

# Oana Cristina PÂRVULESCU

## Lecturer



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### Contact information

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### Education and training

Dates	2005 - 2007
Title of qualification awarded	Postdoctoral studies
Principal subjects/occupational skills covered:	Modelling, simulation and experimentation of chemical micro- and nanoimplants in porous vegetal structures
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest, Faculty of Industrial Chemistry
Level in national or international classification	
Dates	1997 - 2004
Title of qualification awarded	PhD in Chemical Engineering
Principal subjects/occupational skills covered:	Momentum and mass transfer in the ion exchange process, hydrodynamics of external-loop air-lift apparatus, modelling and simulation PhD thesis: "Transfer phenomena in the ion exchange process"
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest, Faculty of Industrial Chemistry
Level in national or international classification	
Dates:	1994 - 1995
Title of qualification awarded	Postgraduate in Chemical Engineering
Principal subjects/occupational skills covered:	Advanced separations and purifications, mass transfer intensification, diffusion in porous structures, modelling and simulation of separations processes
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest, Faculty of Industrial Chemistry
Level in national or international classification	
Dates:	1989 - 1994
Title of qualification awarded	Chemical engineer
Principal subjects/occupational skills covered:	Chemical engineering basis, mathematics applied in chemical engineering, chemical reactors, momentum, heat and mass transfer processes
Name and type of organisation providing education and training	POLITEHNICA University of Bucharest, Faculty of Industrial Chemistry
Level in national or international classification	

## Professional experience

Dates	2013 -
Occupation or position held	Lecturer
Main activities and responsibilities	Courses, seminars, laboratories and research in the field of chemical engineering.
Name and address of employer	POLITEHNICA University of Bucharest, 313 Splaiul Independenței, Bucharest
Type of business or sector	Education / Research
Dates	2010 - 2013
Occupation or position held	Expert in SOP HRD 61839 project "Looking towards the Future - Professional Training of Teaching Staff to Use Modern Digital Resources in Efficient Teaching of Chemistry – e-Chemistry"
Main activities and responsibilities	Information, publicity and dissemination of project results, selection and organization of target group, coordination of training sessions
Name and address of employer	POLITEHNICA University of Bucharest, 313 Splaiul Independenței, Bucharest
Type of business or sector	Education
Dates	2005 - 2010
Occupation or position held	Researcher
Main activities and responsibilities	Research in the field of chemical engineering, results dissemination (papers in journals and conference proceedings)
Name and address of employer	POLITEHNICA University of Bucharest, 313 Splaiul Independenței, Bucharest
Type of business or sector	Research
Dates	1998 - 2005
Occupation or position held	Laboratory head
Main activities and responsibilities	Production and sale of adhesive thread (synthesis, quality control, work team leading, raw materials/finite product administration, suppliers/clients relations)
Name and address of employer	Adhesive Thread Factory of Bucharest, 15 Puțul lui Crăciun, Bucharest
Type of business or sector	Production
Dates	1995-1998
Occupation or position held	Laboratory head
Main activities and responsibilities	Production and sale of polyurethane foam (synthesis, quality control, work team leading, raw materials/finite product administration, suppliers/clients relations, primary accountancy), research in the field of polyurethane foam
Name and address of employer	Polyurethane Factory of Bucharest, 46 Pipera , Bucharest
Type of business or sector	Production / Research

## Academic and research interests

### **Academic interests**

- Unit operations in chemical and food industry
- Chemical and biochemical unit processes

### **Research interests**

- Pyrolysis of unimpregnated and nickel impregnated biomass producing pyrolytic char, oil and gases
- Synthesis of activated carbon and carbon-supported nickel catalyst by pyrolytic char activation
- Testing of carbon-supported nickel catalyst in hydrogenation reactions

