

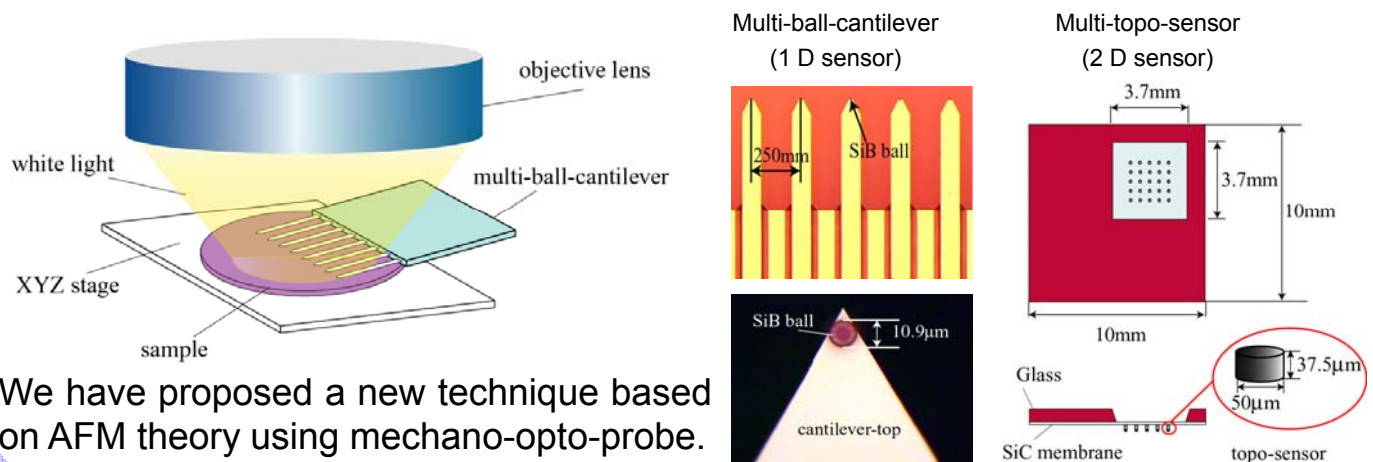
# Profile Measurement for Wide-Area Soft Thin Film Surface Using Mechano-opto-probe

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## OBJECTIVES

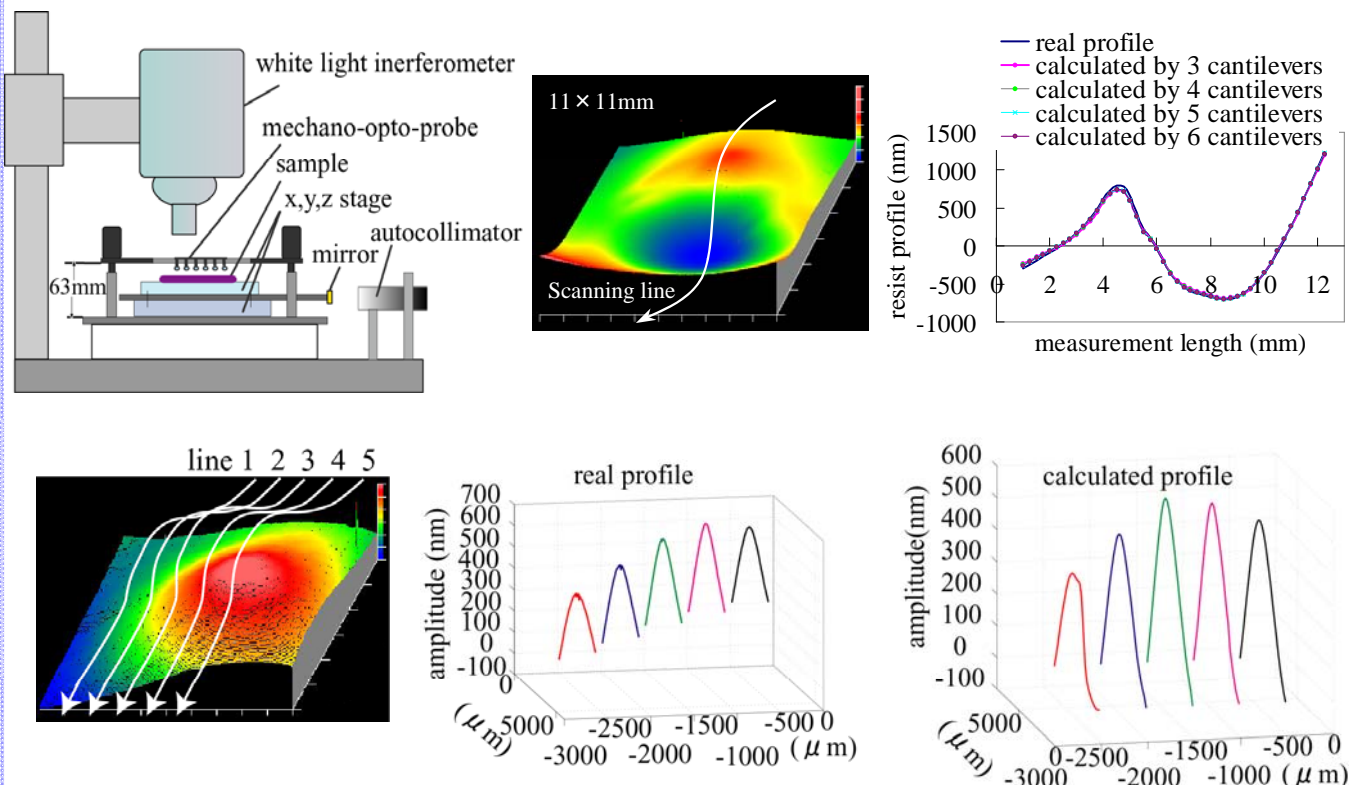
Development of a new technique, which can measure the 3D surface of soft thin film like photoresist with nano resolution in wide area ( $\varnothing 300\text{mm}$ ).

## Profile measurement technique using mechano-opto-probe



We have proposed a new technique based on AFM theory using mechano-opto-probe.

## Development of mechano-opto-probe system



The scanning results with 29.7nm standard deviation confirmed the feasibility of the proposed method in 11.25 mm length resist surface.

Ref.) S. Liu, S. Nagasawa, S. Takahashi and K. Takamasu "Profile Measurement of Resist Surface Using Multi-Ball-Cantilever AFM", Proc. SPIE (ISOT 2005), Vol.6049, 2005. (Sapporo) 2005-12-5.