Electronic Supplementary Information (ESI)

Polymer-Buried van der Waals Magnets for Promising Wearable Room-Temperature Spintronics

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List of Supplementary Materials

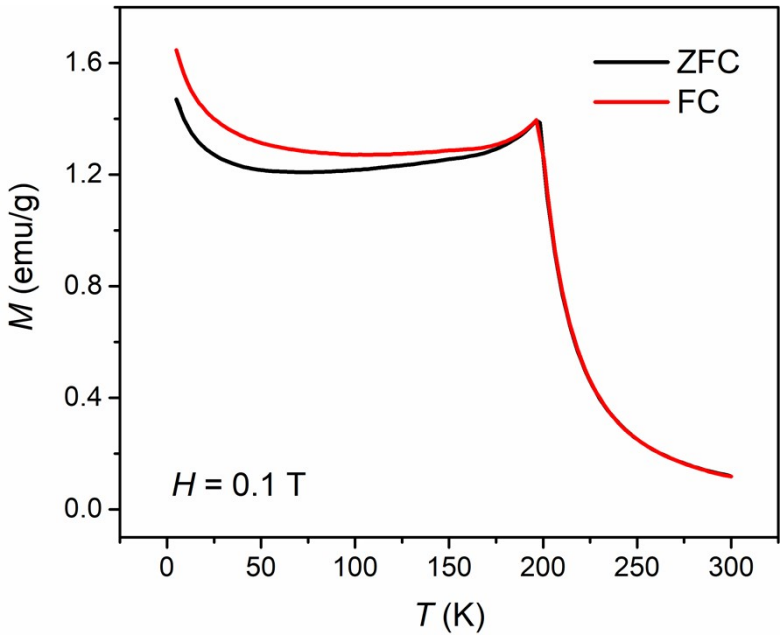

Fig. S1 ZFC-FC curves of the grown FGT single crystal magnetized along an in-plane field of 0.1 Tesla

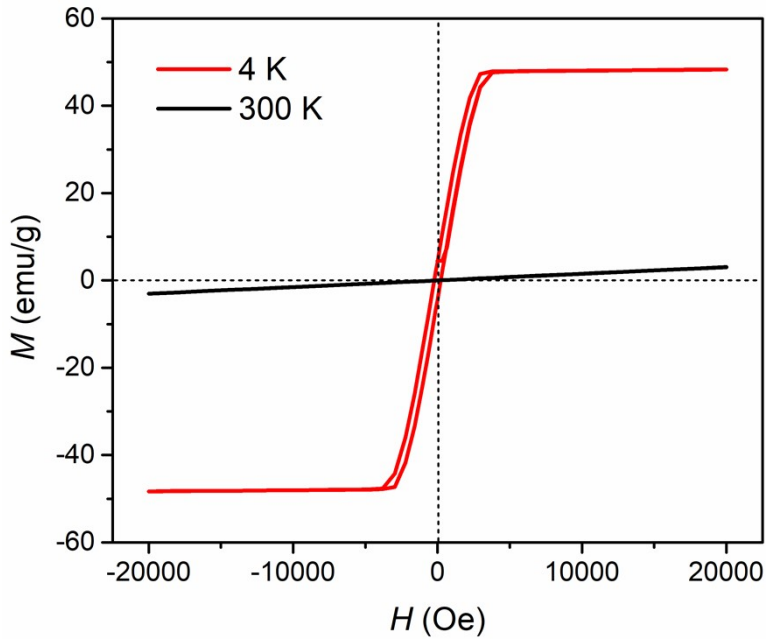

Fig. S2 Magnetization curves of the FGT single crystal at 4 K and 300 K measured in out-of-plane direction

