

Curriculum vitae

Europass

Personal information

Name: Corneliu Sergiu Stan

Street Prof. dr. docent Dimitrie Mangeron, no. 73, 700050, Iași, Romania

Phone +40 (0)232 278683 / int. 2135 **Mobile** +40 (0)742 208215

Email stancs@tuiasi.ro ; stcornel@gmail.com

Webpage: https://www.researchgate.net/profile/Corneliu_Stan/?ev=prf_high

Birth date 29.12.1964 | **Nationality** : romanian

Professional experience

Period May.2017 - present

Function Scientific Researcher II

TUiasi RO

Scientific research, laboratory research activity; experimental planning; experimental setups; FT-IR, Fluorescence spectroscopy (steady state, lifetime, PLQY), FTIR, Raman, XPS spectroscopy, DLS, AFM, TEM/SEM etc; investigations of the new compounds and materials; data processing and interpretation, scientific papers and patent requests elaboration.

Period 2013 - 2017

Function Scientific Researcher

TUiasi RO

Scientific research, laboratory research activity; experimental planning; experimental setups; FT-IR, Fluorescence spectroscopy (steady state, lifetime, PLQY), FTIR, Raman, XPS spectroscopy, DLS, AFM, TEM/SEM etc; investigations of the new compounds and materials; data processing and interpretation, scientific papers and patent requests elaboration.

Period Jan.2012 – Jul.2013

Function Scientific Research Assistant

TUiasi RO

Activities and responsibilities Scientific research; laboratory research activity; experimental planning; experimental setups; FT-IR, elemental analysis, thermal analysis, SEM, EDX, Fluorescence spectroscopy (steady state, lifetime, PLQY), XPS spectroscopy etc; investigations of the new compounds and materials; data processing and interpretation, scientific papers and patent requests elaboration, project web-page design, new equipments and materials acquisition.

Period Oct. 2009 – Dec. 2012

Function PhD Student/ Scientific Research Assistant

TUiasi RO

Activities and responsibilities Scientific research related to nanocomposite materials with application in electronics; laboratory research activity; experimental planning; experimental setups; FT-IR, elemental analysis, thermal analysis, SEM, EDX, fluorescence spectroscopy investigations of the new compounds and materials; data processing and interpretation, scientific papers and patent requests elaboration.

Period Feb. 2007 – Sept. 2009

Function Research project advisor

Activities and responsibilities Research projects management

Name of the employer Gheorghe Asachi Technical University of Iasi

Sector of the activity Education, management, training and scientific research

Period Feb. 2004 – Jan. 2007 (also June 1997 – Feb. 2002)

Function Production Manager

Activities and responsibilities Injection molding and thermoforming production plant management, quality assurance, new product development, technical studies and plans for production extension and custom design products.

Name of the employer SIBEL ltd. Iasi
Sector of the activity Management, Production plastics
Period March 2002 – Jan. 2004
Function Counselor A.1.3.
Activities and responsibilities Pollution monitoring in Iasi city, pollution monitoring, laboratory and field monitoring equipments set-up and maintenance, database maintenance.

Name of the employer Environmental Protection Agency Iasi
Sector of the activity Government, environmental protection
Period March.1990 – Nov. 1996
Function Research assistant, Scientific Researcher
Activities and responsibilities Research, research programs and grants management, scientific reports, scientific publications and reviews, experimental setups, technology transfer and implementation.

Name of the employer Research Institute ICIT-FIBRESIN Iasi
Sector of the activity Scientific Research

Education

Period Oct. 2009 – Sept. 2012
Qualification/diploma PhD in chemistry
Doctoral thesis New lanthanide complexes with organic ligands
Funding EURODOC project (European and national co-funding project)
Name of institution Faculty of Chemical Engineering and Environmental Protection, Gheorghe Asachi Technical University of Iasi, Romania
Period Sept. 1984 – July.1989
Qualification/diploma Eng. Diploma nb.
Disciplines approach/competence Chemistry, organic chemistry, polymers
Name of institution Faculty of Chemical Engineering and Environmental Protection, Gheorghe Asachi Technical University of Iasi, Romania, Fully funded study scholarship

Research stages abroad

Period 01.Nov.2011 – 30.Apr.2012
Name of institution Ecole Nationale Supérieure de Chimie / Institut de Chimie Moléculaire et des Matériaux Charles Gerhardt Montpellier, France.

