Comparison with the best DC NV ensemble magnetometers

	GSLAC [1]	Microwave DC [2]	LFDM
η (nT/$\sqrt{\text{Hz}}$)	0.3*	0.015	116
V (μm^3)	??	$5.2 \cdot 10^6$	$3.3 \cdot 10^3$
η_v (nTμm$^{3/2}$Hz$^{-1/2}$)	??	34	6700

[1] Zheng, H.[...] Budker, D. (2020). Physical Review Applied, 13(4), 044023.
[2] Barry, J. F. [...] Walsworth, R. L (2016). PNAS, 113(49), 14133-14138.

LFDM advantages

- Microwave free
- Works at low magnetic field
- Insensitive to inhomogeneous/slow noises (strain gradient, T° fluct., ...)
- Magnetic orientation insensitive: diamond powder, polycristalline

Room for improvement

- Material optimization
- Better light collection (NA=0.65, non gaussian laser beam)
- My knowledge of metrology