Innovative materials for direct X-ray detection: organic semiconductors and 2D transition metal dichalcogenides.

Syllabus:

Abstract

Introduction (topic of the thesis, innovative materials, **motivation of the thesis, understand and compare two performances of the devices with similar structure, structure of the thesis (1.5 page max))**

1. Basics of X-ray detection (general x-ray detectors, TFT for X-ray detection) Don’t be too long here, focus on materials in Chapter 2.

2) Literature review of the materials (one for organic semiconductors, one for TMDC and MoS2) (Optoelectronic properties, deposition technique(

3) Description of exp methods

* Fabrication method
* IV characterization
* Characterisation under X-rays

4) Experiemntal results for OrgSem

5) Experimental results for MoS2

6) Conclusions (1-2 pages)

7) References

**Volume of the thesis (60 min – 100 max including references)**

**At least the half of the thesis must be be focused on Chapters 3-5 (Experimental stuff)**

**In Chapter 2 I should reference the articles that I use in Chapter 5 (to compare my results)**

**2/02 11:30 Meeting**

**Report**

**The draft of the syllabus**