Aptitude and professional competence

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C2	C1
French	B1	B1	A2	A2	B1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user, Common European Reference for Languages

Competence and organizing aptitudes Able to plan, organize, and handle a heavy workload. Work well independently or in a team. Self-educated regarding the research, publishing activity, national and international collaborations.

Computer skills	<ul style="list-style-type: none"> - MS Office, Corel Suite, ChemBioOffice, Origin, FL-WinLab, Panalytical Expert High Score Plus., X-Powder, Infometrix Bio-Rad, Horiba Fluorescence,, Electronic Workbench, PCB Express etc. - Web page design software. - Advanced hardware setup and configuration.
Job-related skills	<ul style="list-style-type: none"> - Various investigation techniques including FT-IR, P-XRD, Thermal Analysis, FTIR, Raman, XPS spectroscopy, TEM/SEM, AFM, Fluorescence spectroscopy including steady state, lifetime and PLQY etc. - Experienced in laboratory related equipments and experimental activities.
Other skills	Very good background in electronics (circuit design, experimental projects, testing, automation, various equipments repair and maintenance), optoelectronics (including various types of light sources, solar cells, lasers, various types of alphanumeric, graphic and flat panel color displays etc).
Driving license	B category license

Scientific Activity Summary

Web of Science ResearcherID: A-9023-2016

ORCID: 0000-0001-8271-0708

- Published ISI papers: **32** (main author: **20**)
- Published IDB papers: **9** (main author: **6**)
- Registered patents: **6** (main author: **6**)
- Requested patents: **3** (main author: **3**)
- International Conferences presented works: **15**

Research projects manager:

1. COFUND-LEAP-RE-ERANET 293/2022, Integration of photonic conversion layers based on photoemissive nanostructured materials for improving sunlight harvesting ability of solar cells, May 2022-Dec. 2024
2. Le Studium Institute for Advanced Studies Franta 2021-2022, "Carbon nanomaterials as solar UV protectors targeting applications ranging from paints/varnishes to pharma/cosmetic products"

Research projects team member (UEFISCDI)

1. PNIII-497PED/2020 (2020-2022) Novel materials with optical properties for anti-counterfeiting paper
2. PNIII-PCCDI 37/2018 (2018-2021) Antitumoral theranostic platforms based on Carbon Dots and polymer matrices TERADOT
3. PNIII-77PED/2017, (2017-2018), A new approach in energy efficient lighting devices based on aerogels and Carbon Dots.
4. CNCS- IDEI 335/5.10.2011 (2012 – 2016) Innovative electroluminescent nanocomposites for a new approach in polymer based light emitting devices.
5. PN-II-PT-PCCA-2013-4 – 218/ 2013 – .2016, Sisteme inovative de eliberare controlata sub forma de particule pentru tintirea segmentului posterior ocular.
6. PN-II-PT-PCCA-2013-4-2210; 276/ 2014 Liposomes and cyclodextrins based complex formulations for transdermal treatment.
7. PN-II-RU-TE-2014-4-0405, Nr. 274/2015, 2015 – 2017, Development and optimization of an innovative photo-Fenton-peroxone system for degrading organic micropollutants in water.
8. CNCS IDEI 721/2009-2012, New Type of Nanocomposite Materials with Applications in Electronics and Electrochemical Sensors.

Research projects (Industry funded) team member:

1. FIBRESIN 578B/1994, Noi polimeri și tehnologii de procesare în domeniul ambalajelor alimentare.
2. FIBRESIN C22/1993, Noi tipuri de copoliesteri, diversificarea domeniilor de utilizare.
3. FIBRESIN FA11/1991, Poliesteri cristale lichide.
4. FIBRESIN A12/1990, Tehnologii pentru obținerea poliesterilor modificați chimic cu acizi dicarboxilici și diverși dioli.

Research projects (Industry funded) team leader

1. FIBRESIN 300B/1993, Sistem și tehnologie de depunere prin baleierea fasciculului ionic în vid, a metalelor pe suporturi organici și anorganici.
2. FIBRESIN CA02/1991, Depunerea în strat subțire a unor metale și oxizi pe folie poliesterică, folosite la obținerea mediilor magnetice pentru stocarea informațiilor audio, video și date.
3. FIBRESIN A09/1991, Traductori electrooptici și termici obținuți prin tehnologia straturilor subțiri.