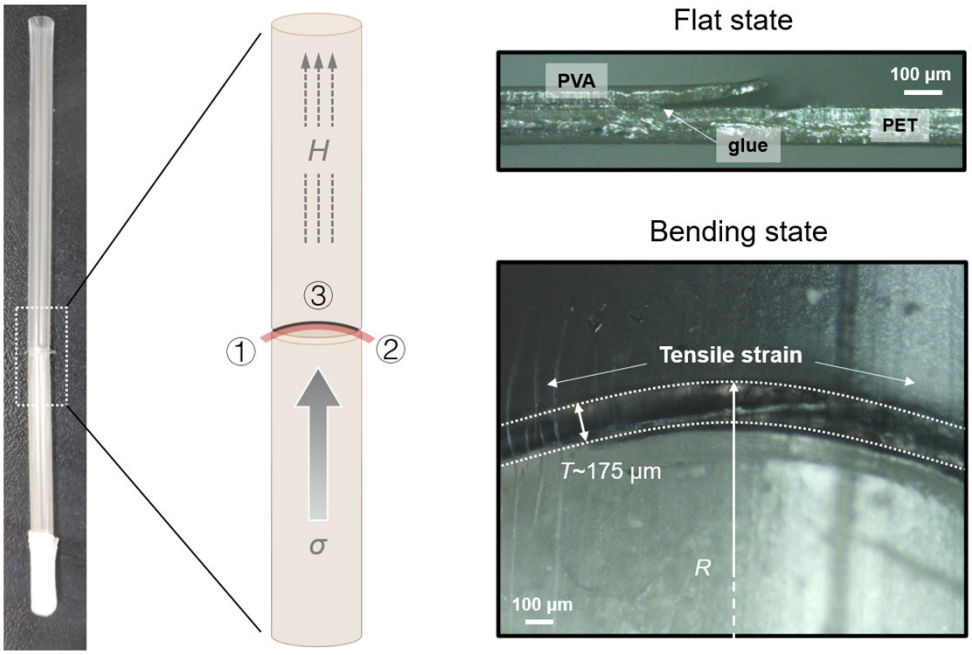

Fig. S3 Demonstration of three-point fixture for straining the FET nanoflakes

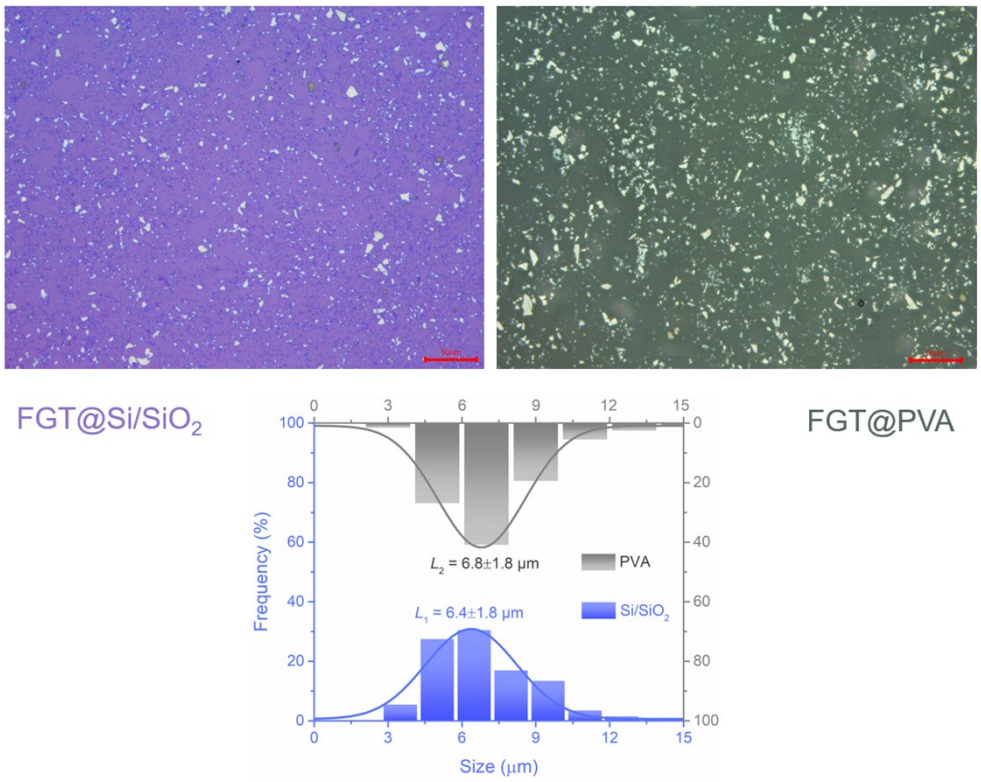

Fig. S4 Microscopic photographs and lateral size statistics of FGT nanoflakes dispersed on Si/SiO_2 and flexible PVA substrates

