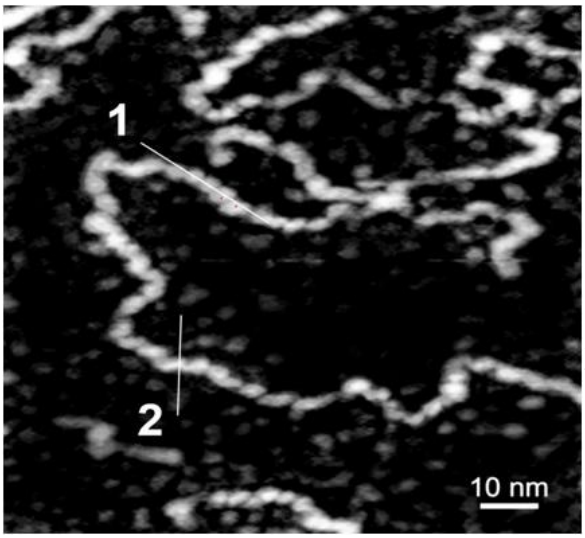
Product Description

Super Sharp Diamond-Like Carbon (DLC) tips with typical curvature radius 1nm grown on the probe series NSG01, resonance frequency 150 kHz, force constant 5.5 N/m.

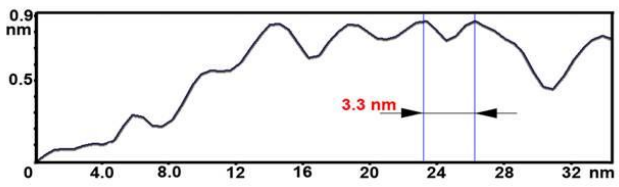
Super sharp diamond-like carbon (DLC) tips* with typical curvature radius 1nm are extremely useful for obtaining high resolution imaging on objects with sizes of several nanometers. DLC tips have very long lifetime due to the high material durability.

DLC tips can be grown on any standard probe series.

To guarantee 20nm working length of DLC tips TEM is used. 10% from total number of probes in the batch are selected for testing. At least 80% of those probes should have the only DLC tip which lengh is exceeded by 20nm others DLC tips on the same probe. In this case the whole batch is considered as passed the TEM test. On the surfaces with roughness bigger than 20nm double images are possible.



Topography image of poly(dG) - poly(dG) - poly(dC) triplex DNA obtained by NSG01_DLC tip.



The graph shows a cross-section of the image along the line 1. The average distance between adjacent peaks on cross-sections is 3.3 nm. Tapping mode in air.

Image courtesy of Dr. D. Klinov (Shemyakin-Ovchinnikov IBC, RAS,

Russia).

General Features

Material	Single Crystal Silicon
DLC material	Diamond-Like Carbon
DLC working length	< 20 nm
Chip size	3.6x1.6x0.4mm
Chip size	3.6x1.6x0.4mm
Reflective side coating	Au
Tip coating	No
Tip curvature radius	1-3nm

Special Features

Cantilever series	Cantilever length, L±5μm	Cantilever width, W±3μm	Cantilever thickness, T±0.5μm	Resonant frequency, kHz			Force constant, N/m		
				min	typical	max	min	typical	max
NSG01_DLC	130	35	2.0	115	150	190	2.5	5.5	10