

## Lista de lucrări

Universitatea "Babeş-Bolyai" din Cluj-Napoca

Departamentul de Fizică Stării Condensate și a Tehnologiilor Avansate

Dr. Pop Viorel-Cornel

- A. Teză Doctorat
- B. Cărți cu ISBN
- C. Articole publicate ISI
- D. Articole ISI PROCEEDING
- E. Articole publicate BDI
- F. Cărți sau îndrumătoare pentru studenți, fără ISBN
- G. Lucrări de laborator redactate și realizate practic
- H. Prezentări sub formă de poster la conferințe naționale și internaționale
- I. Citări ale articolelor publicate

### A. Teza de doctorat :

"*Studiul reologic și spectroscopic al unor sisteme polimerice de interes farmaceutic*",  
conducător științific: Prof. Dr. Aștilean Simion.

Susținere publică: Teza s-a susținut in data de 1.10.2010

### B. Cărți publicate cu ISBN (1):

1. Todica Mihai, **Pop Viorel-Cornel**, *Fizică generală aplicată*, PRESA UNIVERSITARA CLUJEANA , CLUJ-NAPOCA, 2007, P. 146

[http://cacheprod.bcub.ro/webopac/List.csp?WebAction=Synonyms&RequestId=124044\\_1&Profile=Default&OpacLanguage=rum&Index1=Uindex07&Database=2&SearchMethod=Find\\_1&NumberToRetrieve=50&SearchTerm1=.2.199999&CSPCHD=00000000000242uq5is9003693800458](http://cacheprod.bcub.ro/webopac/List.csp?WebAction=Synonyms&RequestId=124044_1&Profile=Default&OpacLanguage=rum&Index1=Uindex07&Database=2&SearchMethod=Find_1&NumberToRetrieve=50&SearchTerm1=.2.199999&CSPCHD=00000000000242uq5is9003693800458)

### C. Articole I.S.I. publicate (15):

1. NMR hole burning in magnetic field gradient

M. Todica, S. Astilean, **C. V. Pop**, B. Blümich

**Journal of Optoelectronics and Advanced Materials Vol. 9, No. 4, April 2007, 916-918**

I.F. = 1.003

[joam.inoe.ro/download.php?idu=501](http://joam.inoe.ro/download.php?idu=501)

2. Preliminary investigation by Raman spectroscopy of some polymeric matrix with pharmaceutical applications

M. Todica, **C. V. Pop**, E. Dinte, C. Farcau, S. Astilean  
**Modern Phys. Letters B, Vol. 21, Nr 16, 2007, 987-985**

I.F. = 0.421

<http://www.worldscientific.com/doi/abs/10.1142/S0217984907013481>

3. Raman Investigation of Some Polymeric Gels of Pharmaceutical Interest

M. Todica, E. Dinte, **C. V. Pop**, C. Farcau, S. Astilean  
**Journal of Optoelectronics and Advanced Materials Vol. 10, april, 2008, 823-825**

I.F. = 1.1

[joam.inoe.ro/download.php?idu=1304](http://joam.inoe.ro/download.php?idu=1304)

4. Analysis of the rheological behavior of some aqueous PEO gels under thermal treatment

M. Todica, **C. V. Pop**  
**Chin. Phys. Lett. Vol. 26, No. 7, july 2009. ISSN 0256-307X CN 11-1959/0.4, pg. 078201-1 to 078201-4**

I.F. = 1,86

<http://iopscience.iop.org/article/10.1088/0256-307X/26/7/078201/pdf>

5. Rheological Behavior of Some Aqueous Gels of Carbopol with Pharmaceutical Applications

M. Todica, **C. V. Pop**, L. Udrescu, M. Pop  
**Chin. Phys. Lett. Vol. 27, No. 1, jan 2010. ISSN 0256-307X CN 11-1959/0.4, pg. 018301-1 to 018301-4**

I.F. = 1,3

<http://iopscience.iop.org/article/10.1088/0256-307X/27/1/018301>

6. Algorithm for preliminary analysis of viscosity behaviour of some aqueous poly(ethylene oxide) gels

M. Todica, **C. V. Pop**, L. Udrescu, M. Pop  
**Acta Physica Polonica A, Vol. 119 (2011) pg. 880-884**

I.F. = 0.40

[https://www.researchgate.net/publication/275582319\\_Acta\\_phisica\\_polonica\\_A\\_2011](https://www.researchgate.net/publication/275582319_Acta_phisica_polonica_A_2011)

