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## The Magnetic and Structural Properties of Layered Materials

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# Propositions

*accompanying the dissertation*

## The Magnetic and Structural Properties of Layered Materials

1. The properties of Van der Waals magnets are very sensitive to the degree of disorder present in the layer stacking (Chapters **3** and **4**).
2. The intercalation of  $\text{FeCl}_3$  by graphite leads to the formation of a disordered magnetic phase (Chapter **4**).
3. Transition-metal layered hydroxides are a promising new class of magnetocalorics (Chapter **5**).
4. Having a safe research environment, both physically and mentally, is essential for high quality research.
5. Participating in hybrid conferences is a good way to decrease the environmental impact of science.
6. Scientific conferences should be livestreamed to improve the accessibility of science for the general public.
7. The ‘publish or perish’ mentality incentivizes flawed research.
8. Luck is a poorly controllable but important parameter when growing crystals.

Joshua J.B. Levinsky

# Stellingen

*behorende bij het proefschrift*

## The Magnetic and Structural Properties of Layered Materials

1. De eigenschappen van Van der Waals magneten zijn zeer gevoelig voor de mate van wanorde in de stapeling van de lagen (Hoofdstukken **3** en **4**).
2. De intercalatie van  $\text{FeCl}_3$  met grafiet leidt tot de formatie van een wanorderlijke magnetische fase (Hoofdstuk **4**).
3. Gelaagde transitie-metaal hydroxides zijn een veelbelovende nieuwe klasse van magnetocalorische materialen (Hoofdstuk **5**).
4. Een veilige onderzoeksomgeving hebben, zowel fysiek en mentaal, is essentieel voor het uitvoeren van onderzoek van hoge kwaliteit.
5. Deelnemen aan hybride conferenties is een goede manier om de invloed van wetenschap op het milieu te verminderen.
6. Wetenschappelijke conferenties zouden gelivestreamd moeten worden om de toegankelijkheid van wetenschap voor de algemene bevolking te bevorderen.
7. De ‘publish or perish’ mentaliteit stimuleert gebrekkig onderzoek.
8. Geluk is een slecht beheersbare doch belangrijke parameter voor het groeien van kristallen.

Joshua J.B. Levinsky