



ACADEMIA ROMÂNĂ
SCOSAAR

FIȘA DE ÎNDEPLINIRE A STANDARDELOR MINIMALE
conform CNATDCU – COMISIA DE CHIMIE
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Candidat: CSI Dr. Maria BERCEA

Categorie Habilitare	N_{max} (*)	FIC (**)	FIC_D (***)	FIC_{AP} (****)	FIC_{AC} (*****)	H index
Cerinte	50	100	70	50	25	13
Realizat	50	189,329	189,329	108,099	42,76	17

- (*) **N_{max}** = număr maxim de lucrări științifice selectate, organizate în ordine descrescătoare a factorilor de impact corespunzători revistelor în care au fost publicate;
- (**) **FIC** = factorul de impact cumulat minimal al revistelor în care s-au publicat cele 50 de lucrări selectate;
- (***) **FIC_D** = factorul de impact cumulat minimal din cele 50 publicații selectate în domeniile de cercetare declarate;
- (****) **FIC_{AP}** = factorul de impact cumulat minimal din cele 50 de publicații selectate în calitate de autor principal (prim autor și/sau autor de corespondență);
- (*****) **FIC_{AC}** = factorul de impact cumulat minimal din cele 50 de publicații selectate în calitate de autor de corespondență.

Data: 24.05.2017

Semnătura:

CSI Dr. Ing. BERCEA Maria



**Lista a 50 articole selectate (N_{max})
publicate în reviste de specialitate de circulație internațională
(indexate de Web of Science)**

