

Dr. Radu Hristu (33) has graduated in 2007 the Faculty of Electronics, Telecommunications and Information Technology of University Politehnica of Bucharest (UPB) with a diploma in Optoelectronics (Microelectronics). In 2012 he has received his PhD in Electronics Engineering from the same University after defending the thesis entitled "Studies on photonic quantum ring laser structures and on semiconductor materials and nanocrystals using laser scanning microscopy techniques". Currently he is working as a Research Scientist within the Center for Microscopy-Microanalysis and Information Processing of UPB.

To date, Radu was involved in 9 research projects funded by national funding agencies, 2 bilateral cooperation projects and 2 FP7 projects funded by the EC. In the frame of these latter, Radu took part of UPB's team that developed a novel scattering scanning near-field optical microscope (sSNOM) in the frame of the FP7 research project "BioElectricSurface". The homemade sSNOM was used to measure charge at the surface of biomaterials [1,2]. The sSNOM was further improved and integrated into a multi-modal system combining laser scanning and probe scanning microscopy techniques in the frame of a second FP7 project ("LANIR"). Based on his scientific merits, Radu was awarded in 2014 a postdoctoral research fellowship by University Politehnica of Bucharest, in the frame of which he carried innovative research connected with multi-modal microscopy until 2015. Currently he is conducting research in the frame of 2 national projects dealing with multi-modal microscopy and super-resolution microscopy.

Radu's main research interests revolve around the development of innovative microscopy instrumentation and connected applications focused towards the characterization of semiconductor materials, micro and nano-structured devices and biophotonics. His most recent research activities are connected with multi-modal microscopy, e.g. using a multi-modal approach to improve collagen organization quantification [3], combining nonlinear optical microscopy and atomic force microscopy for the imaging of defects in silicon carbide [4] or luminescence in laser scanning microscopy and atomic force microscopy phase imaging for the separation of surface charge and carbon contamination on electron irradiated hidroxyapatite [1]. Other research interests are optoelectronics – improvement of the optical beam induced current technique [5,6] and scanning probe microscopy [7,8].

He has published until now 28 articles in ISI journals for 8 of them him being the first author. According to Thomson Reuters records Radu has an h-index of 5 and more than 140 citations. Radu's complete CV can be accessed online at: http://cmmip-upb.org/rhristu_cv.pdf

[1] **R. Hristu**, D. E. Tranca, S. G. Stanciu, M. Gregor, T. Plecenik, M. Truchly, T. Roch, S. A. M. Tofail, G. A. Stanciu: *Surface charge and carbon contamination on an electron beam irradiated hydroxyapatite thin film investigated by photoluminescence and phase imaging in atomic force microscopy*. Microscopy and Microanalysis 20(2), pp. 586-595 (2014).

[2] D.E. Tranca, E. Sanchez-Ortiga, G. Saavedra, M. Martinez-Corral, S.A.M. Tofail, S.G. Stanciu, **R. Hristu**, G.A. Stanciu: *Mapping electron-beam-injected trapped charge with scattering scanning near-field optical microscopy*. Optics Letters 41(5), pp. 1046-1049 (2016).

[3] **R. Hristu**, S.G. Stanciu, D.E. Tranca, G.A. Stanciu: *Improved quantification of collagen anisotropy with polarization-resolved second harmonic generation***,** Journal of Biophotonics, DOI: 10.1002/jbio.201600197, (2016)

[4] **R. Hristu**, S. G. Stanciu, D. E. Tranca, A. Matei, G. A. Stanciu: *Nonlinear optical imaging of defects in cubic silicon carbide epilayers*. Scientific Reports 4, 5258 (2014).

[5] **R. Hristu**, S.G. Stanciu, F.J. Kao, G.A. Stanciu: *Two-photon excited photoluminescence of photonic quantum ring laser structures*. Applied Physics B: Lasers and Optics 107(1), 97-101 (2012).

[6] **R. Hristu**, S.G. Stanciu, S.J. Wu, F.J. Kao, O. Kwon, G.A. Stanciu: *Optical beam induced current microscopy of photonic quantum ring lasers*. Appl Phys B: Lasers and Optics 103, 653-657 (2011).

[7] **R. Hristu**, S.G. Stanciu, G.A. Stanciu, I. Capan, B. Guner, M. Erdogan: *Influence of atomic force microscopy acquisition parameters on thin film roughness analysis*. Microscopy Research and Technique 75(7), 921-927 (2012).

[8] **R. Hristu**, S.G. Stanciu, D.E. Tranca, G.A. Stanciu: *Electron beam influence on the carbon contamination of electron irradiated hydroxyapatite thin films*. Applied Surface Science 346, pp. 342-347 (2015)