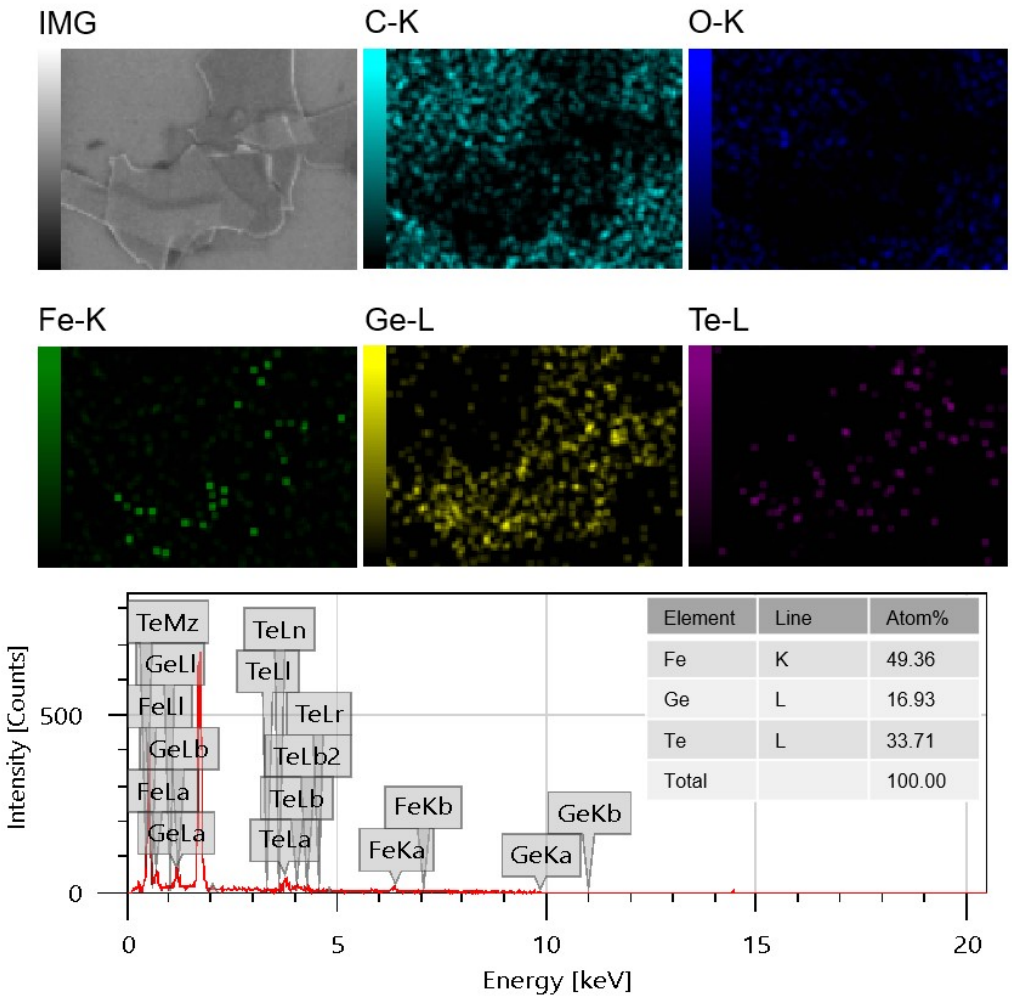

Fig. S5 The elemental distribution and EDS diagram of the FGT nanoflakes supported on PVA substrates

Table S1. List of the fitted parameters

	T_C	β	R-square
Thin nanoflakes	163.0 ± 0.3 K	0.121 ± 0.002	0.99005
Thick nanoflakes	210.8 ± 1.5 K	0.338 ± 0.024	0.99762

ε	T_C	β	R-square
2.2%	358.4 ± 0.8 K	0.248 ± 0.009	0.99717
3.4%	406.9 ± 1.3 K	0.170 ± 0.007	0.99032
4.7%	451.9 ± 5.4 K	0.123 ± 0.006	0.99674

