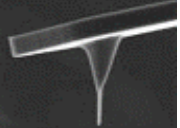


Magnetic Properties of Team Nanotec's Co-alloy MFM Coatings

Mar 13, 2015



Co-alloy MFM probes

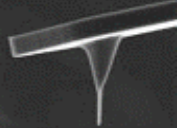
Magnetic Properties¹⁾

Coating	ML 2	ML 3	ML 1
Coercivity $H_{c }$ in-plane	950 Oe	950 Oe	950 Oe
Coercivity $H_{c\perp}$ perpendicular	950 Oe	950 Oe	950 Oe
Remanence magnetization $M_{R }$ in-plane	540 emu/cm ³	540 emu/cm ³	540 emu/cm ³
Remanence magnetization $M_{R\perp}$ perpendicular	160 emu/cm ³	160 emu/cm ³	160 emu/cm ³
Magnetic tip moment ²⁾	$\approx 7.5 \times 10^{-14}$ emu	$\times \frac{3}{4}$	$\times \frac{1}{2}$

1) We characterize our coatings with a flat reference sample that we coat together with the probes.

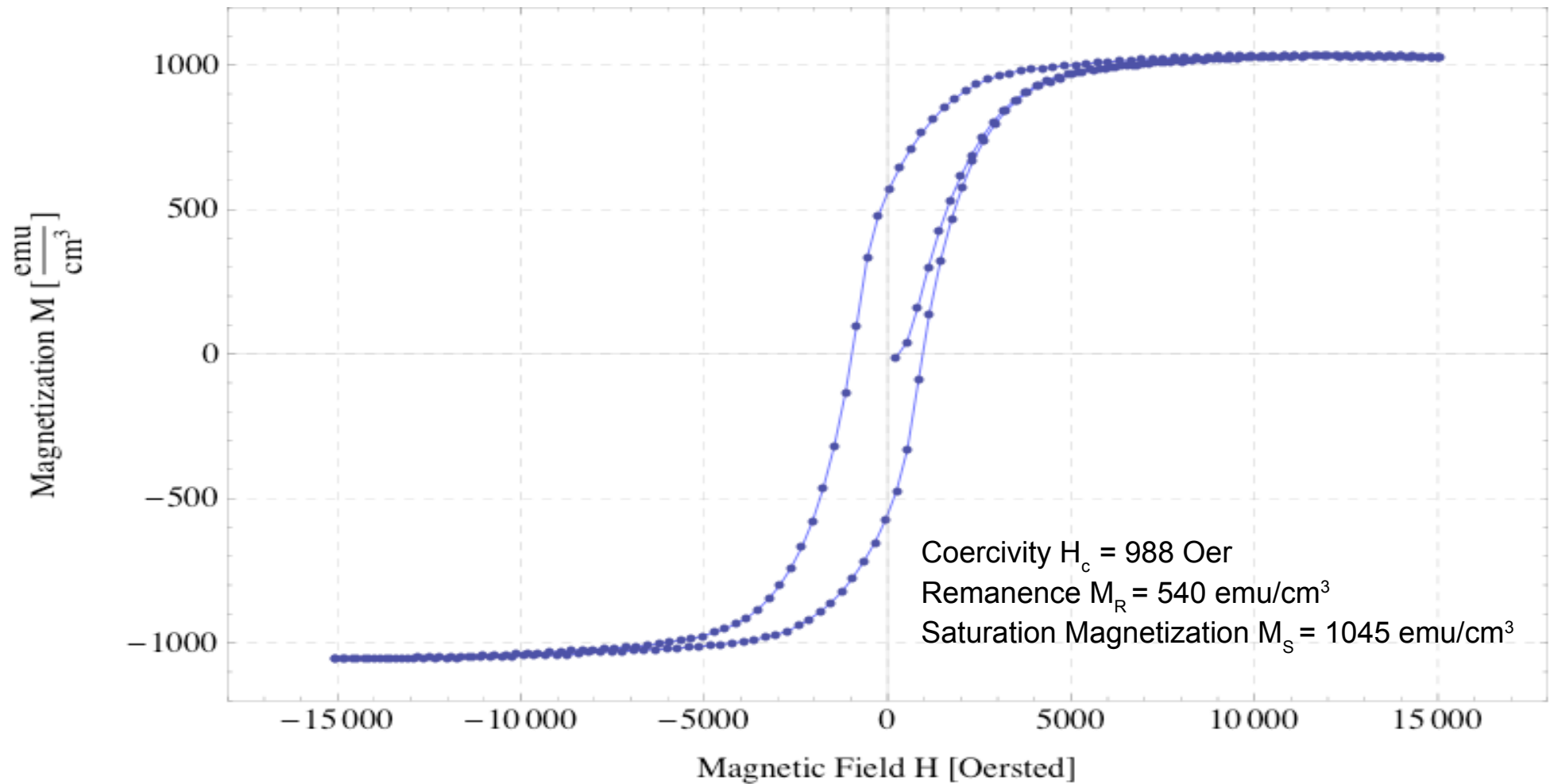
2) Calculated value, based on an assumed effective magnetic tip volume at the tip apex.

