

CONTENTS

1. INTRODUCTION.....	6
2. EXPERIMENTAL DETAILS.....	7
3. RESULTS AND DISCUSSION	9
3.1. HREM CONTRAST OF GP ZONES	9
3.2. MORPHOLOGY OF GPI ZONES	15
3.3. UNSTABLE GP ZONES SITUATED ON {111} PLANES	19
3.4. DETERMINATION OF CU CONTENT IN GP ZONES USING SIMULATIONS	20
3.5. FIELD ION MICROSCOPY.....	23
<i>GPI zones parallel to the tip axis</i>	23
<i>GPI zones perpendicular to the tip axis</i>	23
3.5. TOMOGRAPHIC ATOM PROBE.....	25
<i>GPI zones parallel to the tip axis</i>	25
<i>GPI zones perpendicular to the tip axis</i>	26
<i>Copper content of the GP zones</i>	26
<i>Copper content of the solid solution</i>	29
4. CONCLUSIONS	29
REFERENCES	31
CURRICULUM VITAE	33
RESERCH AND EDUCATION - FUTURE PROSPECTS.....	35