

# Contents

<b>Acknowledgment</b> .....	I
<b>Abstract ( in Chinese )</b> .....	1
<b>Abstract ( in English )</b> .....	3
<b>Chapter 1 Introduction</b> .....	5
<b>Chapter 2 Theoretical Background</b> .....	7
2-1 Wurtzite Structure and Related Raman Tensors.....	7
2-2 Photoluminescence (PL) in Semiconductors.....	11
2-3 Raman Scattering.....	14
<b>Chapter 3 Experiments</b> .....	17
3-1 Sample Preparations.....	17
3-2 Micro-PL System.....	18
3-3 Micro-Raman System.....	20
<b>Chapter 4 Results and Discussion</b> .....	22
4-1 The Types of Hillocks.....	22
4-2 The Correlation of Micro-PL and Micro-Raman at the Same Hillocks.....	24
4-3 The Micro-PL and Micro-Raman Spectra of Tent-like Hillock.....	30
4-4 The Size-Dependence Micro-PL and Micro-Raman of Tent-like Hillock.....	44
4-5 Depth Analysis of Tent-like Hillock.....	53
<b>Chapter 5 Conclusions</b> .....	59
<b>Reference</b> .....	61