7. Raman imaging investigation on PAA-clotrimazole system

**C. V. Pop**, T. Stefan, S. Astilean, M. Todica  
**Studia Chemia Volume 56 (LVI) 2011 month september issue 3 arbine e3**

I.F. = 0.129

<http://studia.ubbcluj.ro/download/pdf/664.pdf>

8. UV Absorption Properties of Doped PVA TiO<sub>2</sub> Membranes.

M. Todica, L. Udrescu, **C. V. Pop**, M. Pop, T. Stefan, S. Simon  
**Studia Chemia Volume 56 (LVI) 2011 month september issue 3 arbine e171**

I.F. = 0.129

<http://studia.ubbcluj.ro/download/pdf/664.pdf>

9. Observation of UV VIS absorption properties of some PVA membranes with silver nanoparticles

L. Udrescu, B. Marta, M. Pop, **C. V. Pop**, T. Stefan, M. Todica  
**Studia Chemia Volume 56 (LVI) 2011 month september issue 3 arbine e185**

I.F., = 0.129

<http://studia.ubbcluj.ro/download/pdf/664.pdf>

10. Spectroscopy of a Gamma Irradiated Poly(Acrylic Acid)-Clotrimazole System

M. Todica, **C. V. Pop**, L. Udrescu, T. Stefan  
**Chin. Phys. Lett. Vol. 28, No. 12 (2011) pg. 128201-1, 128201-4 ISSN 0256-307X CN 11-1959/0.4**

I.F. = 0.74

<http://iopscience.iop.org/article/10.1088/0256-307X/28/12/128201/pdf>

11. Water absorption and degradation of packages based on native corn starch with plasticizers

N. Cioica, R. Fechete, R. Chelcea, C. Cota, M. Todica, **C. V. Pop**, O. Cozar  
**Studia Universitatis Babes-Bolyai Chemia 60(1):45-55 · January 2015**

I.F. = 0.148

<http://studia.ubbcluj.ro/download/pdf/915.pdf>

**12.** UV-VIS and fluorescence investigation of some poly(acrylic) gels

M. Todica, R. Stefan, **C. V. Pop**, I. Papuc, O. Stan and L. E. Olar  
**Studia Universitatis Babeş-Bolyai. Chemia 60(1):7-17 · March 2015**

I.F. = 0.148

<http://studia.ubbcluj.ro/download/pdf/915.pdf>

**13.** Spectroscopic investigation of some poly (acrylic acid) gels with embedded gold nanoparticles

M. Todica, **C. V. Pop**, R. Stefan, M. Nagy, Garabagiu S  
**Studia Universitatis Babeş-Bolyai Chemia 60(1):19-28 · January 2015**

I.F. = 0.148

<http://studia.ubbcluj.ro/download/pdf/915.pdf>

**14.** IR and raman investigation of some poly(acrylic) acid gels in aqueous and neutralized state

M. Todica, R. Stefan, **C. V. Pop**, L. E. Olar  
**Acta Physica Polonica Series a 128(1):128-135 · July 2015**  
**DOI: 10.12693/APhysPolA.128.128**

I.F. = 0,43

[https://www.researchgate.net/profile/Pop\\_Cornel/contributions](https://www.researchgate.net/profile/Pop_Cornel/contributions)

**15.** XRD Investigation of Some Thermal Degraded Starch Based Materials

M. Todica, E. M. Nagy, C. Niculaescu, O. Stan, N. Cioica, **C. V. Pop**  
**Journal of Spectroscopy, Volume 2016 (2016), Article ID 9605312, 6 pages**  
**<http://dx.doi.org/10.1155/2016/9605312>**

I.F. = 0,814

<https://www.hindawi.com/journals/jspec/2016/9605312/>

**D. Article ISI PROCEEDING publicate (1):**

**1.** Structural changes of the corn starch from Romania used to make biodegradable packaging

N. Cioica, R. Fechete, C. Cota, M. Todica, **C. V. Pop**, Nagy E,

**Conference Paper · February 2013: Actual Tasks on Agricultural Engineering.**  
Proceedings of the 41. International Symposium on Agricultural Engineering, Opatija,  
Croatia, 19-22 February 2013 2013 pp.398-404 ref.15

