

Contents

CHAPTER 1

- 1.1 Magnetic properties of solids:
- 1.2 Ferromagnetic domains
- 1.3 Nanomagnetism
- 1.4 Spin dependent transport (spin injection/ detection)

CHAPTER 2

- 2.1 Dilute magnetic semiconductor:
- 2.2 Types of dms
- 2.3 Advantages
- 2.4 Applications
- 2.5 DMS with curie temperature greater than 300k:

Motivation

Survey of current scenario

CHAPTER 3

- 3.1 Room temperature ferromagnetism in dilute magnetic semiconductor
- 3.2 Fe doped NiO dilute magnetic semiconductor
- 3.3 Experimental work:
- 3.4 Results and discussion
 - 3.4.1 XRD
 - 3.4.2 PL
 - 3.4.3 HYSTERESIS LOOP TRACER
 - 3.4.4 CONDUCTIVITY STUDY

Conclusion

Reference and bibliography