

メカノオプトプローブを利用した広範囲薄膜形状の測定

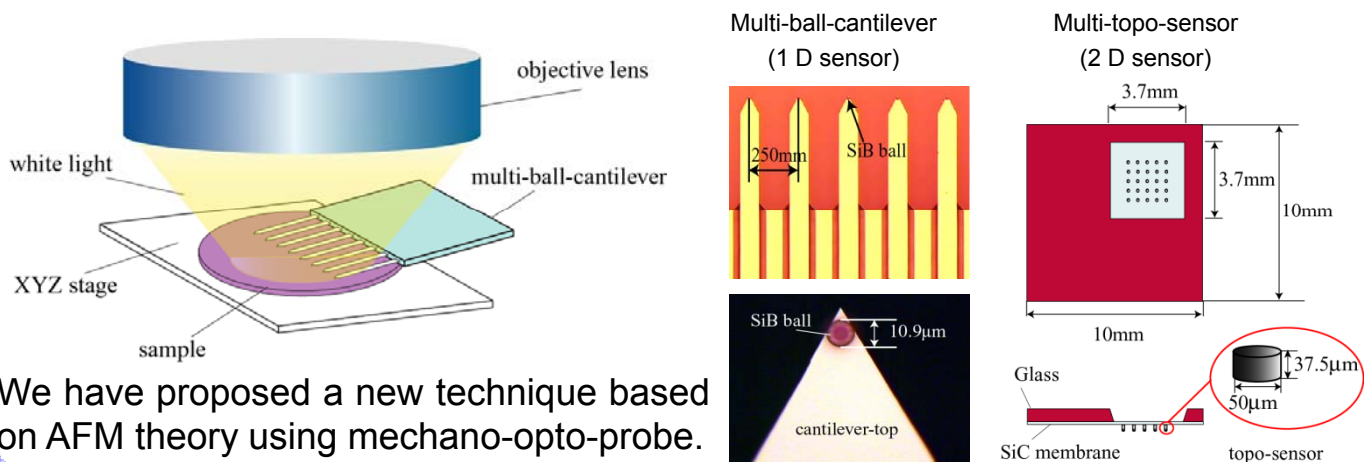
Profile Measurement for Wide-Area Soft Thin Film Surface Using Mechano-opto-probe

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OBJECTIVES

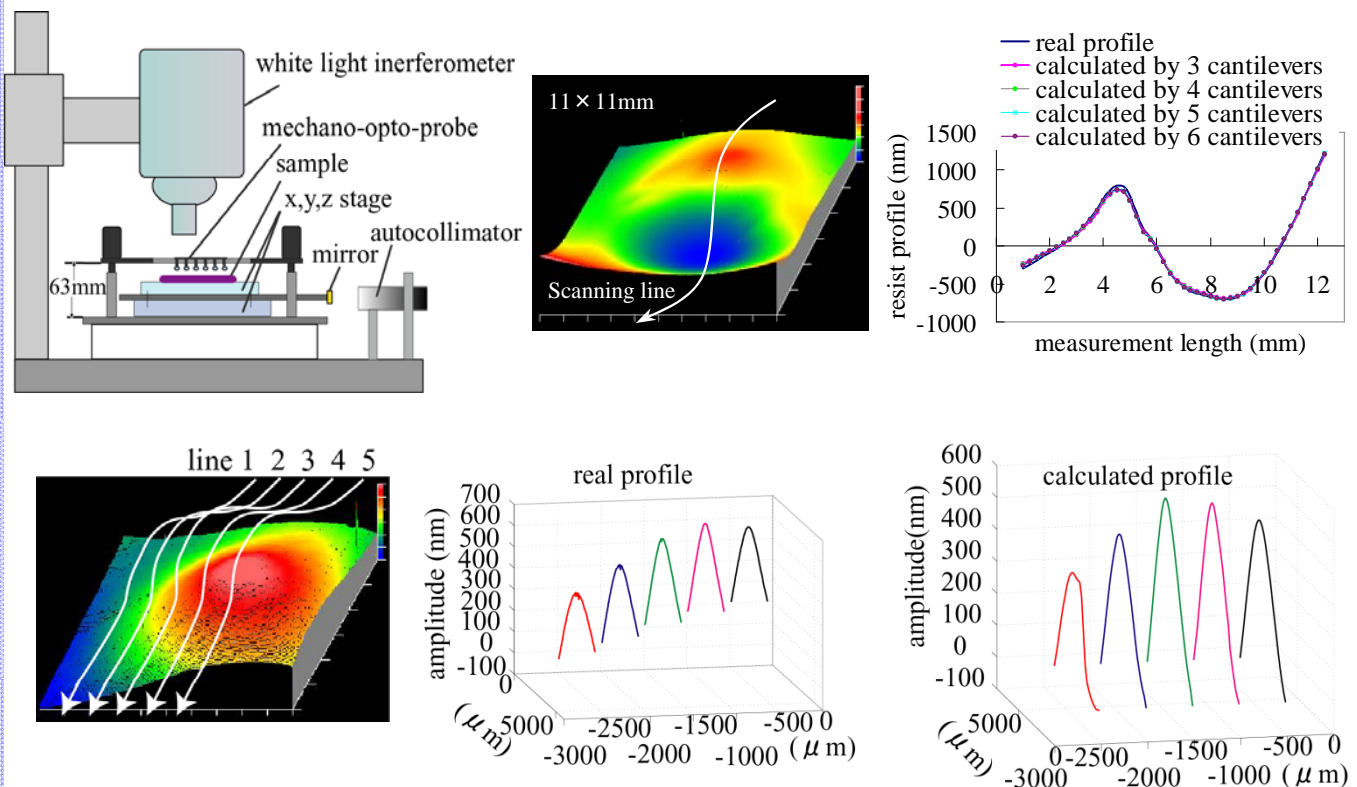
ナノメートル分解能で広い範囲(例えば直径300mm)の薄膜(レジスト表面)の三次元形状を測定するために、メカノオプトプローブ(機械的接触と光学的測定を組み合わせたプローブ)を利用した新しい計測手法を開発する。

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.