<https://www.cabdirect.org/cabdirect/abstract/20133187896>

## **E. Article B.D.I. publicate (9):**

1. UV VIS behavior of doped PVA TiO<sub>2</sub> membranes under gamma irradiation

Todica M., Udrescu L., **C. V. Pop**, Dinte E.,  
**BDI**, <http://studia.ubbcluj.ro/serii/physica/>, **Studia UBB Physica**, LVI, 2, 2011, 2011,  
P.167-174

<http://studia.ubbcluj.ro/download/pdf/673.pdf>

2. Hydration-drying and ageing effects on the Peo-clotrimazole system

Todica M., **C. V. Pop**, Udrescu L. – G., Potara M., Dinte E.,  
**ISSN (online) 2065-9415**, [http://www.studia.ubbcluj.ro/serii/physica/index\\_en.html](http://www.studia.ubbcluj.ro/serii/physica/index_en.html),  
**Studia Univ. "Babes-Bolyai"**, Physica, no. 1, LV, 2010, P.175-183

<http://www.studia.ubbcluj.ro/download/pdf/530.pdf>

3. Physical characterization of some mucoadhesive gels for oral cavity applications

Todica M., **C. V. Pop**, Dinte E., Leucuta S. E.,  
**ISSN (online) 2065-9415**, [http://www.studia.ubbcluj.ro/serii/physica/index\\_en.html](http://www.studia.ubbcluj.ro/serii/physica/index_en.html),  
**Studia Univ. "Babes-Bolyai"**, Physica, LIII, 1, 2009, P.55-64

<http://studia.ubbcluj.ro/download/pdf/385.pdf>

4. Molecular mass effect on rheological behavior of some aqueous poly(ethylene oxide) gels

**C. V. Pop**, Udrescu L., Dinte E., Todica M.,  
**Studia Universitatis Babes Bolyai. Physica, Categ CNCSIS B+**, 1, 2009, P.98 – 105

<http://studia.ubbcluj.ro/download/pdf/385.pdf>

5. Some Properties of the Nmr Spin-Spin Relaxation of the Polybutadiene-Toluene Solutions

Astolean S., **C. V. Pop**, Todica M.,  
**Studia Universitatis Babes Bolyai. Physica, Categ CNCSIS B+**, LI, 2006, P.73 – 78

[http://studia.ubbcluj.ro/arhiva/abstract.php?editie=PHYSICA&nr=1&an=2006&id\\_art=3903](http://studia.ubbcluj.ro/arhiva/abstract.php?editie=PHYSICA&nr=1&an=2006&id_art=3903)

6. Spectroscopic investigation of PVA membranes doped with Black Carbon nanoparticles

T. Ștefan, C. Leordean, **C. V. Pop**, D. Marconi, M. Todica,  
**Studia Univ. "Babes-Bolyai", Physica, vol. 57, 2012, P.53 – 60**

<http://studia.ubbcluj.ro/download/pdf/754.pdf>

7. Observation of the effects of UV exposure of some pva membranes

Udrescu L., **C. V. Pop I**, Ștefan T., M. Todica,  
**Studia Univ. "Babes-Bolyai", Physica, LXI, vol. 56, 2011, P.81-90**

<http://studia.ubbcluj.ro/download/pdf/607.pdf>

8. Simple method for investigation of low frequency damped oscillations of elastomers

M. Todica, **C. V. Pop**, O. Balibanu,  
**Studia Univ. "Babes-Bolyai", Physica, LXI, vol. 61, 2016, P.91-100**

<http://studia.ubbcluj.ro/download/pdf/1074.pdf>

9. Water degradation effect on some starch-based plastics

N. Cioica, Nagy M., C. Cota, M. Todica, **C. V. Pop**, O. Cozar  
**Conference: 43 International symposium on agricultural engineering, opatija, croatia. pp. 755-762, ISSN:1848-4425**

