
Extra long title which spans serveral lines and therefore
has to be split manually and the vertical spacing
has to be adjusted

My Name

My university

(Diploma/doctoral...) Thesis

Supervisor:

Prof. Dr. Supervisor

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Abstract

A novel method... It is based on...

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Acknowledgements

First of all, I want to thank my supervisor...

I am very grateful for the guiding help of...

I am grateful to...

Chapter 1

Introduction

In the last few years...

Now my major contribution which is aaaaawesome...

Chapter 2

The Awesome Theory

The Large Hadron Collider (*LHC*) is a particle collider which is situated near Geneva, Switzerland and lies about 100 m below ground level.

Chapter 3

Experimental Setup

In this chapter, the experimental setup which was used for the majority of the experiments described in this thesis will be introduced. After a short overview, it will be described in further detail.

3.1 Intro Confocal Setup

The key measurements of this thesis are fluorescence measurements of SiV centers in nanodiamonds. For this aim, a home built confocal setup is used. The setup serves to perform a series of measurement of fluorescence light: scanning the sample to find SiV centers, recording luminescence spectra of the aforementioned, determine the saturation count rate and determine whether the emitter in question is a single emitter by performing photon autocorrelation measurements. The two key components for these measurements are

- A Hanbury-Brown and Twiss setup to investigate the single photon character. It is built up of two avalanche photo diodes (APDs) which also serve to scan the sample in order to find emitters on the sample surface; and to perform saturation measurements.
- A spectrometer to investigate the spectral properties.

A slightly modified version of the setup is used to perform measurements of the Raman emission of the diamond host material.

3.2 Details Confocal Setup

3.3 Raman Measurements

3.4 Nanomanipulator

Chapter 4

Experimental Results

In the following paragraphs, both phenomenological of the nanodiamonds and spectroscopic measurement of the SiV centers are described. Unless explicitly otherwise stated, the results in this paper report measurements of the milled nanodiamonds containing *in-situ* incorporated SiV centers.

4.1 Diamond Characteristics

4.1.1 Raman Measurements

4.1.2 Transmission Electron Microscopy

4.2 Photoluminescence spectra

4.2.1 Sideband

4.3 Photon correlation measurements

4.4 Photostability

Chapter 5

discussion

Chapter 6

Conclusion

In conclusion...

Appendix A

Text of Minor Interest

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