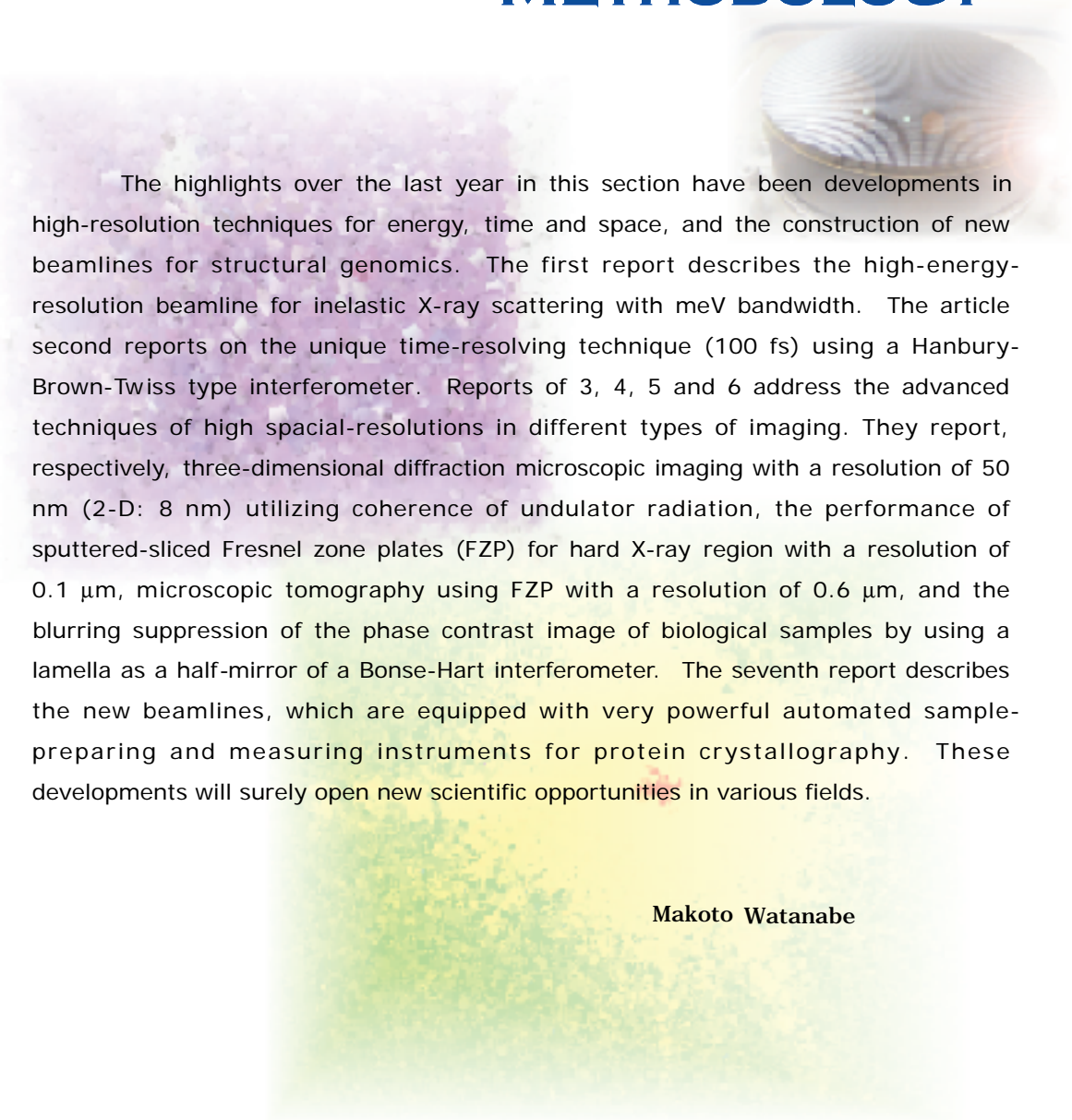


INSTRUMENTATION & METHODOLOGY



The highlights over the last year in this section have been developments in high-resolution techniques for energy, time and space, and the construction of new beamlines for structural genomics. The first report describes the high-energy-resolution beamline for inelastic X-ray scattering with meV bandwidth. The article second reports on the unique time-resolving technique (100 fs) using a Hanbury-Brown-Twiss type interferometer. Reports of 3, 4, 5 and 6 address the advanced techniques of high spatial-resolutions in different types of imaging. They report, respectively, three-dimensional diffraction microscopic imaging with a resolution of 50 nm (2-D: 8 nm) utilizing coherence of undulator radiation, the performance of sputtered-sliced Fresnel zone plates (FZP) for hard X-ray region with a resolution of 0.1 μm , microscopic tomography using FZP with a resolution of 0.6 μm , and the blurring suppression of the phase contrast image of biological samples by using a lamella as a half-mirror of a Bonse-Hart interferometer. The seventh report describes the new beamlines, which are equipped with very powerful automated sample-preparing and measuring instruments for protein crystallography. These developments will surely open new scientific opportunities in various fields.

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