[http://atae.agr.hr/Zbornik\\_2015.pdf](http://atae.agr.hr/Zbornik_2015.pdf)

## **F. Cărți sau îndrumătoare pentru studenți, fără ISBN (1):**

1. Lucian Baia, **Pop Viorel-Cornel**, *Îndrumător de lucrări de laborator: "Fenomene termoelectrice și aplicații"*, Universitatea Babeș-Bolyai, Cluj-Napoca, 2013

*Trei exemplare se găsesc la Biblioteca Facultății de Fizică, Universitatea Babeș-Bolyai, Cluj-Napoca.*

## **G. Lucrări de laborator redactate și realizate practic (3)**

1. Obținerea și testarea unui termocuplu.
2. Efectul Peltier
3. Aplicație practică a efectelor termoelectrice

*Toate aceste lucrări de laborator au referate redactate (incluse în dosar), sunt realizate practic și sunt instalate în "Laboratorul de Fizică generală" (Sala 192) a Departamentului de Fizică și Chimie a Facultății de Ingineria Materialelor și a Mediului, UTCN- Cluj, Str. Gheorghe Barițiu nr. 25.*

## **H. Prezentări sub formă de poster la conferințe naționale și internaționale (6):**

1. Some electrical and spectroscopical properties of paa doped with ammonia gas

**C.V. Pop**, T. Ștefan, M. Todica,  
**Belgian-German (Macro)Molecular Meeting, 03/12/2012, Houffalize, Belgium**  
[http://www.ldorganisation.com/produits.php?cle\\_menus=1238915541](http://www.ldorganisation.com/produits.php?cle_menus=1238915541)

2. Raman imaging investigation of PAA-Clotrimazole system

**C.V. Pop**, T. Ștefan, S. Aștilean, M. Todica,  
**Conferința Internațională „Advanced Spectroscopies on Biomedical and Nanostructured Systems”, Cluj-Napoca, 4-7 septembrie 2011.**  
<http://icei.ubbcluj.ro/bionanospec/>

3. Observation of some physical properties of Carbon filled PVA membranes

L. Udrescu, B. Marta, **C. V. Pop**, M. Todica,  
**Conferința Internațională: „4th annual meeting of the COST Action CUSPFEL” in Cluj, Romania, 21-23 March 2012.**  
<http://atom.ubbcluj.ro/cuspfel/index.php?menuId=4>

4. Physical characterization of some mucoadhesive gels for oral cavity applications

E. Ddinte, S.E. Leucuta, **C. V. Pop**, M. Todica, “ **Simpozionul Național de Biomateriale - SNB’2007 18-20 octombrie 2007, Cluj-Napoca..**

5. Some physical properties of polymeric matrix with pharmaceutical applications

M. Todica, **C. V. Pop**, E. Dinte, S. Astilean, “**Isotopic and molecular processes” 2007, september 20 - 22, Cluj-Napoca, Romania**

<http://pim.itim-cj.ro/2007/>

6. Raman investigation of some polymeric gels of pharmaceutical interest

M. Todica, E. Dinte, **C.V. Pop**, C. Farcau, S. Astilean,  
**5th International Conference on "New research trends in material science" ARM-5, September 5-7, 2007, Sibiu, Romania**

7. NMR hole-burning in magnetic fields gradients

M. Todica, S. Astilean, **C. V. Pop**, B. Blümich,  
**Advanced Spectroscopies on Biomedical and Nanostructured Systems, Cluj-Napoca, September 3-6, 2006**

[http://www.research.gov.ro/img/files\\_up/1151312707nanospec%20\\_circular1.pdf](http://www.research.gov.ro/img/files_up/1151312707nanospec%20_circular1.pdf)

8. UV-VIS and fluorescence investigation of some poly(acrylic) gels

M. Todica, R. Stefan, **C. V. Pop**, I. Papuc, L. E. Olar and O. Stan,  
**International Conference BioNanoSpec 2014**

<http://bionanosci.institute.ubbcluj.ro/bionanospec/>

9. Observation of UV-VIS absorption properties of some PVA membranes with silver nanoparticles

L. Udrescu, B. Marta, **C. V. Pop**, M. Todica,  
**International Conference BioNanoSpec 2014**

<http://bionanosci.institute.ubbcluj.ro/bionanospec/>

10. Rheological characterization of some aqueous dispersions of poly(ethylene oxide)  
750

**C. V. Pop**, E. Dinte, S. Astilean, M. Todica,  
**Advanced Spectroscopies on Biomedical and Nanostructured Systems, September 7-10, 2008, Cluj-Napoca, România**

