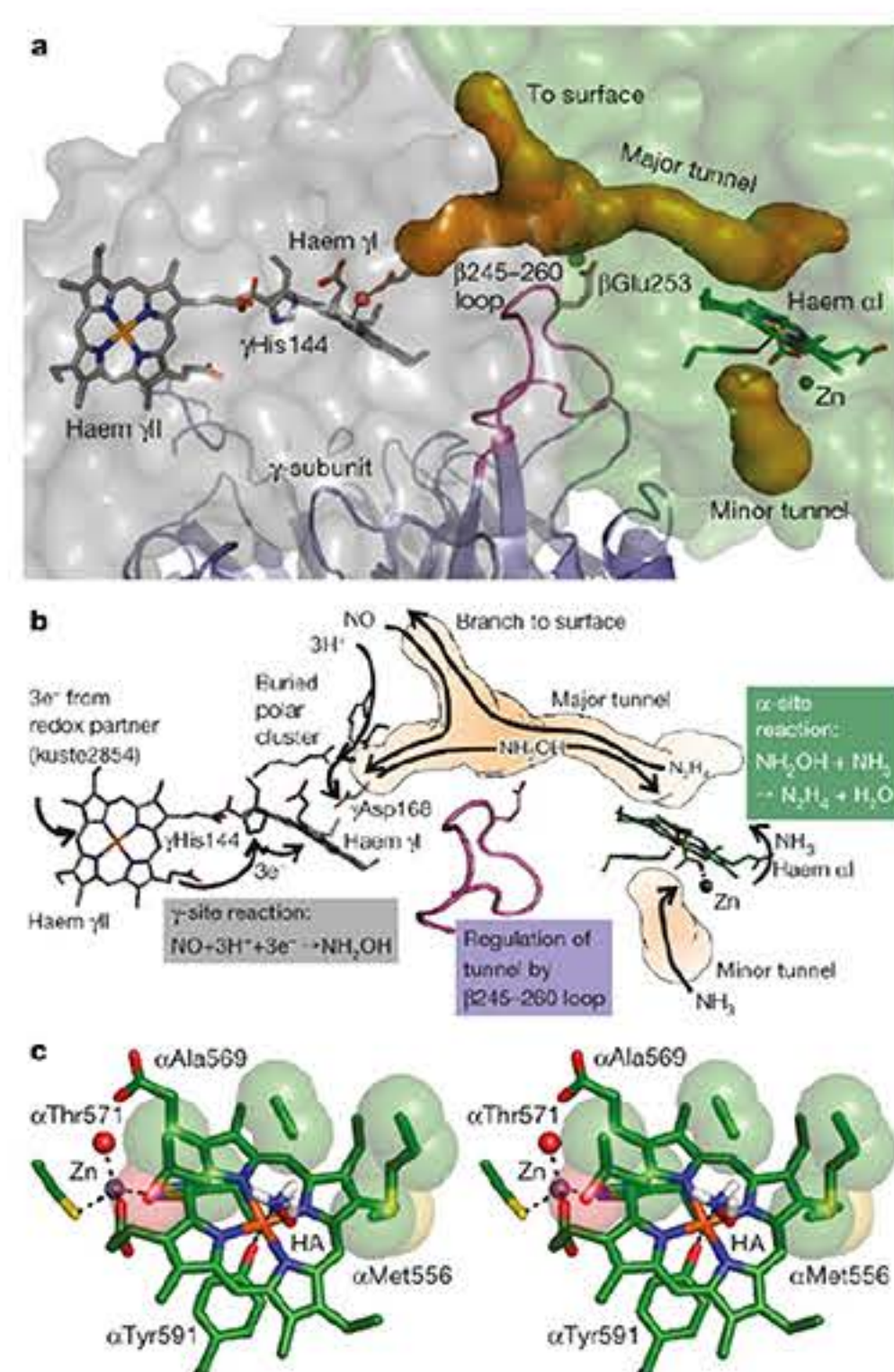


Florian Schaff, Martin Bech, Paul Zaslansky, Christoph Jud, Marianne Liebi+ et al., *Nature* 527, 353–356, published 19 November 2015 (doi:10.1038/nature16060)

A small-angle X-ray scattering computed tomography method that reduces the amount of data that needs to be collected and analysed to reconstruct the three-dimensional scattering distribution in reciprocal space of a three-dimensional sample in real space is

demonstrated by measuring the orientation of collagen fibres within a human tooth.

### The inner workings of the hydrazine synthase multiprotein complex



Andreas Dietl, Christina Ferousi, Wouter J. Maalcke, Andreas Menzel, Simon de Vries+ et al., *Nature* 527, 394–397, published 19 November 2015 (doi:10.1038/nature15517)

Hydrazine is an intermediate in the process of anaerobic ammonium oxidation which has a major role in the Earth's nitrogen cycle; the crystal structure of a hydrazine synthase enzyme provides insights into the mechanism of hydrazine synthesis.