


PERSONAL INFORMATION **Cristian Alexandru Tache**

 National Institute of Materials Physics, Atomiștilor 405A,
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 [Replace with type of IM service](#) Replace with messaging account(s)

Sex M | Date of birth 02/08/1988 | Nationality Romanian

 WORK
EXPERIENCE

Oct 2011-Oct 2019

Engineer

National Institute of Materials Physics, Atomiștilor 405 A, 077125, Măgurele-Ilfov, Romania

Oct 2019-Present

Technology Development Engineer III

National Institute of Materials Physics, Atomiștilor 405 A, 077125, Măgurele-Ilfov, Romania

I gained extensive experience in a range of experimental surface analysis techniques, including molecular beam epitaxy, X-XPS X-ray photoelectron spectroscopy, low energy electron diffraction-LEED, STM tunneling microscopy, magneto-optical effect Kerr - MOKE.

I became familiar with ultra high vacuum technologies as well as with the assembly and operation of laboratory equipment, in particular on the CoSMoS surface analysis cluster which has currently been relocated to the Elettra Synchrotron in Trieste, Italy

Business or sector Research

 EDUCATION
AND TRAINING

[Add separate entries for each course. Start from the most recent.]

01/04/2014-05/04/2017

PhD

Replace with EQF
(or other) level if
relevant

Nanotechnology Doctoral School, Trieste University, Italy

Piazzale Europa, 1 34137, Trieste (Italia)

www.units.it

Development of a new method for depositing graphene layers on different substrates based on the electronic bombardment model.

01/10/2011-15/06/2013

Master degree in Electrical Engineering; Nano & Electromagnetic

Politehnica University, Bucharest

Splaiul Independenței nr. 313, sector 6

www.upb.ro

Thesis title "Light influence on magnetic properties of samples obtained by manganese-germanium diffusion"

PERSONAL SKILLS

[Remove any headings left empty.]

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	B2	B2
Replace with name of language certificate. Enter level if known.					
German	A1	A1	A1	A1	A1
Replace with name of language certificate. Enter level if known.					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills ▪ Good communication skills obtained as speaker at different seminaries during Phd school and home Institute

Organisational / managerial skills ▪ Very good team-work skills.

Job-related skills I gained good experience in the maintenance of vacuum pumps, as well as solving various electrical and technical problems at the CoSMoS cluster.

Digital competence	SELF-ASSESSMENT				
	Information processing	Communication	Content creation	Safety	Problem solving
	Proficient user	Proficient user	Independent user	Independent user	Proficient user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

Replace with name of ICT-certificate(s)

▪ Good knowledge of the Microsoft Office software package, Latex text editor, and IGOR software.

Driving licence B

ADDITIONAL
INFORMATION

- Publications
1. *Atomic structure and magnetism of PLD deposited TiO₂:Fe*, R.M. Costescu, G.A. Lungu, G. Socol, N.G. Gheorghe, D. Macovei, C.C. Negrila, C. Logofatu, M.A. Husanu, D.G. Popescu, **C.A. Tache**, C.M. Teodorescu, **Dig. J. Nanomater. Biostr.** **7**(1), p. 73-78 (2012).
 2. *Band bending at free Pb(Zr,Ti)O₃ surfaces analyzed by X-ray photoelectron spectroscopy*, N.G. Apostol, L.E. Stoflea, G.A. Lungu, **C.A. Tache**, L. Pintilie, C.M. Teodorescu, **Mater. Sci. Eng. B** **178**, p. 1317-1322 (2013).
 3. *Photoelectron spectroscopy and spectro-microscopy of Pb(Zr,Ti)O₃ (111) thin layers: Imaging ferroelectric domains with binding energy contrast*, M.A. Husanu, D.G. Popescu, **C.A. Tache**, NG Apostol, A Barinov, S. Lizzit, P Lacovig, C.M. Teodorescu, **Appl. Surf. Sci.** **352**, p 73-81 (2015).
 4. *Non-interacting, sp² carbon on a ferroelectric lead zirco-titanate: towards graphene synthesis on ferroelectrics in ultrahigh vacuum* N.G. Apostol, G.A. Lungu, I.C. Bucur, **C.A. Tache**, L. Hrib, L. Pintilie, D. Macovei and C.M. Teodorescu, **RSC Advances** **6**, 67883 (2016).
 5. *Ferroelectric triggering of carbon monoxide adsorption on lead zirco-titanate (001) surfaces*, L.C. Tanase, N.G. Apostol, L.E. Abramiuc, **C.A. Tache**, L Hrib, L Trupina, L Pintilie, C.M. Teodorescu, **SCI. REP.** **6**, 35301(2016).
 6. *Spectroscopic Fingerprints of Carbon Monomers and Dimers on Ir(111): Experiment and Theory*, F. Presel, **C.A. Tache**, H. Tetlow, D. Curcio, P. Lacovig, L. Kantorovich, S. Lizzit, A. Baraldi, **J. Phys. Chem. C**, **2017**, **121**, 11335–11345
 7. *Graphene growth by molecular beam epitaxy: an interplay between desorption, diffusion and intercalation of elemental C species on islands*, F Presel, H Tetlow, L Bignardi, P Lacovig, **C.A. Tache**, S. Lizzit, L Kantorovich, A Baraldi, **Nanoscale**, **10**, 7396-7406(2018)
 8. *Long-range magnetic interaction in Mn_xGe_{1-x}: structural, spectromicroscopic and magnetic investigations*, L.C. Tanase, G.A. Lungu, L.E. Abramiuc, I.C. Bucur, NG Apostol, RM Costescu, **CA Tache**, D Macovei, A Barinov, CM Teodorescu, **Jorn. Mat. Science** **52**, 3309-3320 (2017).
 9. *Room temperature ferromagnetism and its correlation to ferroelectricity of manganese embedded in lead zirco-titanate*, Ioana Cristina Bucur, Nicoleta G Apostol, Laura E. Abramiuc, Liviu C. Tanase, **Cristian A Tache**, George A Lungu, Ruxandra M Costescu, Cristina F. Chirila, Lucian Trupina, Lucian Pintilie, Cristian M Teodorescu, **Thin Solid Films** **669**, 440-449, (2019).
 10. *CO adsorption and oxidation at room temperature on graphene synthesized on atomically clean Pt(001)*, Nicoleta G Apostol, Ioana C Bucur, George A Lungu, **Cristian A Tache**, Cristian M Teodorescu, **Catalysis Today**, **366**, 155-163 (2021).