Published ISI papers

1. A. Tiron, **C. S. Stan**, G. Luta, C. M. Uritu, I. C. Vacarean-Trandafir, G. D. Stanciu, A. Coroaba, C. E. Tiron, Manganese-Doped N-Hydroxyphthalimide-Derived Carbon Dots—Theranostics Applications in Experimental Breast Cancer Models, *Pharmaceutics* 13(11), 1982, 2021. doi.org/10.3390/pharmaceutics13111982
2. A. Borhan, D. Herea, D.Gherca, C. Stavila, A. E. Minuti, M. Grigoras, C. Danceanu, L.Labusca, G. Stoian, G. Ababei, **C. S. Stan**, N. Lupu, H. Chiriac, Flash-cooling assisted sol-gel self-ignited synthesis of magnetic carbon dots-based heterostructure with antitumor properties, *Materials Science and Engineering: C* 117, 111288, 2020 doi.10.1016/j.msec.2020.111288
3. C. E. Tiron, G. Luta, M. Butura, F. Zugun-Eloae, **C. S. Stan**, A. Coroaba, E.L. Ursu, G. D. Stanciu, A. Tiron, NHF-derived carbon dots:prevalidation approach in breast cancer treatment, *Nature Scientific Reports* 10, 12662, 2020 doi.10.1038/s41598-020-69670-z
4. **C. S. Stan***, A. Coroaba, E. L. Ursu, M. S. Secula, B. C. Simionescu, Fe(III) doped carbon nanodots with intense green photoluminescence and dispersion medium dependent emission, *Nature Scientific Reports* 9, 18893, 2019 doi:10.1038/s41598-019-55264-x
5. **C. S. Stan***, A. Coroaba, M. Popa, L. E. Ursu, Highly photoemissive polymer-transition metal complexes based on Poly(2-hydroxy ethyl) methacrylate, *Polymer International*, sept. 2019, <https://doi.org/10.1002/pi.5926>.
6. C. L. Savin, C. Tiron, E. Carasevici, **C. S. Stan**, S. A. Ibanescu, B. Simionescu, C. Peptu, Entrapment of N-Hydroxyphthalimide Carbon Dots in Different Topical Gel Formulations: New Composites with Anticancer Activity, *Pharmaceutics* 11(7):303, 2019. doi: 10.3390/pharmaceutics11070303
7. **C. S. Stan**, G. Soreanu*, M. Popa, P. Horlescu, T. Lupascu, I. Cretescu, A new approach to obtain aerogels for gas safety applications, *Environmental engineering and management journal* 18(8), pp. 1815-1820, 2019.
8. E. S. Bacaita, **C. S. Stan**, M. Agop, G. Cioca, Spectral Properties of HEMA/poly(HEMA) as Ligand in Luminescent Europium Based Complexes Through Computational Investigation, *REV.CHIM.69*(9), 2018.
9. M. S. Secula, E. David, B. Cagnon, A. Vajda, **C. S. Stan**, I. Mamaliga, Kinetics and equilibrium studies of 4-chlorophenol adsorption onto magnetic activated carbon composites, *Environmental engineering and management journal* 17(4), pp.783-793, 2018. DOI: 10.30638/eemj.2018.079
10. **C. S. Stan***, P. Horlescu, L. E. Ursu, M. Popa, C. Albu, Facile preparation of highly luminescent composites by polymer embedding of carbon dots derived from N-hydroxyphthalimide, *Springer- J. of Material Science* 52(1), pp. 185-196, 2017. doi 10.1007/s10853-016-0320-y.
11. C. Y. Rosca, P. Horlescu, **C. S. Stan***, D. Sutiman, Photoemissive polymer composite based on new Y(III), Gd(III) and Tb(III) complexes with N-hydroxyphthalimide, *Turkish J. of Chemistry* 41(5), pp.648-657, 2017. (I. F. 1.07). DOI: 10.3906/kim-1609-69
12. **C. S. Stan***, P. Horlescu, M. Popa, A. Coroaba, L. E. Ursu, Photoluminescent polymer composites with R, G, B emission and their potential applications in LCD displays, *RSC- New J. of Chemistry* 40, pp.6505 – 6512, 2016.
