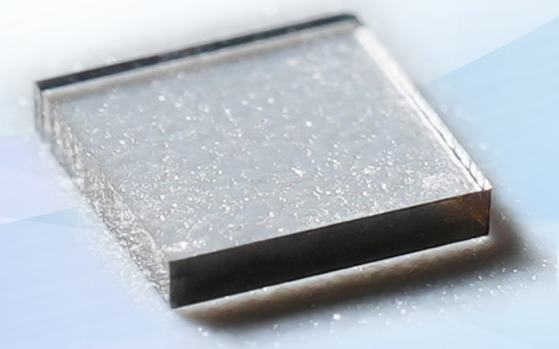
VIQIUM

Shallow NV Diamond

Nanoscale depth control for ultra-high-resolution quantum sensing.



ViQium™ Shallow NV Diamonds offer high spatial resolution. Widely applied in wide-field current imaging, wide-field magnetic imaging, and ultrafast nonlinear photonic sensing.

Product Parameters

Quantum Performance	Values
Center Type	Shallow NV
NV Density	~ 1 - 2 ppm
T_2	~ 2 - 5 μs
T_2^*	~ 100 - 300 ns

Notes: 1. NV depth: 10–50 nm.
2. NV density measured using ODMR system.
3. T_2 measured by Spin Echo.
4. T_2^* measured by FID.

Thermal Properties	Values
Thermal Conductivity	> 2000 $Wm^{-1}K^{-1}$
CTE (300 K)	1.0 ± 0.1 $ppm \cdot K^{-1}$
CTE (1000 K)	4.4 ± 0.1 $ppm \cdot K^{-1}$

Geometric Properties	Values
Standard Size	3 mm × 3 mm & 2 mm ×2 mm
Standard Thickness	0.5 mm
Polished Surface Roughness	Ra < 5 nm

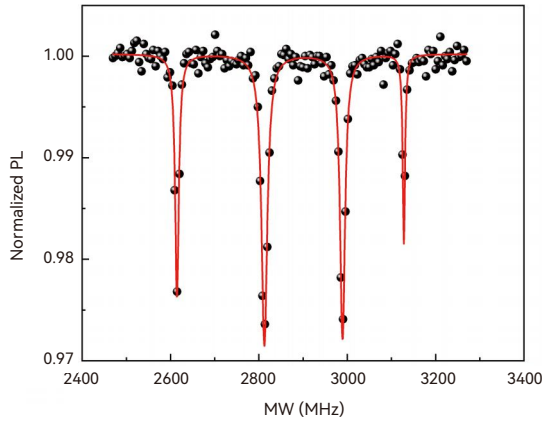


Fig 1. Continuous-Wave ODMR Spectrum of Shallow NV Diamond

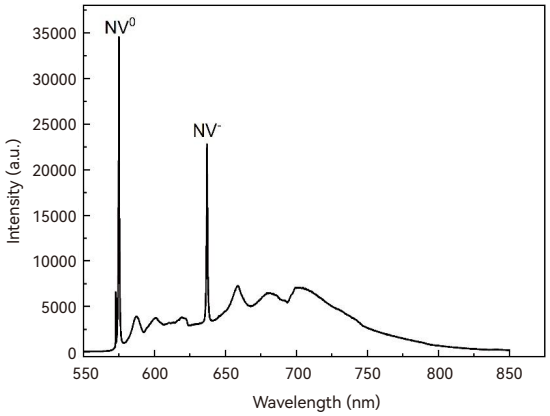


Fig 2. Fluorescence Spectrum of Shallow NV Diamond

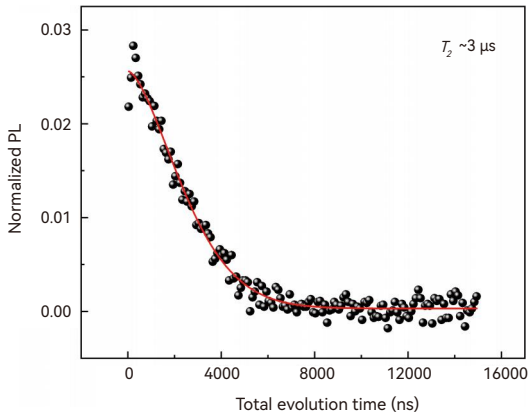


Fig 3. Spin Coherence Properties of Shallow NV Diamond: T_2

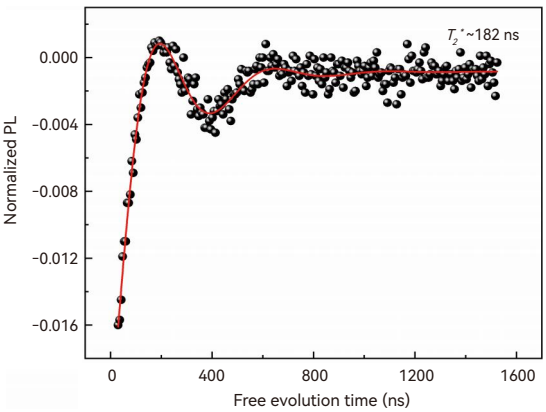


Fig 4. Spin Coherence Properties of Shallow NV Diamond: T_2^*

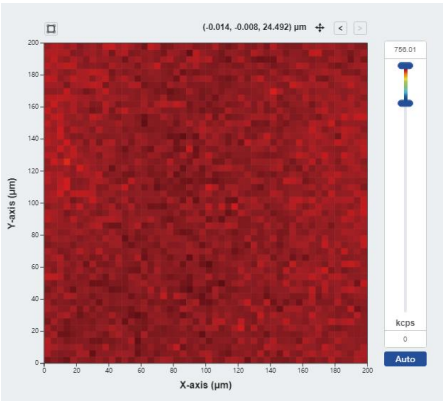


Fig 5. Confocal Fluorescence Image of Shallow NV Diamond

ViQium™ Shallow NV Diamond

No.	Product Code	Dimensions (mm)	Crystal Orientation
1	SLNV100F12	2 × 2 × 0.5	<100>
2	SLNV100F13	3 × 3 × 0.5	<100>
3	SLNV111F12	2 × 2 × 0.5	<111>
4	SLNV111F13	3 × 3 × 0.5	<111>

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