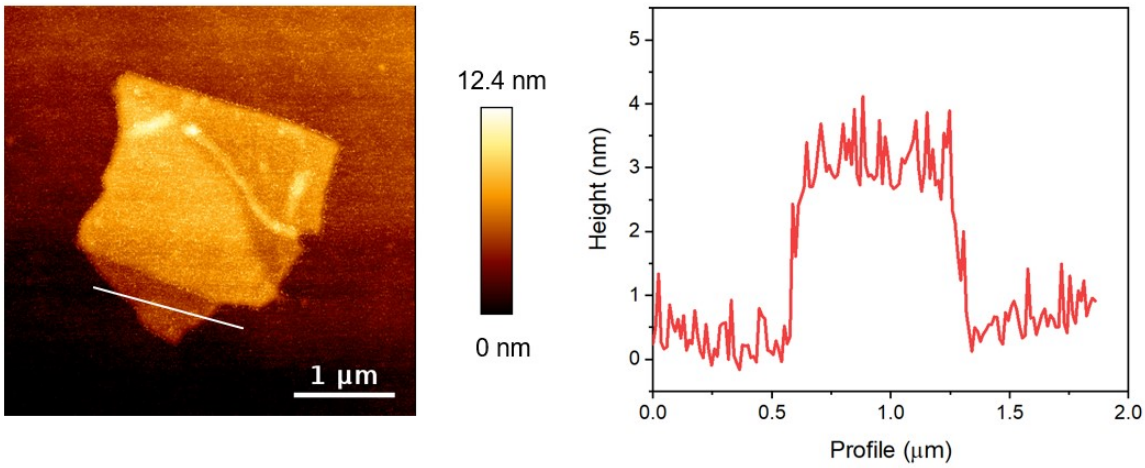

Fig. S6 AFM height image of an ultra-thin nanoflake and thickness profile along white solid line

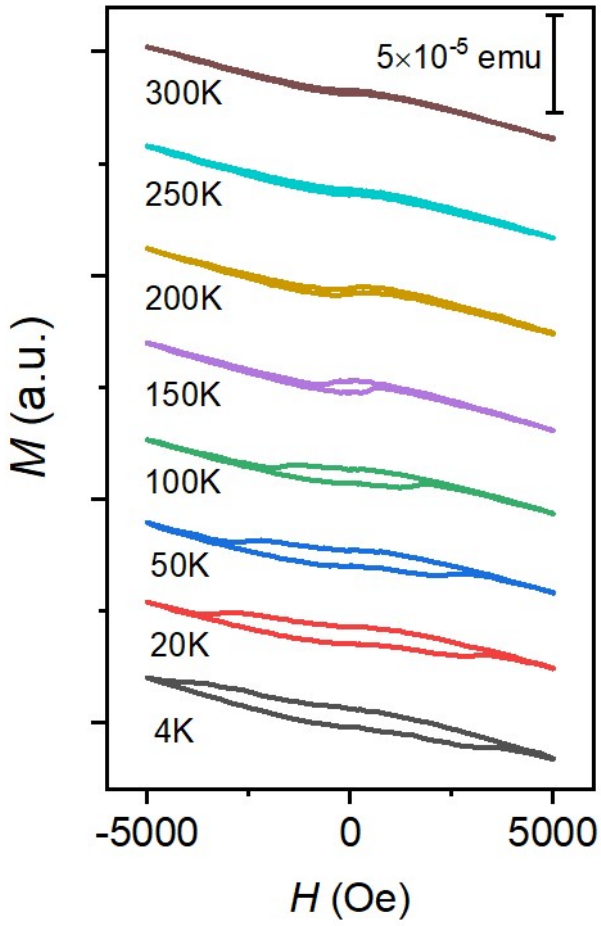

Fig. S7 Temperature-dependent magnetization curves without subtracting the diamagnetic contribution of FGT nanoflakes on PVA substrates