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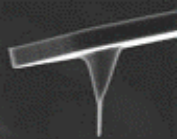


in-plane hystereses curve / ML2 coating

magnetic sample volume $V = 8 \times 10^{-6} \text{ cm}^3$

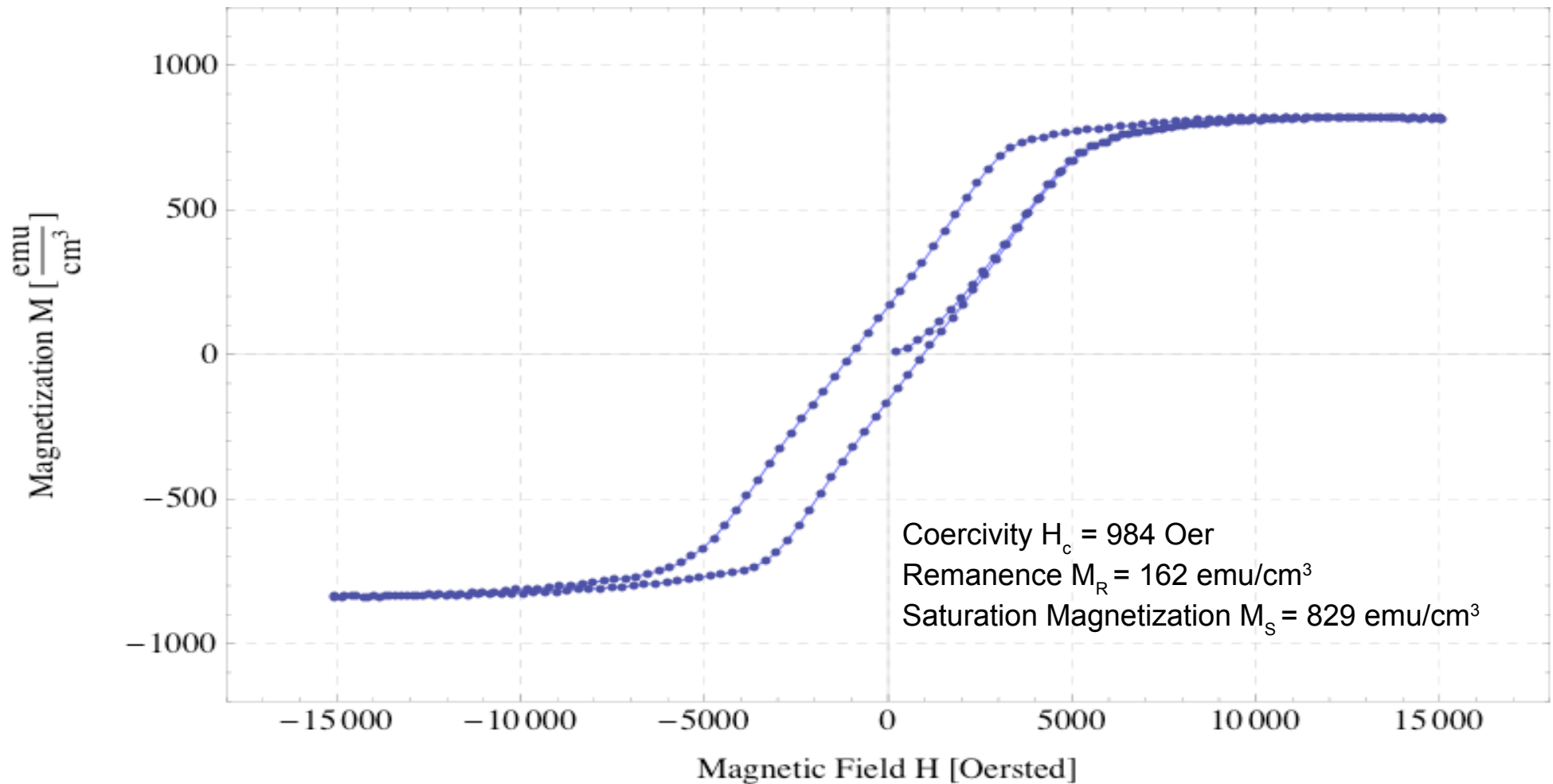


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perpendicular hystereses curve / ML2 coating

magnetic sample volume $V = 8 \times 10^{-6} \text{ cm}^3$



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