ナノメートル形状計測およびトレーサビリティの確立

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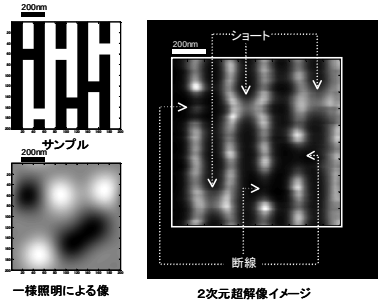
革新的な機械を生産の基礎であるナノメートル形状計測の新しい技術を開発すると同時に，測定の不確かさの推定手法およびトレーサビリティの確立を行う．

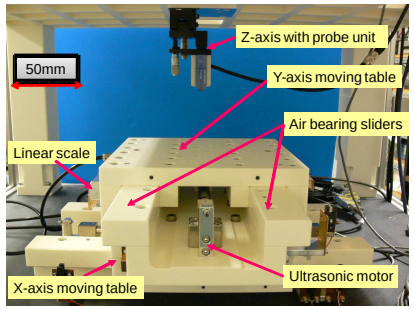
超解像による半導体欠陥検査



高橋哲

György Striker Junior Paper Award: R. Kudo et al., Fundamental Verification for 2-Dimensional Super-Resolution Optical Inspection for Semiconductor Defects by Using Standing Wave Illumination Shift, IMEKO World Congress 2009.

高精度CMMの開発

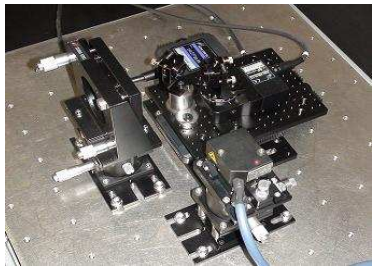


高橋哲

松本弘一

JSPE Young Researcher Award: S. Liu et al., Profile measurement of a wide-area resist surface using a multi-ball cantilever system, Precision Eng. 33, 2009, 50-55.

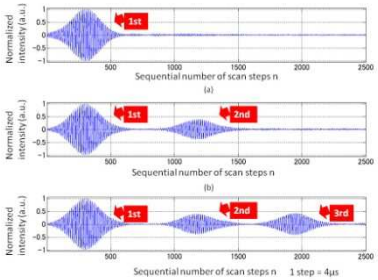
大型非球面形状のナノメートル計測



高橋哲

M. Xiao et al., Profile Measurement of Large Aspheric Optical Surface by Scanning Deflectometry with Rotatable Optical Devices - Error Analysis and Pre-experiment-, Key Eng. Materials 447-448 (2010) pp 604-608

光周波数コムレーザのパルス干渉による絶対距離測定



松本弘一

Outstanding Paper Award, 10th ISMQC 2010: D. Wei et al., Advanced Absolute Length Metrology Based On Pulse Trains' Constructive Interference - Measurements of Meter Order with an Accuracy of Nano Order -, C1-001-1-4
D. Wei et al., Experimental observation of pulse trains' destructive interference with a femtosecond optical frequency-comb-based interferometer, Optics Letters 34 (18), 2009, 2775-2777