

Aims

- The initial aim of this thesis is to fully derive the fundamental electronic properties of graphene at an accessible level.
- The electronic properties will then be used to replicate existing graphene nano-devices, specifically diodes and transistors.
- Comparisons between the theoretical analysis and experimental results will be made.
- The analysis of graphene transistors will then be expanded, with the possibility of creating a new device.
- Using the methods highlighted by graphene the reasearch may be expanded into three dimensional materials with a linear energy spectrum.