

**Alice Hospodková, Ing, PhD.**

Institute of Physics of CAS, Cukrovarnická 10, 162 53 Praha 6,  
Czech Republic

**Date of Birth:** June 19<sup>th</sup> 1968

**Education:**

- 1993-1999 Post gradual studies on Faculty of Mathematics and Physics, Charles University in Prague, specialization Physics of the solid state, thesis: Preparation of A<sup>III</sup>B<sup>V</sup> based quantum structures by Metal Organic Vapor Phase Epitaxy. PhD degree
- 1986- 1992 Electrotechnical faculty CTU, Prague, department of microelectronics. Diploma work: Ellipsometric measurements of silicon oxide. MS degree
- 1989-1991 Masaryk's Institute of Post-Gradual Studies. State examination: teacher-specialist.



**Professional experience**

1992-93 – Development of technology for porous silicon preparation  
Since 1994 - a member of the team in MOVPE (Metal Organic Vapor Phase Epitaxy) laboratory, which is specialized on the preparation of quantum wells and quantum dots nanostructures in semiconductor material system A<sup>III</sup>B<sup>V</sup>. She concentrates on design and preparation of structures containing highly strained In(Ga)As/GaAs, GaSb/GaAs or In(Ga)Sb/GaSb and mainly InGaN/GaN heterostructures: self-assembled quantum dots and quantum wells with the thickness of few atomic layers and their characterization. Another field of interest and experience is design and evaluation of properties of nanoparticles, quantum dots and core/shell structures (TiO<sub>2</sub>, ZnS, CdS, ZnS/CdS) for catalytic applications. Since 2015 gaining experience with design of nitride polar heterostructures namely InGaN/GaN quantum wells for scintillators and AlGaIn/GaN heterostructures for HEMTs.  
Since 2014 the manager of project LABONIT for building a new MOVPE laboratory for preparation of nitride semiconductor nanoheterostructures.  
Since 2017 head of MOVPE laboratory in FZU.  
Since 2022 head of Semiconductor department

**Residency**

- 1990 3 months, practical training in technological laboratories at the University of Wisconsin, wet oxidation of silicon, photolithography and ellipsometric measurements.
- 1996 2 months, MOVPE technological laboratory, Clarendon Laboratories at Oxford University, MOVPE group of Dr. Nigel Mason, preparation and characterization of GaSb, InAs and InGaSb epitaxial layers, testing of alternative TMSb precursor.

**Publications:**

Author or co-author of 96 publications according to WOS from which 22 impacted publications in last 5 years; 1098 citations (904 without self-citations), h-factor 15, first author of 6 national patents, one of them patented also in US, EU, Japan, South Korea, China and Izrael.

**Scientific awards**

Award of Josef Hlávka, 15<sup>th</sup> Nov 1996 (for students – national importance)  
Premium of Otto Wichterle, June 2002 (for young scientists – national importance)

**Maternity leaves: 1996, 1999, 2006** (3 years each)

**Activity in last 5 years**

- Design and preparation of structures containing In(Ga)As/GaAs or GaSb/GaAs self-assembled quantum dots covered by strain reducing layer prepared by MOVPE
- Building of nitride MOVPE laboratory
- Design of nitride heterostructures and technology for fast scintillators
- Design of nitride heterostructures and technology for HEMTs

- Native defect investigation in nitride semiconductors

### ***Teaching and student education***

Supervisor of 2 diploma students, and 1 doctorand, supervisor-specialist of 3 diploma students and 3 doctorands. All of them graduated successfully.

Presently, supervisor of 1 doctorand, 1 postdoctorand and supervisor-specialist of 1 doctorand.

Lessons on TUL and FJFI ČVUT „Chapter from nanoelectronics“

### ***Projects***

Coordinator, investigator or co-investigator of 7 scientific projects concerning III/V semiconductor heterostructures prepared by MOVPE: doctoral, junior (2006-2009), standard GACR (2016-18), 2 TACR projects (2017-2019), MSMT project INTERACTION (2020-2022), GAČR LA (2022-2024) and one investment project OPPK LABONIT.

Member of the team in many other projects.