

Crystal growth: Physics, technology, and modeling

Semester II

Lectures are held on Mondays from 3 to 5 p.m., room D IFPAN.

Lectures will be given in English.

Lecture titles and schedule:

I. Growth of crystals and epitaxial structures

1	17.02.2025	Epitaxy – an introduction (Z.R. Żytkiewicz – IFPAN)
2	24.02.2025	Growth of bulk crystals from the melt or solution. (T. Sochacki – IWC PAN)
3	3.03.2025	Bulk crystal growth from gas phase (M. Boćkowski – IWC PAN)
4	10.03.2025	Liquid phase epitaxy and lateral overgrowth (Z.R. Żytkiewicz – IFPAN)
5	17.03.2025	Molecular beam epitaxy (Z.R. Żytkiewicz – IFPAN)
6	24.03.2025	Molecular beam epitaxy of nitride semiconductors (Z.R. Żytkiewicz – IFPAN)
7	31.03.2025	Gas phase epitaxy (M. Leszczyński – IWC PAN)
8	7.04.2025	Atomic layer deposition (E. Guziewicz – IFPAN)

II. Characterization of crystals and epitaxial structures

9	14.04.2025	Surface studies of crystals (B. Kowalski – IFPAN)
10	28.04.2025	Selected methods of transmission electron microscopy (S. Kret – IFPAN)
11	5.05.2025	Electrical characterization of semiconductors and semiconductor based structures (R. Schifano – IFPAN)
12	12.05.2025	X-ray diffraction studies of crystals (M. Leszczyński – IWC PAN)
13	19.05.2025	Secondary ion mass spectrometry (P. Michałowski – Łukasiewicz Institute of Microelectronics and Photonics)
14	26.05.2025	Optical properties of crystals (A. Kamińska – IFPAN)
15	2.06.2025	Electronic and optical properties of graphene and other 2D materials (A. Wysmołek – IFD UW)