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Magnetic anisotropy induced novel phenomena in itinerant ferromagnet SrRuO₃ thin films

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Propositions

accompanying the dissertation

Magnetic anisotropy induced novel phenomena in itinerant ferromagnet SrRuO_3 thin films

1. "Adding a new capability to a chip may make a company money today, but there is no guarantee that adding another will earn it more money tomorrow..."
- Chris Mack in "Fifty years of Moore's law", *IEEE Spectrum*, (2015).
2. For epitaxial thin film growth, the substrate termination can have an enormous influence on the physical properties of the films. It might be too naive to trust all the parameters provided by the crystal supplier.
3. A well-studied material does not mean it is boring for further scientific studies. Rather, this can be a boon for developing new technologies.
4. For complex oxides with perovskite structure, strain engineering is a useful pathway to manipulate the magnetic properties [*Chapter 4*]. The tunability of magnetic anisotropy plays an important role to explore the interplay between magnetism and transport [*Chapter 5, 6*].
5. Sometimes the experimental results depend on the way you train the device.
6. Controversies in science are useful to promote further development of the field.
7. A similar feature in performing dedicated experiments and motherhood is that you have a chance to enjoy the midnight scenery in both cases.
8. 今日事，今日毕。
Never put off till tomorrow what can be done today.

Ping Zhang