Nr. crt.	Autori/Articol/Revista	F.I. (2015)
1.	Bercea M. , Ioan C., Ioan S., Simionescu B.C., Simionescu C.I. Ultrahigh molecular weight polymers in dilute solutions , <i>Progress in Polymer Science</i> , 24 , 379–424 (1999) DOI: 10.1016/S0079-6700(99)00007-6, ISSN: 0079-6700	27.184
2.	Teodorescu M., Bercea M. , Morariu S. Biomaterials of poly(vinyl alcohol) and natural polymers , <i>Polymer Reviews</i> , in press (2017)	6.216
3.	Bercea M. , Peiti C., Navard P., Simionescu B.C. Shear rheology of semidilute poly(methyl methacrylate) solutions , <i>Macromolecules</i> , 26 , 7095–7096 (1993) ISSN: 0024-9297, DOI: 10.1021/ma00077a061	5.554
4.	Bercea M. , Navard P. Shear dynamics of aqueous suspensions of cellulose whiskers , <i>Macromolecules</i> , 33 , 6011–6016 (2000) ISSN: 0024-9297, DOI: 10.1021/ma000417p	5.554
5.	Bercea M. , Eckelt J., Morariu S., Wolf B.A. Islands of immiscibility for solutions of compatible polymers in a common solvent: experiment and theory , <i>Macromolecules</i> , 42 (10), 3620–3626 (2009) ISSN: 0024-9297, DOI: 10.1021/ma9002769	5.554
6.	Spatareanu A., Bercea M. , Budtova T., Harabagiu V., Sacarescu L., Coseri S. Synthesis, characterization and solution behaviour of oxidized pullulan , <i>Carbohydrate Polymers</i> , 111 , 63–71 (2014) ISSN: 0144-8617, DOI: 10.1016/j.carbpol.2014.04.060	4.219
7.	Nita L.E., Chiriac A., Bercea M. Effect of pH and temperature upon self-assembling process between poly(aspartic acid) and Pluronic F127 , <i>Colloids and Surfaces B: Biointerfaces</i> , 119 , 47–54 (2014) ISSN: 0927-7765, DOI: 10.1016/j.colsurfb.2014.04.023	3.902
8.	Brunchi C.E., Morariu S., Bercea M. Intrinsic viscosity and conformational parameters of xanthan in aqueous solutions , <i>Colloids and Surfaces B: Biointerfaces</i> , 122 , 512–519 (2014) ISSN: 0927-7765, DOI: 10.1016/j.colsurfb.2014.07.023	3.902
9.	Nita L.E., Chiriac A.P., Bercea M. , Wolf B.A. Synergistic behavior of poly(aspartic acid) and Pluronic F127 in aqueous solution as studied by viscometry and dynamic light scattering , <i>Colloids and Surfaces B: Biointerfaces</i> , 103 , 544–549 (2013) DOI:10.1016/j.colsurfb.2012.10.054, ISSN: 0927-7765	3.902
10.	Nita L.E., Chiriac A.P., Neamtu I., Bercea M. Study of a binary interpenetrated polymeric complex by correlation of rheological parameters with zeta potential and conductivity , <i>Colloids and Surfaces B: Biointerfaces</i> , 76 , 70–75 (2010) doi: 10.1016/j.colsurfb.2009, ISSN: 0927-7765	3.902
11.	Bercea M.* , Wolf B.A. Dependence of solvent quality on the composition of copolymers: Experiment and theory for solutions of P(MMA-<i>ran</i>-<i>t</i>-BMA) in toluene and chloroform , <i>Soft Matter</i> , 11 (3), 615–621 (2015) ISSN: 1744-683X, DOI: 10.1039/c4sm02568g	3.798
12.	Bercea M.* , Morariu S., Rusu D. In-situ gelation of aqueous solutions of entangled poly(vinyl alcohol) , <i>Soft Matter</i> , 9 (4), 1244–1253 (2013) ISSN: 1744-683X, DOI: 10.1039/C2SM26094H	3.798
13.	Bercea M.* , Wolf B.A. Viscometry of polyelectrolyte solutions: Star-like versus linear poly[[2-(methacryloyloxy)ethyl] trimethylammonium iodide] and specific salt effects , <i>European Polymer Journal</i> , 93 148–157 (2017) ISSN: 0014-3057; http://dx.doi.org/10.1016/j.eurpolymj.2017.05.040	3.485
14.	Bercea M.* , Morariu S., Wolf B.A. Consequences of linking charged and uncharged monomers to binary copolymers studied in dilute solution. Part I: Viscometric behavior of the homopolymers, the effects of charging, and uncommon salt effects , <i>European Polymer Journal</i> , 88 , 412–421 (2017) ISSN: 0014-3057, http://dx.doi.org/10.1016/j.eurpolymj.2016.12.008	3.485
15.	Bercea M.* , Wolf B.A. Consequences of linking charged and uncharged monomers to binary copolymers studied in dilute solution. Part II: Non-additivity effects in the viscometric behavior , <i>European Polymer Journal</i> , 88 , 422–432 (2017) http://dx.doi.org/10.1016/j.eurpolymj.2016.12.007 , ISSN: 0014-3057	3.485
16.	Coseri S., Bercea M. , Harabagiu V., Budtova T. Oxydation vs. degradation in polysaccharides: pullulan – a case study , <i>European Polymer Journal</i> , 85 , 82–91 (2016) DOI: 10.1016/j.eurpolymj.2016.10.020	3.485
17.	Morariu S., Bercea M. , Teodorescu M., Avadanei M. Tailoring the properties of PVA/PVP hydrogels for biomedical application , <i>European Polymer Journal</i> , 84 , 313–325 (2016), DOI: 10.1016/j.eurpolymj.2016.09.033, ISSN: 0014–3057	3.485
18.	Brunchi C.E., Bercea M. , Morariu S., Avadanei M. Investigations of the interactions between xanthan gum and poly(vinyl alcohol) in solid state and aqueous solutions , <i>European Polymer Journal</i> , 84 , 161–172 (2016) ISSN: 0014–3057, DOI: 10.1016/j.eurpolymj.2016.09.006	3.485

