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Propositions

accompanying the dissertation

SPINS IN DIAMOND AND SILICON CARBIDE FOR QUANTUM NETWORKS

by

Sjoerd Johannes Hendrikus LOENEN

1. P1 centers are not suitable qubits to be used in large-scale quantum computers. *Chapter 3 of this thesis.*
2. If there is significant correlated dephasing during entanglement generation processes using solid-state defect centers, spectator qubits should be part of the solution to mitigate this dephasing. *Chapter 4 of this thesis.*
3. The compatibility of a material with large-scale foundry processes and integrated circuits should be one of the two most dominant reasons to investigate a material platform for quantum processors. The other reason is the material's ability to host controllable quantum systems. *Chapter 5 of this thesis.*
4. A student's programming skills should be a key indicator on whether or not to be admitted to a PhD in experimental physics. The undergraduate education should be in line with that which contains more programming training.
5. In the statement 'treat others as you would like to be treated yourself' society fails to properly include animals in the definition of 'others'.
6. To foster long-term technological advancements, safeguard self-sustainability and diminish international dependence, nations need a private impact investor that is financed with public means and has the state as only shareholder.
7. Increased excise taxes and higher taxes on unhealthy behaviors, such as smoking, sugary beverages, and high-fat foods, should be introduced to promote better health and ensure a fair distribution of healthcare costs.
8. To stimulate scientific outreach, financial compensation for scientific outreach related activities should be implemented by research institutes.
9. The TU Delft PhD defence is inefficient. Less committee members and no propositions is what I propose.
10. To make the Dutch culture more socially inclusive, every Dutch person should have celebrated the Dutch carnival at least once.

These propositions are regarded as opposable and defensible, and have been approved as such by the promotor Prof. dr. ir. R. Hanson.