

Chapter 12

Electron Spin Qubit in Semiconductor-1-Qubit and 2-Qubit Gates

12.1 Introduction

In Chap.11, we showed how to implement a qubit using electron spin on a silicon substrate. We also demonstrated how to initialize and measure a qubit. In this chapter, we will study how to perform a universal 1-qubit gate and a 2-qubit entanglement gate to fulfill the last