19. Bercea M.*, Bibire L.E., Morariu S., Teodorescu M., Carja G. pH influence on rheological and structural properties of chitosan/poly(vinyl alcohol)/layered double hydroxide composites, *European Polymer Journal*, 70, 147–156 (2015) ISSN: 0014–3057, doi.org/10.1016/j.eurpolymj.2015.07.013 3.485
20. Morariu S., Bercea M., Ioan C., Ioan S., Simionescu B.C. Conformational characteristics of oligo- and polyacrylonitrile, *European Polymer Journal*, 35(3), 377–383 (1999) DOI: 10.1016/S0014-3057(98)00144-X 3.485
21. Bercea M., Morariu S., Ioan C., Ioan S., Simionescu B.C. Viscometric study of extremely dilute polyacrylonitrile solutions, *European Polymer Journal*, 35(11), 2019–2024 (1999) DOI: 10.1016/S0014-3057(98)00287-0 3.485
22. Ioan S., Bercea M., Ioan C., Simionescu B.C. Solution properties of ultrahigh molecular weight polymers. 20. polymer chain dimensions of poly(methyl methacrylate), *European Polymer Journal*, 31(1), 85–89 (1995) ISSN: 0014-3057 3.485
23. Simionescu C.I., Ioan S., Bercea M., Mitu N., Simionescu B.C. High Molecular Weight Polystyrene in Solvent Mixtures. Preferential and Total Adsorption, *European Polymer Journal*, 29(2/3), 183–191 (1993) ISSN: 0014-3057, DOI: 10.1016/0014-3057(93)90081-P 3.485
24. Simionescu B.C., Ioan S., Bercea M., Simionescu C.I. Solution characterization of high molecular weight polyacrylonitrile obtained by plasma-induced polymerization, *European Polymer Journal*, 27(6), 553–556 (1991) ISSN: 0014-3057, DOI: 10.1016/0014-3057(91)90182-N 3.485
25. Simionescu B.C., Ioan S., Bercea M., Simionescu C.I. Unperturbed dimensions of high molecular weight polyacrylonitrile, *European Polymer Journal*, 27(7), 589–591 (1991) DOI: 10.1016/0014-3057(91)90140-J 3.485
26. Schneider A., Schuld N., Bercea M., Wolf B.A. On what terms and why the thermodynamic properties of polymer solutions depend on chain length up to the melt, *Journal of Polymer Science Part B: Polymer Physics*., 42, 1601–1609 (2004) ISSN: 0887-6266, DOI: 10.1002/polb.20041 3.318
27. Teodorescu M., Morariu S., Bercea M., Sacarescu L. Viscoelastic and structural properties of poly(vinyl alcohol)/poly(vinyl pyrrolidone) hydrogels, *RSC Advances*, 6, 39718–39727 (2016) ISSN: 2046-2069 DOI: 10.1039/c6ra04319d 3.289
28. Bercea M.*, Wolf B.A. Thermodynamics of copolymer solutions: How the pair of interactions contribute to the overall effect, *Journal of Physical Chemistry B*, 118(31), 9414 – 9419 (2014) ISSN: 1520–6106, DOI: 10.1021/jp505155e 3.187
29. Morariu S., Bercea M. Effect of temperature and aging time on the rheological behavior of aqueous poly(ethylene glycol)/Laponite RD dispersions, *The Journal of Physical Chemistry B*, 116, 48 – 54 (2012) ISSN 1520-6106, DOI: 10.1021/jp208136g 3.187
30. Nita L.E., Chiriac A.P., Bercea M., Nistor M.T. Static and dynamic investigations of poly(aspartic acid) and Pluronic F127 complex prepared by self-assembling in aqueous solution, *Applied Surface Science*, 359, 486–495 (2015) ISSN: 0169-4332, DOI: 10.1016/j.apsusc.2015.10.116 3.150
31. Nita L.E., Chiriac A.P., Bercea M., Asanduleasa M., Wolf B.A. Self-assembling of poly(aspartic acid)/BSA mixtures in aqueous solutions, *International Journal of Biological Macromolecules*, 95, 412–420 (2017) ISSN: 0141-8130, doi.org/10.1016/j.ijbiomac.2016.11.080 3.138
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33. Bercea M., Wolf, B. A. Vitrification of polymer solutions as a function of solvent quality, analyzed via vapor pressures, *The Journal of Chemical Physics*, 124(17), 174902 (7 pages) (2006) ISSN: 0021-9606 2.894
34. Nita L.E., Chiriac A.P., Bercea M., Neamtu I. Aspects concerning the temperature influence on the polymer/polymer interactions between poly(aspartic acid) and poly(ethylene glycol), *Colloid and Surfaces A: Physicochemical and Engineering Aspects*, 374, 121–128 (2011) ISSN: 0927-7757 2.760
35. Nita L., Chiriac A., Neamtu I., Bercea M., Pintilie M. An analysis of complexation between poly(aspartic acid) and poly(ethylene glycol), *Colloid and Surfaces A: Physicochemical and Engineering Aspects*, 348, 254–262 (2009) ISSN: 0927-7757 2.760
36. Morariu S., Bercea M., Brunchi C.E. Effect of cryogenic treatment on the rheological properties of chitosan/poly(vinyl alcohol) hydrogels, *Industrial & Engineering Chemistry Research*, 54(45), 11475–11482 (2015) DOI: 10.1021/acs.iecr.5b603088, ISSN: 0888-5885 2.567
37. Bercea M.*, Darie R.N., Nita L.E., Morariu S. Temperature responsive gels based on Pluronic F127 and poly(vinyl alcohol), *Industrial & Engineering Chemistry Research*, 50, 4199–4206 (2011), ISSN: 0888-5885, DOI: 10.1021/ie1024408 2.567
38. Morariu S., Brunchi C.E., Hulubei C., Bercea M.* Influence of temperature on the rheological behavior of polymer mixtures in solution, *Industrial & Engineering Chemistry Research*, 50, 9451–9455 (2011), DOI: 10.1021/ie200736e, ISSN: 0888-5885 2.567
39. Amarioarei G., Spiridon I., Lungu M., Bercea M.* Rheological investigation of *Prunus sp.* gums in aqueous medium, *Industrial & Engineering Chemistry Research*, 50(24), 14148–14154 (2011) ISSN: 0888-5885 2.567
40. Brunchi C.E., Morariu S., Cazacu M., Bercea M.* Influence of the solvent quality on the thermodynamic behavior of polymethylphenylsiloxane solutions, *Industrial & Engineering Chemistry Research*, 49(24), 12740–12746 (2010) ISSN: 0888-5885 2.567
41. Bercea M., Eckelt J., Wolf B.A. Vapor pressures of polymer solutions and the modeling of their composition dependence, *Industrial & Engineering Chemistry Research*, 48(9), 4603-4606 (2009) DOI: 10.1021/ie801965h, ISSN: 0888-5885 2.567