13. C. Albu, **C. S. Stan***, P. Horlescu, Fluorescent Carbon Dots Prepared Through Thermal Processing of Succinimide, *Digest Journal of Nanomaterials and Biostructures* 11(1), pp.133-139, 2016.
14. **C. S. Stan***, C. Peptu, M. Popa, D. Sutiman, P. Horlescu, Novel Y³⁺, Sm³⁺, Eu³⁺, Gd³⁺ and Tb³⁺ complexes with 2-(1H-1,2,4-Triazol-3-yl)pyridine and their remarkable photoluminescent properties, *Elsevier- Inorganica Chimica Acta* 429, pp. 160-167, 2015. doi: 10.1016/j.ica.2015.01.041
15. P.Horlescu, **C. S. Stan***, D. Sutiman, C. Mita, C. Peptu, M. E. Fortuna, C. Albu, New Complexes of 2-(1H-1, 2, 4-Triazol-3-YL) Pyridine with Co(II), Cd(II), Rh(III) Ions: Synthesis, Structure, Properties and Potential Applications, *E.E.M.J.* 14(2), pp.383-391, 2015.
16. **C. S. Stan***, A. Coroaba, M. Popa, C. Albu, D. Sutiman, One step synthesis of fluorescent Carbon Dots through pyrolysis of N-hydroxysuccinimide, *RSC-Journal of Materials Chemistry C* 3, pp.789-795, doi: 10.1039/C4TC02382J, 2014.
17. **C. S. Stan***, M. Popa, D. Sutiman, P. Horlescu, Photoluminescent red green and blue monoliths of new Eu(III), Tb(III) and Y(III) complexes embedded in silica matrix, *Springer-Electronic Materials Letters* 10(4), pp. 827-835, doi: 10.1007/s13391-014-3240-5, 2014.
18. **C. S. Stan***, M. Popa, N. Marcotte, Photoluminescent polymer composites based on new Tb(III) and Eu(III) – Maleimide complexes, *Springer- J. of Inorganic and Organometallic Polymers and Materials* 24(4), pp. 676-683, DOI: 10.1007/s10904-014-0044-x, 2014.
19. L. Zaleschi., M. S. Secula, C. Teodosiu, **C. S. Stan**, I. Cretescu, Removal of Rhodamine 6G from Aqueous Effluents by Electrocoagulation in a Batch Reactor: Assessment of Operational Parameters and Process Mechanism, *Water, Air, & Soil Pollution* 225(9), pp. 827-835, doi: 10.1007/s11270-014-2101-z, 2014.
20. M.S. Secula, **C.S. Stan**, C. Cojocaru, B. Cagnon, I. Cretescu, Multi-Objective Optimization of Indigo Carmine Removal by an Electrocoagulation/GAC Coupling Process in a Batch Reactor, *Separation Science and Technology* 49: pp. 924–938, DOI: 10.1080/01496395.2013.871292, 2014.
21. **C. S. Stan***, M. Popa, M. Olariu, M. S. Secula, Synthesis and characterization of a PSSA-Polyaniline composite with enhanced processability in thin films, *Springer- Central European Journal of Chemistry, Open Chem.* 13, pp. 467-476, DOI: 10.1515/chem-2015-0057, 2015.
22. **C. S. Stan***, N. Marcotte, M. Popa, M. Secula, Photoluminescent silica aerogel containing a new prepared N-Hydroxysuccinimide –Tb(III) complex, *Springer-J. of Sol-Gel Science and Technology*, 69, pp. 207–213, doi: 10.1007/s10971-013-3205-4, 2014.
23. **C. S. Stan***, M. Popa, M.S. Secula, Luminescent xerogels obtained through embedding Tb(III) and Eu(III) complexes in silica matrix, *Elsevier- J. of Optical Materials* 35(9), pp.1741–1747, doi: 10.1016/j.optmat.2013.05.025, 2013.
24. M. S. Secula, L. Zaleschi, **C. S. Stan**, I. Mămăligă, Effects of electric current type and electrode configuration on the removal of Indigo Carmine from aqueous solutions by electrocoagulation in a batch reactor, *Desalination and Water Treatment*, doi: 10.1080/19443994.2013.811116, in press, 2013.

