

## Europass Curriculum Vitae



### Personal information

First name(s) / Surname(s) **NICOLETA – VIORICA DUMITRASCU**

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Nationality Romanian

Gender Female

### Present employment / position

Professor *Emeritus*

### Work experience

Dates

1974 - 1977, professor, Industrial school no. 7, Iasi

1977 - 1990, assistant, Department of Physics, *Gheorghe Asachi* Technical University, Iasi

1990 - 2001, lecturer, *Alexandru Ioan Cuza* University of Iasi

2001 - 2007, assoc. professor, *Alexandru Ioan Cuza* University of Iasi

2007 – professor, *Alexandru Ioan Cuza* University of Iasi

2009 – PhD supervisor.

Occupation or position held Professor

Name and address of employer Faculty of Physics, *Alexandru Ioan Cuza* University of Iasi, Romania

Type of business or sector

### Education and training

Dates

- D.Sc. in Plasma Physics (1990)

- M. Sc. in Optics, Spectroscopy and Plasma Physics (1974), with average grade 10 (on a scale of 10 maximum)

- B.Sc. in Physics (1973), with average grade 9.83 (10 maximum)

Title of qualification awarded Physicist

Principal subjects/occupational skills covered

- Biomaterials characterization. Biocompatibility testing of materials for medical applications
- Plasma techniques for immobilization of biological molecules (heparin, albumin, IgG, antibiotics etc.) onto the polymeric surfaces
- Reactions of polymerization under the plasma conditions
- Optical and electrical diagnosis of plasma. Dielectric barrier discharges
- Waves and instabilities in low temperature plasmas.

Name and type of organisation providing education and training	Faculty of Physics, <i>Alexandru Ioan Cuza</i> University of Iasi, Romania.									
<b>Personal skills and competences</b>	<ul style="list-style-type: none"> <li>• Biomaterials and biocompatibility testing of materials used in medical applications</li> <li>• Optical and electrical diagnosis of plasmas at atmospheric pressure</li> <li>• Mechanisms of polymerization</li> <li>• Techniques of biomolecules characterization</li> </ul>									
Mother tongue(s)	Romanian									
<b>English</b>										
Self-assessment	<b>Understanding</b>				<b>Speaking</b>			<b>Writing</b>		
<i>European level (*)</i>	Listening		Reading		Spoken interaction		Spoken production			
	C1	Proficient user	C1	Proficient user	A2	Basic user	A2	Basic user	B1	Independent user
Organisational skills and competences	<ul style="list-style-type: none"> <li>• Participation at International programmes of scientific cooperation: Brancusi (2000-2002), COST (2003-2007), CEEPUS (2003-2007; 2007-2012, 2012-2015) Socrates / Erasmus (2000-2015).</li> <li>• Convenor at ESF Exploratory Workshop about <i>Manipulation of Biomaterials surface by Plasma Processing</i> (May 2010)</li> <li>• Peer review activities at <i>Applied Surface Science, Elsevier, IEEE Transactions on Plasma Physics, J. of Coll. Inter Sci., ACS Appl. Mat &amp; Interface, Acta Biomaterialia</i>.</li> </ul>									
Teaching activities	<p>Courses (2009-2016):</p> <ul style="list-style-type: none"> <li>• <i>Biomaterials and Biocompatibility</i>. Master II, Plasma Physics, Biophysics and Medical Physics – in Romanian and English</li> <li>• <i>Ecosystem and Interactions with human</i>. Master II, Plasma Physics</li> <li>• <i>Elements of Plasma Physics. Medical applications</i>. Bachelor III, Biophysics and Medical Physics.</li> </ul>									
Scientific research activity	<p><b>a) Scientific papers</b></p> <ul style="list-style-type: none"> <li>• 53 articles ISI: 45 articles in the topic of <i>Plasma treatments of biomaterials surface and Biocompatibility testing of materials</i>.</li> <li>5 Books: <ul style="list-style-type: none"> <li>- <i>Biomaterials and Plasma Processing</i>, Eds. N. Dumitrascu, I.Topala, ISBN: 978-973-703-543-1, 2011.</li> <li>- <i>Polimeri degradabili si biocompatibili</i> (Cap. VI: Tratamente cu plasma ale polimerilor naturali si sintetici. Importanta si aplicatii in domeniul medical (G. Borcia, N.Dumitrascu), eds: C.Vasile et al., Tehnopress, Iasi, (in Romanian), 2009.</li> <li>- <i>Biomaterials and Biocompatibility</i>, pgs. 312, Ed. Univ. Al.I.Cuza Iasi, 2007.</li> <li>- <i>Dielectric barrier discharge and treatments of polymer surfaces</i> - in <i>Plasmas non thermiques et applications</i>, vol. II, N. Dumitrascu, Ed. Univ. Al. I. Cuza Iasi, 2003.</li> <li>- <i>Introducere în Fizica Plasmei</i>, partea I-a, N. Dumitrascu, Ed. Junimea, Iasi, 1999.</li> </ul> </li> </ul> <p><b>b) Scientific grants</b></p> <ul style="list-style-type: none"> <li>• 6 grants : 3 grants CNCSIS as director, and 3 grants CEEX as coordinator</li> <li>• 1 international grant as convenor, Workshop ESF: <i>Manipulation of Biomaterials by Plasma Processing</i>, Iasi, 26- 30 May, 2010</li> <li>• 2 international grants: Brancusi and COST (<i>Plasma Polymers and Related Materials</i>) as member</li> <li>• 11 grants CNCSIS as member.</li> </ul> <p><b>c) ISI citations:</b></p> <ul style="list-style-type: none"> <li>• Over 688 citations in ISI journals, 2 books and 1 USA patent. 17 Hirsch factor.</li> </ul>									

