

# Entanglement detection with use of current measurements in double quantum dot system.

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The development of quantum computing requires highly efficient and continuous solid-state source of spatially separated spin-entangled electrons. One of the approaches is a use of double quantum dot system connected to superconducting lead (source of naturally entangled electrons). Apart from the source, an useful tool for detection of quantum entanglement is needed. We present entanglement detection by the ferromagnetic detectors using entanglement witness operator method. Detection of entanglement is connected with a direct measurement of spin polarized current in the system. We introduce what requirements must be fulfilled by ferromagnetic detectors.

## References:

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