25. M. S. Secula, I. Cretescu, B. Cagnon, L. R. Manea, **C. S Stan**, I. G. Breaban, Fractional Factorial Design Study on the Performance of GAC-Enhanced Electrocoagulation Process Involved in Color Removal from Dye Solutions, *Materials*, 6(7), pp.2723-2746, published online July 2013.
26. **C. S. Stan**, I. Rosca, D. Sutiman, M.S. Secula, Highly luminescent europium and terbium complexes based on succinimide and n-hydroxysuccinimide, *Elsevier-J. of Rare Earths*, 30 (5), pp.401-407, 2012.
27. **C. S. Stan**, M.S. Secula, D. Sibiescu, Highly luminescent polystyrene embedded CdSe quantum dots obtained through a modified colloidal synthesis route, *Springer- Electronic Materials Lett.* 8 (3), pp.275-281, 2012.
28. **C. S. Stan**, D. Sibiescu, I. Cretescu, Solar Energy Powered Phosphorescent Composites for Utilitarian and Emergency Lighting, *J. of Environmental Protection and Ecology* (13) 2, pp. 666-674, 2012.
29. M. D. Tutulea, I. Cretescu, D. Sibiescu, **C. S. Stan**, Electrochemical Sensors for Heavy Metal Ions Detection from Aqueous Solutions, *Environmental Engineering and Management J.* (11) 2, pp. 463-470, 2012.
30. **C. S. Stan**, D. Sibiescu, I. Cretescu, C.Y. Rosca, D. Sutiman, M.D. Tutulea, I. Rosca, New Gd(III) complexes based on Succinimide, N-hydroxysuccinimide and N- hydroxyphtalimide with possible applications in optoelectronics and medical imaging, *J. of Optoelectronics and Advanced Materials*, 5 (9), pp. 994-998, 2011.
31. **C. S. Stan**, D. Sibiescu, M.S. Secula, I. Rosca, I. Cretescu, Phosphorescent Composites Based on Polyethyleneterephthalate, *Materiale Plastice*, 47(3), pp. 324-327, 2010.
32. Popa, M., Ciobanu, B.C., Ochiuz, L., Desbrieres, J., **Stan, C.S.**, Peptu, C.A., Controlling the release kinetics of calcein loaded liposomes from chitosan/tannic acid and chitosan/poly(vinyl alcohol)/tannic acid hydrogels, *Cellulose Chemistry and Technology*, 52, (5-6), pp. 353-370, 2018

Registered patents OSIM:

1. C. S. Stan, D. Sibiescu, L. Chirila, I. Rosca, R. Butnaru, M. Vizitiu, Compus de coordinație al FeIII și procedeu de obținere, RO126207
2. C. S. Stan, D. Sibiescu, I. Rosca, I. Cretescu, D. M. Tutulea, Compozit fosforescent și procedeu de obținere a acestuia, RO126406
3. C. S. Stan, I. Cretescu, D. Sibiescu, M. S. Secula, Procedeu de obținere a unui compozit fluorescent pe baza de polietilentereftalat și nanocristale de seleniura de cadmiu, RO128622
4. C. S. Stan, D. Sibiescu, I. Rosca, I. Cretescu, Procedeu de sinteză a nanocristalelor fluorescente de seleniură de cadmiu, RO127186
5. C. S. Stan, M. Popa, P. Horlescu, Compozit fotoluminescent pe bază de polimeri hidrosolubili și complecși ai gadoliniului, RO31560
6. C. S. Stan, M. S. Secula, Procedeu de preparare criogeluri polimerice pe bază de 2-Hidroxietil metacrilat și oxid de grafen, RO132703A2

Requested patents OSIM:

1. C. S. Stan, M. S. Secula, A. Coroaba, B. Simionescu, Aerogel fotoluminescent higrosensibil pe bază de nanostructuri de carbon, A00747/15.11.2019.
2. C. S. Stan, M. S. Secula, A. Coroaba, B. Simionescu, Hidrogel fluorescent pe bază de nanostructuri de carbon pentru protecția la radiații UV solare, A00751/15.11.2019
3. C. S. Stan*, P. Horlescu, B. Simionescu, C. A. Peptu, S. Ibănescu, Compuși coordinativi ai Gd(III) și Mn(II) utilizabili ca precursori de obținere a nanostructurilor de tip „carbon dots”, A00704/21.09.2018.