

C.1 CURRICULUM VITAE

Personal information

Name, Surname:	SILVIU POLOSAN		
Date of birth:	03.01.1968	Sex:	M
Nationality:	ROMANIAN		
Researcher unique identifier(s) (ORCID, Researcher ID etc.):	ORCID 0000-0003-3359-8531 Researcher ID C-5032-2011 UEFISCDI ID: **U-1700-039K-6372**		
URL for personal website (if case):	https://infim.ro/en/@spol68/		

Education

Year	Faculty/department - University/institution - Country
2002 (dissertation defended)	Ph.D. Bucharest University, Romania
1993	Faculty of Physics/Bucharest University, Romania

Positions - current and previous

(*Academic sector/research institutes/industrial sector/public sector/other)*

Year	Job title – Employer - Country
2016	Head of Department, National Institute of Materials Physics
1993-2016	Researcher, National Institute of Materials Physics

Career breaks (if case)

Year	Reason
yyyy-yyyy	

Project management experience

(*Academic sector/research institutes/industrial sector/public sector/other. Please list the most relevant.)*

Year	Project title - Role – Funder – Budget – link to project webpage
2022-2024	"Highly conductive and transparent metallic electrodes for Organic Light-Emitting Diodes", PED 726, Project manager, PN-III-P2-2_1-PED-2021-0828, 585.000 lei (117.000 Euro), https://infim.ro/en/project/highly-conductive-and-transparent-metallic-electrodes-for-organic-light-emitting-diodes/
2017-2021	„New directions of technological development and use of advanced nano-composite materials" (47PCCDI/2018) -PN-III-P1-1.2-PCCDI-2017-0871, Project Coord.-725.000 lei (145.000 Euro) https://infim.ro/project/kuncser_noi_directii_de_dezvoltare_tehnologica_si_utilizare_nanocom pozite_avansate_47pccdi_2018/
2011-2016	"Dual emitters for displays based on OLED compounds" (PN-II-ID-PCE-2011-3-0620 Project manager, IDEAS programme)- 1.500.000 lei (400.000 Euro). https://infim.ro/project/diode-electroluminescente-organice-oled-cu-emisie-dubla-pentru-tehnologia-afisajelor-electronice/
2007-2010	"Eulytite materials for radiation detection" (71-007 Project manager, collaborative project, CEEX programme)- 2.000.000 lei (600.000 Euro) http://lab40.infim.ro/Projects%20lab%2040/2007/Parteneriate/index_ro.html
2005-2007	"Spectroscopic study of highly functional optical materials", (Romanian-Japan international project, JSPS; head of the research project)- 80.000 EURO https://www.jsps.go.jp/english/e-laza/common/pdf/find_n_fellows/2005_Mathematical.pdf
2001-2003	"Active media lasers with lead negative metal ions with functionality at room temperature", (project no. 2, project manager, cooperative project, PNCDI CERES)-68.022 lei (25.000 Euro). https://www.ifa-mg.ro/ceres_ceex/

Other relevant professional experiences

(e.g. institutional responsibilities, organisation of scientific meetings, membership in academic societies, review boards, advisory boards, committees and major research or innovation collaborations, other commissions of trust in public or private sector)

Year	Description - Role
2023	Associate member in Academy of Romanian Scientists
2016	Head of Multifunctional Nanostructures Dep., National Institute of Materials Physics
2005-2007	Bilateral cooperation Romania-Japan, head of Romanian team
2004-2005	Bilateral cooperation Romania-Italy, head of Romanian team

C.2 Track record of the last 10 years

A list of the ten most important scientific outputs (publications, patents, technologies etc).

1. Vladoiu, R.; Mandes, A ; Dinca, V ; Kudrna, P; Tichy, M ; **Polosan, S**. Magnesium-silver cathodes for efficient charge injection into Organic Light Emitting Diodes deposited by LTVA method, J. Alloys& Comp., 869, 159364 (2021)
2. Ciobotaru, IC ; Crisan, DN ; Sket, P ; Ciobotaru, CC ; **Polosan, S**, Detailed Molecular and Structural Analysis of Dual Emitter IrQ(ppy)2 Complex, Materials, 13(7), 1617 (2020)
3. **Polosan, S**; Ciobotaru, CC; Ciobotaru, IC; Enculescu, M; Iosub, D; Mandes, A; Vladoiu, R, „Electron Irradiation of Titanium-Doped Chromium Nanostructured Thin Films for Higher Conductive Electrodes", 3. IEEE Transactions on Nanotech., 21, 823-829 (2022)

4. **Polosan, S**; Ciobotaru, IC; Ciobotaru, "Organometallic Coatings for Electroluminescence Applications", Coatings, 10(3), 277 (2020)
5. Secu, M; **Polosan, S** „Charge carrier traps in tris-(8-hydroxyquinoline) aluminum", J. Lumin., 194, 91-95 (2018)
6. Ciobotaru IC; **Polosan S**.,Ciobotaru CC, "Organometallic compounds for photovoltaic applications", Inorganica Chimica Acta, 483, 448-453 (2018)
7. **Polosan, S**; Ciobotaru, IC ; Tsuboi, T, "Absorption, phosphorescence and Raman spectra of $IrQ(ppy)_2$ organometallic compound", Materials Chemistry& Physics, 162, 822-830 (2015)
8. **Polosan, S**; Ciobotaru, IC; Enculescu, I ; Ciobotaru, CC, „Structural characteristics of iridium dual-emitter organometallic compound", J. Mater. Res., 29(23), 2898-2904 (2014)
9. Ciobotaru, IC; **Polosan, S;** Ciobotaru, CC, "Dual emitter IrQ(ppy)2 for OLED applications: Synthesis and spectroscopic analysis", J. Lum., 145, 259-262 (2014)
10. Ciobotaru I. C., Ciobotaru C. C., Evanghelidis A., **Polosan S**., Enculescu I., Casarica A., "Transparent and flexible multilayer diode device based on electrospun polymer fibers and organometallic compounds and process for manufacturing such device", **EP23465550/10.102023**

C.3 Narrative CV

A narrative summarizing which work has had the greatest importance and impact.