- Testing of pyrolytic activated carbon as well as of other materials prepared in Laboratory of Property Transport Phenomena and Unit Operations, e.g. biocellulose, biocellulose-magnetite composite, in adsorption processes
- VOCs adsorption on various adsorbents
- Separation and purification processes by ion exchange
- Extraction of active compounds from vegetal materials
- Sol-gel synthesis

### Teaching activity

Ciclu studii	Denumire specializare	Cod disciplină din planul de învățământ	Titlu disciplină	Tip activitate
Licență	Ingineria și protecția mediului în industria chimică și petrochimică	UPB.11.T.05.O.105	Operații unitare în industriile de proces	Curs Seminar Lucrări practice
Licență	Chimia și ingineria substanțelor organice, petrochimie și carbochimie	UPB.11.T.06.O.312	Operații unitare în industriile de proces	Seminar Lucrări practice
Licență	Ingineria și informatica proceselor chimice și biochimice	UPB.11.S.07.O.506	Procese unitare chimice și biochimice	Lucrări practice
Licență	Ingineria și informatica proceselor chimice și biochimice	UPB.11.T.01.O.004	Utilizarea calculatoarelor și grafică computerizată	Lucrări practice
Licență	Ingineria proceselor alimentare	UPB.07.F.03.O.006	Informatică aplicată	Lucrări practice
Licență	Ingineria proceselor alimentare, Controlul și expertiza produselor alimentare	UPB.07.F.03.O.006 UPB.11.T.04.O.211	Operații unitare în industria alimentară	Seminar Lucrări practice Proiect
Licență	Chimie alimentară și tehnologii biochimice	UPB.11.S.08.O.414	Tehnologii biochimice	Lucrări practice

### Publications (selective):

#### Articles

- Sandu Ohreac, B., Dobre, T., Pârvulescu, O.C., Danciu, T.D., Integration of ABE Solvents Fed-Batch Biosynthesis with Their Recovery by Gas-Stripping, *Rev. Chim. (Bucharest)*, 65 (5), 2014 (in press).
- Dobre, T., Sandu Ohreac, B., Pârvulescu, O.C., Danciu, T.D., Effect of Solid Carriers on Oxygen Mass Transfer in a Stirred Tank Bioreactor, *Rev. Chim. (Bucharest)*, 65 (4), 2014 (in press).
- Pârvulescu, O.C., Dobre, T., Vasilescu-Mirea R., Ceatră, L., Iavorschi, G., Statistic and Kynetic Models for Wheat Grains Pyrolysis Coupled with Volatiles Reforming, *U.P.B. Sci. Bull. Series B*, 75 (4), 53-68, 2013.
- Dobre, T., Pârvulescu, O.C., Rodriguez Ramos, I., Ceatră, L., Stroescu, M., Stoica, A., Mirea, R., Global Reaction Kinetics and Enthalpy in Slow Pyrolysis of Vegetal Materials, *Rev. Chim. (Bucharest)*, 63 (1), 54-59, 2012.
- Dobre, T., Pârvulescu, O.C., Ceatră, L., Stroescu, M., Stoica, A., Fixed Bed Pyrolysis of Untreated and Ni (II) Impregnated Corn Grains: Experiment and Modelling, *U.P.B. Sci. Bull. Series B*, 74 (1), 143-158, 2012.

