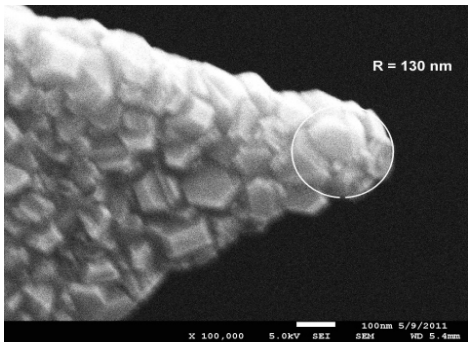
NANOSENSORS™
The World Leader in Scanning Probes

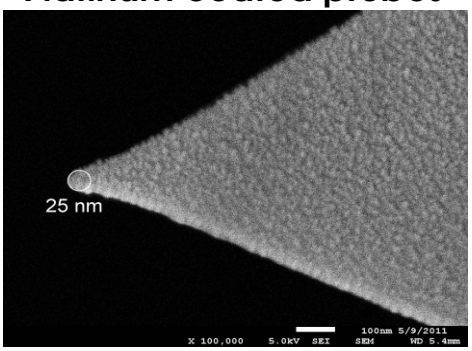
Platinum silicide probes: highly conductive AFM probes with small radii and high wear resistance

Conductive diamond



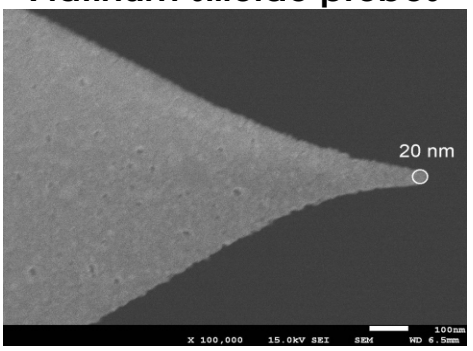
Conductive diamond probes. Advantages: hard, long-lasting coating. Disadvantages: large radius, low conductivity

Platinum coated probes



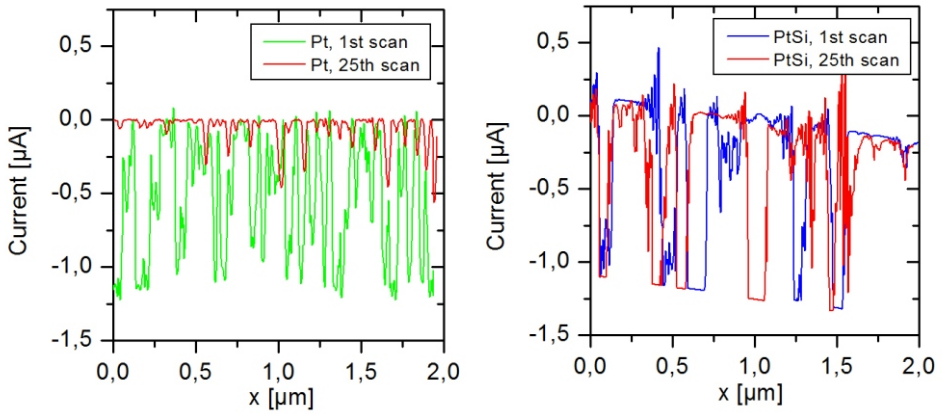
Platinum(Iridium) coated probes. Advantages: relatively small radius, excellent conductivity. Disadvantages: fast wear-out

Platinum silicide probes



Platinum silicide probes. Advantages: small radius, excellent conductivity, good wear-out behavior

Extremely durable: C-AFM comparison of PtSi and Pt probes



Cross sections of current images of (a) a commercial Pt probe (Pt, left image) and (b) a PtSi probe (PtSi, right image). TUNA mode, DI Icon, sample bias -0.25V, force 1μN, total tip travel distance 13mm. For each tip a cross section out of the first and the last scan is shown.

Silicide tip advantages

- Formation of a hard and massive conductive tip apex instead of only a few ten nanometer deposited metal coating at the tip apex
- Smaller radius than PtIr coated probes. About 5 to 6 times smaller than diamond coated tips
- Metal (PtIr) like conductivity. About 10 times better conductivity than conductive diamond
- Dramatically reduced wear rates compared to silicon and PtIr coated tips

Product list

	Type	Application	Force Constant [N/m] (nominal)	Res. Frequency [kHz] (nominal)	Coating (backside)
Non-Contact	PtSi-NCH	C-AFM, TUNA	42	330	PtSi (PtSi reflective)
	PtSi-FM	C-AFM, TUNA, SCM EFM, KPFM,	2.8	75	PtSi (PtSi reflective)
Contact	PtSi-CONT	C-AFM, TUNA, SCM	0.2	13	PtSi (PtSi reflective)

Available soon

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