Over the last 22 years since my PhD, I supervised and coordinated research activities on crystalline and glass materials technologies at different levels, between 2002-2005. In September 2004, I was invited as Associate Professor at the University Roma Tre to teach irradiation defects produced in crystalline matrices, starting from 1st October up to 30 January 2005 as Post Doc fellowship at ENEA Frascati, Italy where I was involved in developing new characterizations concerning the production of metallic nanostructures in crystalline matrices.

These activities were followed as bilateral collaborations COPBIL projects 2006-2008 by the joint research project n.19, entitled "Optical Spectroscopy of point defects in heavy metals doped LiF for photonic applications", in the area of Basic and Applied Sciences: Physics with the Laboratory of Solid State Lasers&Spectroscopy (FIS-ACC) at the ENEA C.R. Frascati Center (http://www.esteri.it/MAE/doc/4_28_67_81_91_89_119.pdf).

Starting in 1996, I was a team member in several projects like: Crystal Clean Collaboration between 1996-1998, Cost 523-Nanomaterials 1997-1999, CERES project no. 15/2002 (88.231 lei), CERES project no. 2/2006 (1.000.000 lei), CEEX project no. 72/2006 partnership (200.000 lei), Ceres project no. 4-89/2004 (104.920 lei), CEEX project no. 77/2006 (150.000 lei).

Before the Ph.D. thesis, I led several grants financed by the Romanian Academy, Research& Technology Ministry and "Horia Hulubei" Foundation: Grant 2037 /1996, Teme B2, MCT; Grant Nr. 35/2003 Romanian Academy, Grant Foundation "Horia Hulubei" in 2001 and 2002, Grant 32/2004 Romanian Academy. It is important to notice that the first financed project for seniors was CERES no. 21/2001 (68.022 lei), as Ph.D. student.

During the collaborative project Romania-Japonia "Spectroscopic study of highly functional optical materials", I was employed as an Associate Professor at Kyoto Sangyo University, Optics and Electricity Department (master degree studies), Japan.

Member of the commission of doctorate candidates for two Ph.D. students at the University POLITEHNICA of Bucharest between 2011 and 2014.

From 2002 to 2020, I was a team member on a series of collaborative projects PN-III-P1-1.2-PCCDI-2017-0062 „New methods of diagnosis and treatment: current challenges and technologic solutions based on nanomaterials and biomaterials; PN-III-P1-1.2-PCCDI-2017-0871, „New advanced nanocomposites. Technological developments and applications"; POC 2016 – 2020, „Smart multifunctional materials for high-

tech applications"; PN-II-PT-PCCA-2011-3.2-1017, „High-efficiency electrospinning"; PN-II-PT-PCCA-2011-3.2-0975, „Complex landslide monitoring system using transducers based on new materials and technologies";

Concerning the main directions developed:

a) Growth and characterization of scintillating and photorefractive crystals (BGO, BSO, BTO).

b) Studies of scintillating materials -like pure and doped CeF3 crystals for high energy radiation detectors.

c) Negative metal ions in alkali halide crystals- like Pb- and Ag- for visible and infrared media active lasers

d) Study of growth kinetics of metal nanoparticles in alkali halides. Synthesis and characterization of metal colloids obtained from solution.

e) Spectroscopy and magneto-optical characterization of rare earth doped crystalline compounds. Magneto-optical characterization of heavy rare earth-doped crystals.

f) Organometallics and OLED devices- based on the dual emitter $IrQ(ppy)_2$ compound.

g) Oxidic materials like phosphate-tellurite glasses with composition $20\%TeO_2+40\%ZnO_2+40\%P_2O_5$ for magnetic sensor and infrared laser detection.

h) Flexible electrodes, based on the electrospun technology of the PMMA nanofibers covered with gold metal, allow a double-side emission when they are used as transparent cathodes.

i) Transparent and conductive metallic electrodes for highly efficient OLED devices ensure a better charge injection in the OLED sandwich structures.

j) Ferromagnetic materials based on $BaFe_{12}O_{19}$ and $Bi_4Ge_3O_{12}$ compounds.

k) Novel metallic alloys for the cathode materials like TiCr, MgAg and CoNi materials.

l) Synthesis of Cobalt-Nickel Aluminate Spinels Using the Laser-Induced Thermionic Vacuum Arc Method and Thermal Annealing Processes as candidates for the development of high-temperature fuel cells.

Note: For each nominated person, please present the CV (uploaded as a single document of maximum 6 pages, saved with the name of the member, A4 format, Times New Roman font, 11-point font size, 1.15 line spacing and 2 cm margins).