

# Gheorghe NECHIFOR

## Professor

University "POLITEHNICA" Bucharest  
Faculty of Applied Chemistry and Materials Science  
Department Analytical Chemistry and Environmental Engineering



### 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

Dates  
Title of qualification awarded  
Principal subjects/occupational skills covered

Name and type of organization providing education and training

Dates  
Title of qualification awarded  
Principal subjects/occupational skills covered

Name and type of organization providing education and training

Dec. 1989 - Jan. 1996  
Ph.D. in Chemical Engineering  
Separation and Concentration Processes by Selective Membranes, Ph.D. thesis adviser - Dr. Georgeta POPESCU  
University Babes-Bolyai of Cluj-Napoca, Physical - Chemistry Department

Oct. 1996- Jul. 1998  
Academic Post University School "Petru SPACU"  
Analytical Control of the Environment Quality and Depollution Techniques, Research advisor: Prof. Dr. Doc. Constantin LUCA  
University POLITEHNICA of Bucharest, Faculty of Industrial Chemistry

Oct. 1980- Jun. 1985  
Diplomat Engineer  
Organic Chemical Technology, Research advisor: Prof. Dr. Eng. Margareta AVRAM and Prof. Dr. Eng. Aurelia GHENCIULESCU  
University POLITEHNICA of Bucharest, Faculty of Chemical Technology

### Professional experience

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

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

Type of business or sector

Dates  
Occupation or position held

Main activities and responsibilities

Sept. 1985- Sept. 1987  
Engineer  
Cellulose fiber  
Viscofil- Bucharest  
Regenerated cellulose

Oct. 1986-Sept. 1988  
Engineer  
Colloidal chemistry laboratory  
Institute of Physical Chemistry, ICECHIM Bucharest  
Membrane and membrane processes

Oct. 1988- 1991  
Assistant (1990-1993), lecturer (1993-1996), reader (1996-1999), professor (1999-2025) and PhD supervisor (2004-present)  
Analytical Chemistry and Instrumental Analysis laboratory

Name and address of employer

Type of business or sector

University POLITEHNICA of Bucharest, Faculty  
of Applied Chemistry and Materials Sciences  
Analytical Chemistry and Environmental  
Engineering

## Academic and research interests

Romanian Academy Prize “C.D. Nenitzescu” for “ Membrane and Membrane Processes”

Award: 1994-1995 Vermeil and Silver Medals at International Patent Saloon, Geneva, Switzerland

## Teaching activity

<b>Studies</b>	<b>The name of Programme</b>	<b>Code</b>	<b>Course title</b>	<b>Activity type</b>
Master	Analytical Environmental Control and Remediation Techniques	UPB.11.01.O.10-01	Analytical Control of Environmental Quality	curses and laboratory
Master	Analytical Environmental Control and Remediation Techniques	UPB.11.01.O.10-05	Sampling and sample preparation for analysis	curses and laboratory
Master	Analytical Environmental Control and Remediation Techniques	UPB.11.02.A.10-14	Polymeric membranes	curses

## Publication (selective):

### Books

1. G. Nechifor, M.D. Barboiu, Materials, Membranes and Processes, Editura PRINTECH, Bucuresti, 2007 and 2009, ISBN 978-973-718 -771-0, pp. 221
2. Systems Membranes-complex roadmaps towards functional devices and coupled processes SYSMEM, Mihail Barboiu, Gheorghe Nechifor, Editura PRINTECH, Bucuresti, 2010, ISBN 978-606-521-526-9, pp. 330
3. Trends in membranology, Stefan Ioan Voicu, Gheorghe Nechifor, Editura PRINTECH, Bucuresti, 2010, ISBN 978-606-521-525-2, pp. 115

### Patents

1. G. Nechifor, G. Popescu, N. Luca, M. Ionescu, M. Bianca, T. Rădulescu, Prepn. of microfiltration polymer membranes|by producing ether! sulphone soln. for film forming, and coagulation, RO103257/1993
2. G. Nechifor, G. Popescu, N. Luca, I. Iosif, T. Rădulescu, A. Poboran, Prodn. of membrane for mol. level sepn.|consists of prepn. of polyphenylene oxide soln. in polar solvents for coagulation, RO103258/1993
3. A.M. Nechifor, G. Nechifor, V. Pordea, G. Popescu, Cleaner for waste water contg. aromatic derivs. giving repeated cleaning|includes disperser for emulsifying which is connected to line housing static turbulence promoters whence the waste is passed into settler, RO108 420 /1996
4. A.M. Nechifor, G. Nechifor, M. Piso, G. Tutos, G. Pintilescu, Liquid membrane based gas and liquids mixture separator|consists of magnetite etc. particles membrane prepared in a relatively short time and adjustable, RO110 407/1996
5. N. Luca, G. Nechifor, A. M. Nechifor, T. Rădulescu, Prepn. of polysulphone asymmetric microporous membranes for filtration|by casting solution of polymer in dimethylformamide onto support and rinsing formed film in ethanol, RO111 548 B1/ 1997

