

## Ioan CĂLINESCU Professor

University "POLITEHNICA" Bucharest  
Faculty of Applied Chemistry and Materials Science  
Department of Bioresources and Polymer Science



### Contact information

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### Education and training

Dates  
Title of qualification awarded  
Principal subjects/occupational skills covered  
Name and type of organization providing education and training  
Level in national or international classification

01/10/1992 - 25/06/1996  
Ph.D.  
Ph.D. in the field: Chemical engineering  
University POLITEHNICA of Bucharest

Dates  
Title of qualification awarded  
Principal subjects/occupational skills covered  
Name and type of organization providing education and training

The most important technical university from Romania  
01/10/1975 - 30/06/1980  
Chemical engineer  
Organic Chemical Technology  
Chemical engineering  
University POLITEHNICA of Bucharest

### Professional experience

Dates  
Occupation or position held  
Main activities and responsibilities  
Name and address of employer  
Type of business or sector

01/10/1987 →  
Chemical engineer, lecturer, reader, professor  
teaching, research  
University POLITEHNICA of Bucharest  
Education

Dates  
Occupation or position held  
Main activities and responsibilities  
Name and address of employer

02/10/1984 - 30/09/1987  
scientific researcher  
Chemical synthesis,  
chemical decontamination  
National Research Center for Military Chemistry  
Bucharest  
Military Research

Type of business or sector

Dates  
Occupation or position held  
Main activities and responsibilities  
Name and address of employer  
Type of business or sector

01/10/1982 - 30/09/1984  
Chemical engineer  
research activity, laboratory activity with students  
University POLITEHNICA of Bucharest  
Education

Dates  
Occupation or position held  
Main activities and responsibilities

01/11/ 1980 – 30/09/ 1982  
Chemical engineer, programmer  
network computers, assembly language, data

Name and address of employer	acquisition Electroaparataj Bucharest
Type of business or sector	electrical engineering

### Academic and research interests

- Biofuels, biorefineries;
- Industrial chemistry – organic chemicals;
- Electron beam and microwave applications in chemical synthesis and material processing;
- Pollution control;
- Chemical and nuclear decontamination

### Teaching activity

<i>Studies</i>	<i>The name of Programme</i>	<i>Code</i>	<i>Course title</i>	<i>Activity type</i>
<i>Bachelor</i>	Chemical Engineering (FILS)	T.5.O.005.EC	Organic Technologies	Course
	Chemistry And Engineering of Organic Substances And Petrochemistry	UPB.11.S.07.O.005	Organic technologies	Course
<i>Master</i>	Biofuels, Biorefinery Technology	UPB.11.M2.O.08-02	Biorefineries technologies	Course and project
	Biofuels, Biorefinery Technology	UPB.11.M3.O.08-03	Pollutant emissions in the biofuels manufacture and use	Course and applications
	Engineering and Management of Complex Projects (The Faculty of Engineering and Management of Technological Systems)	UPB.06.PC.02.O.003	Fuels, burning and pollution	Course

### Publication (selective):

#### Books

- ‘*Heterogeneous Catalysts – Applications in organic chemical industry*’ I.Călinescu, I.Iliuta, Ed. Printech, Bucuresti, 2007, ISBN (13) 978-973-718-646-1,
- “*Apa – procedee de tratare si standarde de calitate – Reglementari legale*”, I.Iliuta, I.Călinescu, Ed. Printech Bucuresti, 2008, ISBN 978-973-718-977-6,
- *Advances in Microwave & Radio Frequency Processing* (Monika Willert - Porada Editor), editura Springer Berlin, 2003, chapters:
  - Environmental Aspects of Microwave Heating in Polyelectrolite synthesis (E. Mateescu, G. Craciun, D. Martin, D. Ighigeanu, M. Radoiu, I.Călinescu, H. Iovu) pp. 349-354
  - Liquid Phase Catalytic Hydrodechlorination of chlorobenze under microwave irradiation (M. Radoiu, I. Calinescu, D. Martin, R. Calinescu) pp. 398-405
- « *Practical Aspects and Applications of Electron Beam Irradiation* », Research Signpost / Transworld Research Network , Kerala, India 2011, Chapter 7: Gaseous Pollutants Treatment by Combined Electron Beams and Microwaves, pp. 181-198
- “*Materiale Polimerice, noi procedee de sinteză și aplicații*”, H.Iovu, I.Călinescu, D.Martin, , Ed. Printech, Bucuresti, 1998 (ISBN 973-9402-58-5)

#### Articles

- Ioan Calinescu, Diana Martin , Andrej Chmielewski , Daniel Ighigeanu, „E-Beam SO<sub>2</sub> and NO<sub>x</sub> removal from flue gases in the presence of fine water droplets”, *Radiation Physics and chemistry*, 2012, <http://dx.doi.org/10.1016/j.radphyschem.2012.10.008>, IF=1.227

- E.Rusen, I.Calinescu, M.Patrascu, "Polymer Colloids and Silver Nanoparticles Hybrid Materials", *Colloid & Polymer Science*, 2012, Volume 290, Number 3, Pages 193-201; IF=1.4098;
- I. Calinescu I Ighigeanu D, Martin D Matei C, Trifan A, Oproiu C , "VOCs Removal by combined use of electron beam, microwave and catalyst, *Revue Roumaine de Chimie*, 54(8), pag. 693-698,
- M. T. Radoiu, D. Martin, I. Calinescu, H. Iovu "Preparation of Polyelectrolytes for Waste water Treatment", *Journal of Hazardous Materials*, vol. 106/B, 2004, pp 27-37, ISSN 0304-3894, DOI 10.1016/j.jhazmat.2003.08.014, IF=4.17
- M.Radoiu, D. Martin, I. Calinescu, "Emission control of SO<sub>2</sub> and NO<sub>x</sub> by irradiation methods", *Journal of Hazardous Materials*, B97 (2003) 145-158. ISSN 0304-3894, IF=4.17

### **Research projects**

(Project manager)

- Technology and Equipment for the Treatment of Solid Oil Waste (drilling and sludge pit) CEEX 138/2006 (435 k€)
- VOC Removal by combined electron beam and microwave treatment , CEEX 55/2005) (415 k€)

(Person in charge for UPB)

- VOC Removal by combined electron beam and microwave treatment –IAEA-Wien no. 13138/RF - 2005-2006;
- Conversion performance increasing of the acid gases from flue gas by combined treatment with electron beam and microwave; PNCDI-2 no. 21-025/200

### **Other information**

In 2005, 2006, 2007, and 2008 I was invited to present my research at the "Research Coordination Meeting on Electron Beam Treatment of organic pollutants contained in gaseous streams", organized by the International Atomic Energy Agency in Vienna, Beijing, Warsaw, and Sofia. Here we made contact with several of the most renowned specialists in the world in the remediation of industrial gases using electron beam and microwave.