- Iancu, P., Stroescu, M., Josceanu, A.M., Danciu, T.D., Pârvulescu, O.C., Boscornea, C., Alexa, How Does e-Chemistry Work?, *Chem. Eng. Trans.*, 29, 1075-1080, 2012.
- Aruș, V.A., Pârvulescu, O.C., Jinescu, C., Nistor, I.D., Mathematical Modelling of Retention Process of Lactic Acid on Anionic Clay Particles Using Mechanical Mixing for Process Intensification, *Rev. Chim. (Bucharest)*, 62 (12), 1180-1184, 2011.
- Dobre, T., Pârvulescu, O.C., Sanchez-Marcano, J., Stoica, A., Stroescu, M., Iavorschi, G., Characterization of Gas Permeation through Stretched Polyisoprene Membranes, *Sep. Purif. Technol.*, 82, 202-209, 2011.
- Pârvulescu, O.C., Dobre, T., Ceatră, L., Iavorschi, G., Characteristics of Corn Grains Pyrolysis in a Fixed Bed Reactor, *Rev. Chim. (Bucharest)*, 62 (1), 89-94, 2011.
- Dobre, T., Rodriguez Ramos, I., Guerrero-Ruiz, A., Pârvulescu, O.C., Ceatră, L., Preparation and Characterization of New Carbon-Supported Nickel Catalysts, *17<sup>th</sup> Romanian International Conference on Chemistry and Chemical Engineering (RICCCE)*, Sinaia, Romania, Proceedings (on CD), S.4.73-S.4.82, Ed. Printech, 2011.
- Dobre, T., Pârvulescu, O.C., Ceatră, L., Stroescu, M., Stoica, A., Iavorschi, G., Process Parameters Estimation at the Vegetal Materials Pyrolysis (I): Global Kinetics, *38<sup>th</sup> International Conference of Slovak Society of Chemical Engineering*, Tatranske Matliare, Slovakia, Proceedings (on CD), 1321-1332, 2011.
- Dobre, T., Pârvulescu, O.C., Stoica, A., Iavorschi, G., Characterization of Cooling Systems based on Heat Pipe Principle to Control Operation Temperature of High-Tech Electronic Components, *Appl. Therm. Eng.*, 30 (16), 2435-2441, 2010.
- Dobre, T., Pârvulescu, O.C., Iavorschi, G., Stoica, A., Stroescu, M., Catalytic Effects at Pyrolysis of Wheat Grains Impregnated with Nickel Salts, *International Journal of Chemical Reactor Engineering*, 8, 1968-1992, 2010.
- Dobre, T., Pârvulescu, O.C., Calotă, L., Jipa, I., Modelling of Fixed Bed Multicomponent Ion Exchange, *Rev. Chim. (Bucharest)*, 61 (2), 213-217, 2010.
- Dobre, T., Pârvulescu, O.C., Stoica, A., Stroescu, M., Experimental Investigation and Modelling of Inulin and Glycyrrhizin Extraction, *Rev. Chim. (Bucharest)*, 61 (1), 82-86, 2010.
- Dobre, T., Pârvulescu, O.C., Ceatră, L., Stroescu, M., Iavorschi, G., Catalytic Effects at the Vegetal Materials Pyrolysis, *6<sup>th</sup> European Meeting on Chemical Industry and Environment*, Mechelen, Belgium, Proceedings, vol. 1, 605-615, 2010.
- Pârvulescu, O.C., Dobre, T., Qin, J., Iavorschi, G., VOCs Adsorption on Activated Carbon: Experiment and Modelling, *19<sup>th</sup> International Congress of Chemical and Process Engineering (CHISA)*, Prague, Czech Republic, CD-ROM of Full Texts, 1-10, 2010.
- Dobre, T., Pârvulescu, O.C., Iavorschi, G., Stoica, A., Stroescu, M., Analysis of Sol Evolution in Sol-Gel Synthesis by Use of Rheological Measurements, *U.P.B. Sci. Bull. Series B*, 71 (3), 55-64, 2009.
- Dobre, T., Stoica, A., Pârvulescu, O.C., Stroescu, M., Iavorschi, G., Factors Influence on Bacterial Cellulose Growth in Static Reactors, *Rev. Chim. (Bucharest)*, 59 (5), 191-195, 2008.

#### **Patents**

- Dobre, T., Stoica, A., Stroescu, M., Iavorschi, G., Pârvulescu, O.C., Sanchez-Marcano, J., Rivallin, M., Membranes and Sorbents Based on Cellulose/Biocellulose-Silica Gel Composite, RO Patent No. 127026 A2, 2012.

#### **Research projects**

- Team member in more than 10 research projects.

#### **Other information**

- Languages: English, French, German.