Other activities	<p><b>a) <u>Visiting professor</u></b></p> <ul style="list-style-type: none"> <li>• <i>Plasma processing of materials and biointerfaces</i>, Leopold Franzens University, Innsbruck, Austria, June 2012.</li> <li>• <i>Le traitement plasma a pression atmospherique de polymeres pour applications bio-medicales</i>, Institut Européen des Membranes, Montpellier, France, 10 Avril-10 May 2007.</li> <li>• <i>Biomaterials. Tests of biocompatibility</i> - Master cours, Leopold Franzens University, Innsbruck, Austria, May 2005.</li> </ul> <p><b>b) <u>Invited talks</u></b> (title of lecture)</p> <ul style="list-style-type: none"> <li>• <i>Medical applications of atmospheric pressure plasma. Tissue – polymeric implants interface</i>, Université de Lille 1, France, September, 2014.</li> <li>• <i>Plasma Physics Laboratory of Iasi</i>, at Conference „40 Jahre Institut für Ionenphysik in Innsbruck“, Leopold Franzens University, Innsbruck, Austria, December 2007.</li> <li>• <i>Optimization of the blood-polymer materials interface by plasma treatments</i>, 4th Joint workgroup meeting COST 527, University of Barcelona, Catalunya, Sant Feliu de Guixols, Spain, 2-5 October 2005.</li> <li>• <i>Hemocompatibility of PA-6 surfaces treated by a dielectric barrier discharge</i>, University of Barcelona, Spain, June 2004.</li> <li>• <i>DBD and its medical applications</i>, Leopold Franzens University, Innsbruck, Austria, May 2004.</li> <li>• <i>Traitements des surfaces polymeres par une decharge a barriere dielectrique</i>, Université Paris-Sud Orsay, France, December 2003.</li> <li>• <i>Tests of biocompatibility</i>, Comenius University, Bratislava, Slovakia, May 2002.</li> </ul> <p><b>c).</b> Co - editor at the Analele “Alexandru Ioan Cuza University of Iasi”. Plasma Physics section (2000-2005).</p> <p><b>d).</b> Coordinator Socrates /Erasmus at the Faculty of Physics (2000-2010).</p>
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*N. Dumitrescu*

April 2021