MS 591 Emerging Nanofabrication Technology

Summer, 2015

Instructor: Prof. Jung, Yeon Sik

3-0-3

Course description

Nanofabrication is the design and manufacture of devices with dimensions measured in nanometers. This lecture covers the interesting and practical examples of nanofabrication technologies that are currently under development. The underlying principles and applications of nanofabrication technologies will be given. The advantages and limitations of top-down and bottom-up approaches are extensively discussed through detailed and in-depth reviews on state-of-the-art techniques.

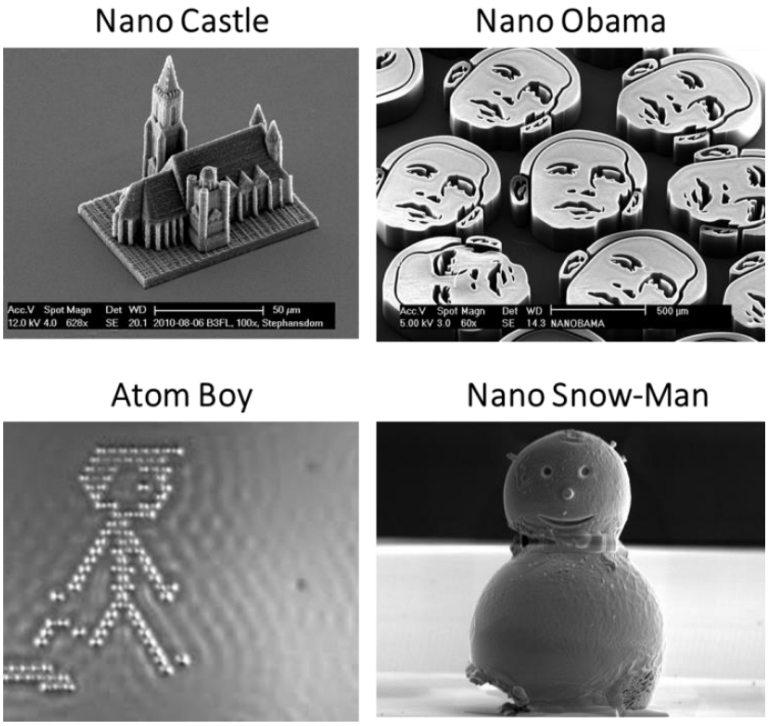
Class hours: Monday - Friday, 13:00 – 15:00 PM. This class will be operated as an Education 3.0 class. (VOD online lecture + off-line class)

Class Room: W1-1, #2427

Contact Info:
Tel: 042-350-3328, Email: ysjung@kaist.ac.kr

Office hours: Anytime by e-mail appointment
Instructor's office: W1-1, 1404

Teaching assistant:
Tae Won Nam (namtaewon@kaist.ac.kr)



Course contents

Period	Contents	Period	Contents
1st Week	Review of top-down and bottom-up nanofabrication techniques	3rd Week	Charged beams: E-beam and focused ion beam lithography
1st Week	Photons: (I) Optical lithography – Part I	3rd Week	Replication: Nanoimprint and soft lithography
2nd Week	Photons: (I) Optical lithography – Part II	4th Week	Self-assembly: (I) Colloidal nanocrystals
2nd Week	Photons: (II) EUV lithography	4th Week	Self-assembly: (II) Polymers
2nd Week	Photons: (II) EUV lithography	4th Week	Final Exam

Evaluation:

- ✓ Class participation (30%)
- ✓ Assignment (10%)
- ✓ Presentation (10%)
- ✓ Final Exam (50%)