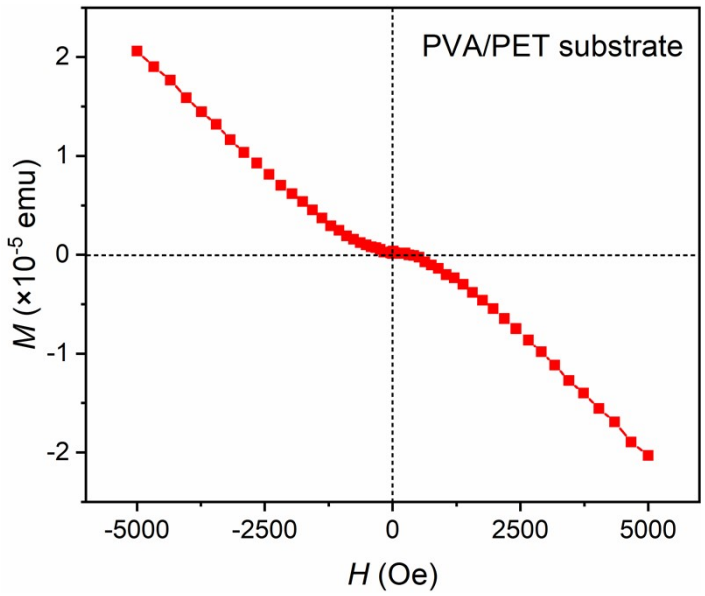

Fig. S8 Magnetization curve of PVA/PET substrate without loading FGT at 300 K

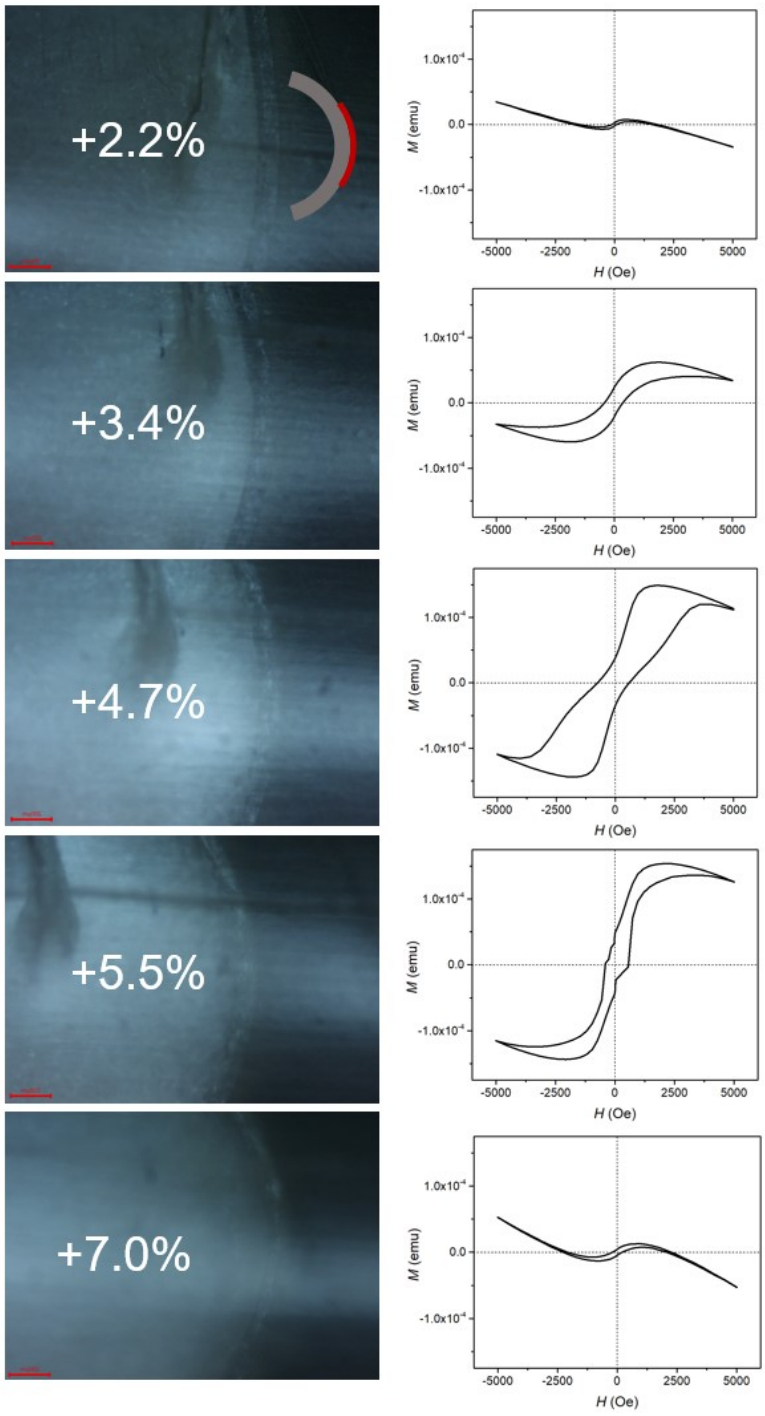

Fig. S9 Comparison of room-temperature magnetization curves under different strain levels. The left panels are the corresponding microscopic photographs

