Organic Electronics
(Course Number 300442) Spring 2006
Syllabus
Instructor: Dr. Dietmar Knipp
Electronic Device and Nanophotonics group

Dr. D. Knipp, Assistant of Prof. Electrical Engineering

Electronic Materials
- Organic semiconductors
- Nanocrystalline Materials
- ...

Micro and Nano Fabrication
- Micro-Contact-Printing (μCP)
- Nano-Imprint-Lithography (NIL)
- ...

Devices
- Thin Film Transistors (TFTs)
- Optical Sensors
- Displays
- ...

Low Cost ICs, drivers LCD displays
Displays, smart cards
Radio frequency information tags
E paper, E ink
Organic Electronics

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Organic Electronics

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Scheduling of the Course
Spring 2006

Easthall 1
Tuesday: 14:15-15:30
Organic Electronics

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Organic Electronics Seminar is part of the Graduate program in Electrical Engineering (Communications, Systems and Electronics).

The seminar is open to students from other graduate programs.

The seminar is open to undergraduate students who attended the course “Introduction to Electronic Devices”.

The course accounts for 4.5 ECTS credit points.
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Composition of the final grade:

20% Homeworks
40% Presentation of an advanced topic
40% Midterm / Test
Course modules and Syllabus

0. Introduction to Course (1 session)
1. Introduction to Organic Electronic (2 sessions)
2. Electronic transport in crystalline organic materials (2 sessions)
3. Organic field effect transistors (2 sessions)
4. Organic electronic circuits (2 sessions)
5. Design Project Display (2 sessions)
6. NanoFETs (1 session)
7. Presentation of advanced subjects (1 session)
8. Miderm / Test (1 session)
References

Pope and Swenburg, Electronic Processes in organic crystals and polymers, 2nd Ed., Oxford

Organic molecular crystals, E.A. Sininsh EA and V. Capek.

(Special Issue of IBM journal on organic electronics)

(Seminar on Organic optoelectronic, MIT)

http://hackman.mit.edu/6976/overview.html
(Seminar on Flat Panel Displays, MIT)