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Propositions

accompanying the dissertation

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1. A three terminal spin injection geometry is not a non-local geometry.
2. The three-terminal geometry is generally not suitable for obtaining the intrinsic, bulk, spin lifetime in semiconductors.
3. Rashba spin-orbit coupling is a promising tool for realizing spintronic devices with Nb:SrTiO₃. (Chapters 4 and 6)
4. The non-linear permittivity of SrTiO₃ is crucial for understanding spin and charge transport across space-charge regions in p- or n-doped SrTiO₃. (Chapters 3, 6 and 7)
5. The rich physics and chemistry of complex oxides provide many avenues for novel spin and charge based electronic device concepts. However, the same complexity might prove to be a fundamental obstacle for large scale production of such devices.
6. When the only permanent research position in academia is professorship, it deters young researchers from pursuing an academic career due to uncertainty in long-term job security.
7. The ability of humans to be insensitive to consequences that have little direct impact on their daily lives is more of a curse than a blessing.
8. The educational quality and its consistency at universities would greatly benefit from the presence of dedicated educational staff.
9. Strong involvement of industry in the funding of academic research will hamper open ended, long term research.
10. Closed, non-peer reviewed, studies should not be considered to be of any value when deciding on legislation.

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