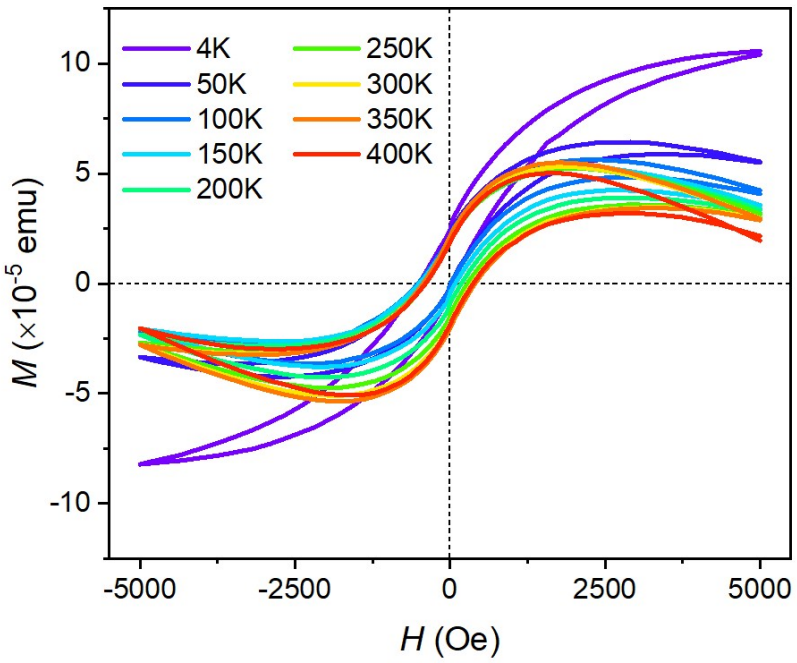

Fig. S10 Vertically shifted magnetization curves collected from different temperatures for initial strained FGT nanoflakes

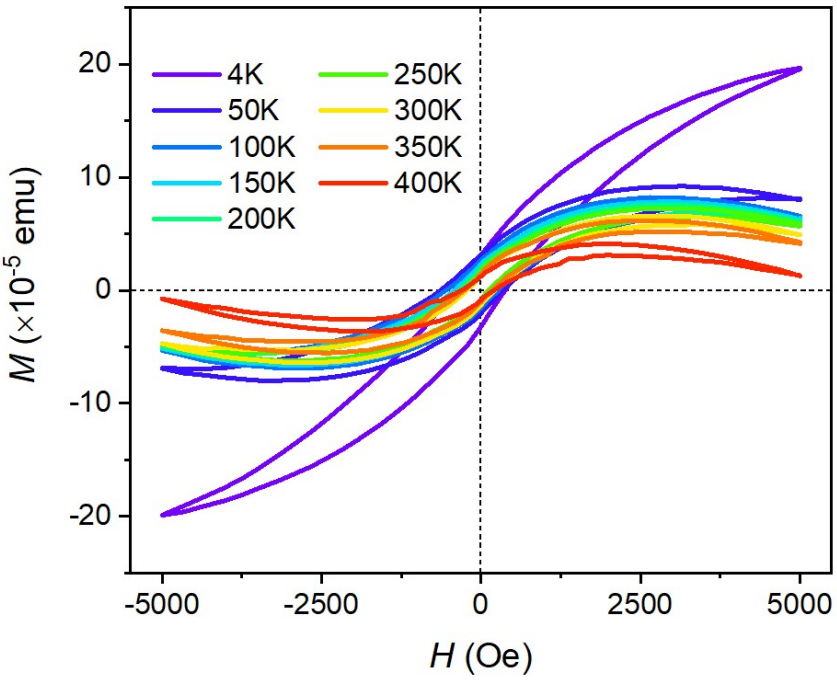

Fig. S11 Temperature-dependent magnetization curves of the strained FGT nanoflakes after field-cooling training process

