

# Magnetic properties of 1-nm thick $\text{Fe}_3\text{O}_4(111)$ films on $\text{Pt}(111)$ and $\text{Ru}(0001)$

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Iron oxide films grown on metal single crystals may exhibit magnetic properties different from the corresponding bulk oxides [1]. The properties of thin films are often rendered by their thickness and the structure and properties of the substrate. 1-nm thick magnetite islands grown on  $\text{Ru}(0001)$  were shown to exhibit magnetic domain structure, which confirms the presence of magnetic order in these low-dimensional islands at room temperature [2]. We studied 1-nm thick  $\text{Fe}_3\text{O}_4(111)$  films on  $\text{Pt}(111)$  and  $\text{Ru}(0001)$ , trying to determine their magnetic properties.

## References:

- [1] N. Spiridis et al., Phys. Rev. B 85 (2012), 075436.
- [2] M. Monti et al., Phys. Rev. B 85 (2012), 020404(R).

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