List of figures

List of Abbreviations

VLSI	Very Large Scale Integration
AFM	Atomic Force Microscopy
Ar	Argon
CVD	Chemical Vapour Deposition
Mo	Molybdenum
MoO_3	Molybdenum trioxide
MoS_2	Molybdenum Disulfide
PVD	Physical Vapour Deposition
SiO_2/Si	Silicon Dioxide on Silicon
S	Sulphur
SCCM	Standard Cubic Centimeters per Minute
TMDC	Transition Metal Dichalcogenide Crystal
2D	Two Dimensional
SEM	Scanning Electron Microscopy
PL	Photoluminescence

ABSTRACT

The search for monolayer materials to substitute silicon in electronic devices has widened in the past decade. Despite the benefits of two dimensional graphene, it has no band gap and behaves as a semi-metal. Molybdenum disulphide is a promising material as it boasts a band gap of up to 1.9eV in a monolayer form. In this project, an inexpensive method of fabricating monolayer MoS_2 is designed and growths on Si-substrates for future use in electronic devices will be attempted with this fabrication method.