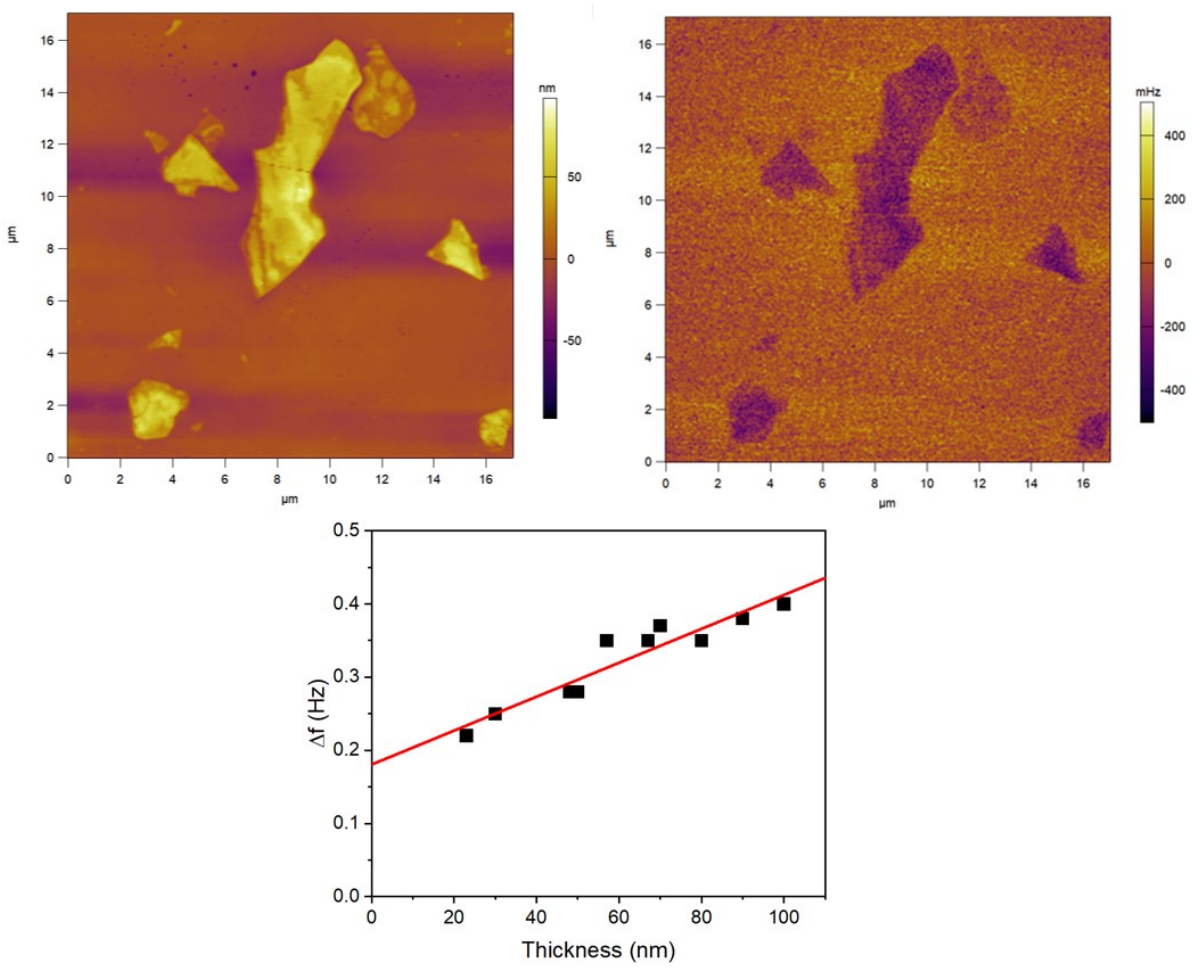

Fig. S12 Δf value as function of thickness extracted from AFM and MFM data. A derivation of intercept possibly stems from inaccurate thickness measurement because the contribution of buried layer is hard to assess.