

Curriculum Vitae

Candidat: Alexandru-Cristi IANCU

EDUCATION AND TRAINING

[15/09/2012 – 15/06/2016] Baccalaureate Diploma

Liceul Teoretic "Horia Hulubei"

Address: Strada Fizicienilor 42, 077125, Magurele, Romania

Field(s) of study: Mate-Info

Level in EQF: EQF level 5

Main subject / occupational skills covered:

- Acquired fundamental principles of the programming languages C++ and HTML
- Advanced use of the Microsoft Office suite
- Socio-cultural experiences gained through participation in academic competitions and Olympiads

[01/10/2016 – 01/07/2019] Bachelor's Degree

Universitatea din Bucuresti, Facultatea de Fizica Fizica.unibuc.ro

Address: Str. Atomistilor, Nr. 405, 077125, Magurele, Romania

Field(s) of study: Fizica-Informatica

Level in EQF: EQF level 6

Thesis: Investigatii computationale asupra modelului Ising

Main subject / occupational skills covered: Use of laboratory equipment and experimental tools

- Development of code and algorithms required for Monte Carlo simulations
- Acquisition of knowledge in the field of scientific research and development
- Development of strong analytical thinking skills
- Knowledge and use of AutoCAD
- Use of scientific and technical software: Origin, QtiPlot, Mathematica, LaTeX
- Data analysis
- Improved project and presentation skills (project presentations and speeches)

[01/10/2019 – 01/07/2021] Master's degree

Universitatea din Bucuresti, Facultatea de Fizica Fizica.unibuc.ro

Address: Str. Atomistilor, Nr. 405, 077125, Magurele, Romania

Field(s) of study: Physics of Advanced Materials and Nanostructures

Level in EQF: EQF level 7

Thesis: Zirconium oxide grown on Ge(001) by molecular beam epitaxy

[01/10/2021 – 2026] PhD in Physics (not official) – thesis presented in the Advisory Committee in 2025

Universitatea din Bucuresti, Facultatea de Fizica Fizica.unibuc.ro

Address: Str. Atomistilor, Nr. 405, 077125, Magurele, Romania

Field(s) of study: Fizica starii condensate

Level in EQF: EQF level 8

Thesis: Controlul Feroelectric al Adsorbțiilor și Desorbțiilor Moleculare pe Suprafețe Monocristaline (001) de Titanat de Bariu

EMPLOYMENT AND CAREER

[01/08/2019 – Current] Research Assistant (ACS) - Laboratory of

Nanoscaled Condensed Matter Physics, Group of Surface and Interfaces.

National Institute of Materials Physics (NIMP/INCDFM)

Str. Atomistilor Nr. 405A, 077125 Magurele (România) <https://infim.ro/>

Duties and Expertise: through the years I've been attending and gaining skills in all the experiments performed in our laboratory, mastering a number of techniques: **preparation techniques** such as Molecular Beam Epitaxy (MBE), Thermal Evaporation (TE), E-Beam Evaporation (EBE), Oxide-MBE and most importantly atomic level substrate cleaning (Si, Ge, GaAs, SrTiO₃, BaTiO₃) and evaporator calibration using Quartz Cristal Microbalance (QCM); **characterization techniques** mainly X-Ray Photoelectron Spectroscopy (XPS) including spectra analysing, deconvolution and complex spectral interpretation, Low Energy Electron Diffraction (LEED), Scanning Tunneling Microscopy (STM) (eventually including the use of Kolibri sensors) and Magneto-Optical Kerr Effect (MOKE). Learning all these includes system maintenance for most devices such as UHV system maintenance, bake-out procedures, filament replacements, repair or multi-method system. I've experienced and learned about synchrotron research and performed Angle-Resolved Photoemission Spectroscopy (ARPES) at facilities like PSI (Switzerland) and Spin-Resolved Photoemission Spectroscopy at Elettra (Italy). All of these were thanks to the group leader Cristian-Mihail TEODORESCU.

Studies presented at international conferences:

- 1) A.-C. Iancu, L. E. Borcan, N. G. Apostol, A. Nicolaev, R. M. Costescu, M. A. Huşanu, D. G. Popescu, G. A. Lungu, C. M. Teodorescu, Surface Magnetism of Pt(001) and SrTiO₃(001) Investigated by Spin-Resolved Photoelectron Spectroscopy, TIM International Physics Conference "TIM24", Timișoara, România, 30 Mai – 1 Iunie (2024)
- 2) A.-C. Iancu, N. G. Apostol, A. Nicolaev, L. E. Abramiuc, C. F. Chirilă, D. G. Popescu, and C. M. Teodorescu, Swinging molecular adsorption of carbon monoxide on ferroelectric BaTiO₃(001), International Balkan Workshop on Applied Physics and Materials Science – IBWAP, Constanța, România, 09 Iulie - 12 Iulie (2024)
- 3) A.-C. Iancu, N. G. Apostol, A. Nicolaev, L. E. Abramiuc, C. F. Chirilă, D. G. Popescu, and C. M. Teodorescu, Swinging molecular adsorption of carbon monoxide on ferroelectric BaTiO₃(001), The 10th International Conference On Advanced Materials: ROCAM, București, România, 15 Iulie - 18 Iulie (2024)