42. [Bercea M.](#), Eckelt J., Wolf B.A. [Random copolymers: their solution thermodynamics as compared with that of the corresponding homopolymers](#), *Industrial & Engineering Chemistry Research*, **47**, 2434–2441 (2008) ISSN: 0888-5885 **2.567**
43. [Bercea M.](#), Nita L.E., Eckelt J., Wolf B.A. [Polyelectrolyte complexes: phase diagram and intrinsic viscosities of the system water/poly\(2-vinylpyridinium-Br\)/poly\(styrene sulfonate-Na\)](#), *Macromolecular Chemistry and Physics*, **213**(23), 2504–2513 (2012); ISSN: 1022-1352, DOI: 10.1002/macp.201200445 **2.495**
44. [Bercea M.](#), Nichifor M., Eckelt J., Wolf B.A. [Dextran-based polycations: thermodynamic interaction with water as compared with unsubstituted dextran. 2. Flory-Huggins interaction parameter](#), *Macromolecular Chemistry and Physics*, **212**(17), 1932–1940 (2011), ISSN: 1022-1352 **2.495**
45. [Bercea M.](#), Wolf, B. A. [Enthalpy and entropy contributions to solvent quality and inversions of heat effects with polymer concentration](#), *Macromolecular Chemistry and Physics*, **207**, 1661–1673 (2006) ISSN: 1022-1352 **2.495**
46. [Bercea M.](#), Cazacu M., Wolf B.A. [Conformational variability of polymers and mixing thermodynamics I: Dilute solutions](#), *Macromolecular Chemistry and Physics*, **204**, 1371–1380 (2003) ISSN: 1022-1352 **2.495**
47. [Bercea M.*](#), Airinei A., Hamciuc V., Ioanid A. [Conformation of polysulfone-*b*-polydimethylsiloxane chains in solution and solid state](#), *Polymer International*, **53**(11), 1860–1865 (2004) ISSN: 0959-8103 **2.414**
48. [Bercea M.*](#), Morariu S., Teodorescu M. [Rheological investigation of poly\(vinyl alcohol\)/poly\(N-vinyl pyrrolidone\) mixtures in aqueous solution and hydrogel state](#), *Journal of Polymer Research*, (2016) 23:142-1–9, DOI 10.1007/s10965-016-1040-3 **1.969**
49. [Bercea M.*](#), Airinei A., Hamciuc V. [Temperature influence on polysulfone-*b*-poly\(alkylene oxide\)-*b*-poly\(dimethylsiloxane\) triblock copolymers in a selective Solvent](#), *Polymer Engineering & Science*, **57**, 114–118 (2017) ISSN: 1548-2634, DOI 10.1002/pen.24400 **1.719**
50. [Bercea M.*](#), Morariu S., Bibire L.E., Carja G. [Chitosan/poly\(vinyl alcohol\)/LDH biocomposites with pH-sensitive properties](#), *International Journal of Polymeric Materials and Polymeric Biomaterials*, **64**(12), 628–636 (2015) DOI: 10.1080/00914037.2014.996712, ISSN: 0091–4037 **1.667**

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