### Articles

1. **Gheorghe Nechifor**, G. Popescu, N. Luca, A. M. Nechifor, Obtaining of membranes by Chemical Reaction-Induced Phase Inversion, Revue Roumaine de Chimie 1994), 39(8), 885-890
2. G. Popescu, **Gheorghe Nechifor**, M. Olteanu, The Influence of Surfactants on the Wetting of Hydrophobic microporous Surfaces, Colloid and Surfaces A: Physicochemical and Engineering Aspects, (1994), 90, 1-8
3. C. Moldovan, R. Iosub, D. Dascălu, **Gheorghe Nechifor**, Anisotropic Etching of Silicon in a Complexant Redox Alkaline System, Sensors and Actuators B 58, (1999), 438-449.
4. **Gheorghe Nechifor**, S.I. Voicu, A.C. Nechifor, Garea, Nanostructured hybrid membrane polysulfone-carbon nanotubes for hemodialysis, Desalination, 241 (1-3), (2009), 342-348.
5. G. Batrinescu, M.A. Constantin, A. Cuciureanu, **G Nechifor**, Polysulfone–polyaniline type membranes obtained in a steady state system: Structural and hydrodynamic characteristics, Polymer Engineering & Science 54 (7), 2014, pp. 1640-1647;
6. S. Koter, P. Szczepański, M. Mateescu, **G Nechifor**, L. Badalau, I. Koter, Modeling of the cadmium transport through a bulk liquid membrane, Separation and Purification Technology 107, 2013, pp. 135-143;
7. I. Nitoi, P. Oancea, I. Cristea, L. Constantin, **G Nechifor**, Kinetics and mechanism of chlorinated aniline degradation by TiO<sub>2</sub> photocatalysis, Journal of Photochemistry and Photobiology A: Chemistry 298, 2015, pp.17-23;
8. C. Orbeci, I. Untea, **G Nechifor**, A.E. Segneanu, M.E. Craciun, Effect of a modified photo-Fenton procedure on the oxidative degradation of antibiotics in aqueous solutions, Separation and Purification Technology 122, 2014, pp.290-296;
9. Cristina Dumitriu, Stefan Ioan Voicu, Alexandru Muhulet, **Gheorghe Nechifor**, Simona Popescu, Camelia Ungureanu, Andrea Carja, Florin Miculescu, Roxana Trusca, Cristian Pirvu, Production and characterization of cellulose acetate–titanium dioxide nanotubes membrane fraxiparinized through polydopamine for clinical applications, Carbohydrate polymers, 181, 215-223

10. M Ghimpusan, G Nechifor, AC Nechifor, SO Dima, P Passeri, *Case studies on the physical-chemical parameters' variation during three different purification approaches destined to treat wastewaters from food industry*, Journal of environmental management 203, 811-816

### **Research projects**

- Inovative separations for the selective recycling of heavy metal ions and organics of biological interest, INCO COPERNICUS, nr ERB IC 15-CT98-0147; UPB-Romania, Barcelona, Montpellier, Varsovia, Bratislava, 1998-2002
- Polysulfone-polyaniline functional nanocomposites for bioanalysis and bioseparations (NANOBIOPAS), 71-025, 2007-2010
- Nanocomposites with electric and magnetic properties for high selective separative processes (NEMSEPSSEL), 71-034, 2007-2010

Member of the research team in other 50 research projects.

### **Other informations**

#### *Academic recognize*

1996, Romanian Academy Prize "C.D. Nenitzescu" for "Membrane and Membrane Processes"

Award: 1994-1995 Vermeil and Silver Medals at International Patent Saloon, Geneva, Switerland

#### *Organization of international scientific meetings*

- Romanian International Conference on Chemistry and Chemical Engineering-RICCCE, 2001, 2003 Romania
- Honorary Symposiun Constantin LUCA, 2007, 2009, 2011, Sinaia, Romania,
- Symposium of Colloid and Surface Chemistry, Timisoara, 1993, 1995, Bucuresti 1998, Galați, 2005
- 20 Ans de coopération franco-roumaine dans le domaine des membranes: axe Montpellier-Bucarest, 2010
- BRINCUSI Project France-Romania, University Montpellier II - Membrane European Institute –University POLITEHNICA of Bucharest, 2007-2009
- European Membrane Society- Summer School, Bucharest 14-20 june 2010

### **Memberships to Editorials Boards of International Journals**

1. Journal of Membrane Science (reviewer)
2. World Journal of Nephrology (editorial board from 2011)
3. Desalination (reviewer)
4. Chemical Engineering Journal (reviewer)
5. Journal of Industrial and Engineering Chemistry (reviewer)
6. Central European Journal of Chemistry, (reviewer)
7. Arabian Journal of Chemistry (reviewer)
8. Polish Journal of Environmental Studies, (reviewer)
9. Natural Product Research, (reviewer)
10. Journal of Herbal Medicine (reviewer)

### **Other electronic informations:**

<http://www.chimie.upb.ro/educatie/scoala-doctorala/conducatori/nechifor-gheorghe>

[https://www.researchgate.net/profile/Gheorghe\\_Nechifor/info](https://www.researchgate.net/profile/Gheorghe_Nechifor/info)

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