<http://www.phys.ubbcluj.ro/nanospec/nanospec3>

## I. Citări ale articolelor publicate (12):

### 1. Articolul:

IR and raman investigation of some poly(acrylic) acid gels in aqueous and neutralized state

M. Todica, R. Stefan, **C. V. Pop**, L. E. Olar

**Acta Physica Polonica Series a 128(1):128-135 · July 2015**

**DOI: 10.12693/APhysPolA.128.128**

### Citări: 1

1. Zhang, Y., Gao, Z., Yu, Z., Ren, X., Duan, L., Gao, G.H. *pH-Tunable mechanical hydrogels prepared via transforming non C-C covalent synergistic interactions*, (2017) New Journal of Chemistry, 41 (4), pp. 1834-1839. DOI: 10.1039/c6nj04099c

### 2. Articolul:

Water absorption and degradation of packages based on native corn starch with plasticizers

N. Cioica, R. Fechete, R. Chelcea, C. Cota, M. Todica, **C. V. Pop**, O. Cozar

**Studia Universitatis Babes-Bolyai Chemia 60(1):45-55 · January 2015**

### Citări: 2

1. Chelcea, R.I., Moldovan, D., Demco, D.E., Culea, E., Fechete, R., *In vitro degradation and phase composition of cosmetic emulsions*, Studia Universitatis Babes-Bolyai Chemia 62 (1), pp. 73-88

2. Todica, M., Cioica, N., Olar, L.E., Papuc, I., Cota, C., Marin, E., Manea, D., Nagy, E.M., *Preliminary XRD and IR investigation of some starch based biodegradable systems*, Romanian Biotechnological Letters, Volume 21, Issue 5, 2016, Pages 11825-11831

### 3. Articolul:

Spectroscopy of a Gamma Irradiated Poly(Acrylic Acid)-Clotrimazole System

M. Todica, **C. V. Pop**, L. Udrescu, T. Stefan

**Chin. Phys. Lett. VOL. 28, No. 12 (2011) pg. 128201-1, 128201-4 ISSN 0256-307X CN 11-1959/0.4**

### Citări: 1

1. Todica, M., Simon, V., Stefan, T., Trandafir, D., Balasz, I., *Spectroscopic investigation of gamma irradiated PAA-graphite membranes*, Indian Journal of Pure and Applied Physics, 53 (6), pp. 359-366, 2015

#### **4. Articolul:**

Rheological Behavior of Some Aqueous Gels of Carbopol with Pharmaceutical Applications

M. Todica, **C. V. Pop**, L. Udrescu, M. Pop

**Chin. Phys. Lett.** Vol. 27, No. 1, jan 2010. ISSN 0256-307X CN 11-1959/0.4, pg. 018301-1 to 018301-4

#### **Citări: 5**

1. Kolarova Raskova, Z., Hrabalíková, M., Sedlárik, V., *Effect of Sodium Salicylate on the Viscoelastic Properties and Stability of Polyacrylate-Based Hydrogels for Medical Applications*, International Journal of Polymer Science, 2016, 5614687
2. Todica, M., Simon, V., Stefan, T., Trandafir, D., Balasz, I., *Spectroscopic investigation of gamma irradiated PAA-graphite membranes*, Indian Journal of Pure and Applied Physics 53 (6), pp. 359-366
3. Di Giuseppe, E., Corbi, F., Funicello, F., Massmeyer, A., Santimano, T.N, Rosenau, M., Davaille, A., *Characterization of Carbopol® hydrogel rheology for experimental tectonics and geodynamics*, Tectonophysics, 642 (1), pp. 29-45
4. Weber, E., Moyers-González, M., Burghilea, T.I., *Thermorheological properties of a Carbopol gel under shear*, Journal of Non-Newtonian Fluid Mechanics, 183-184, pp. 14-24
5. Siddique, J.I., Anderson, D.M., *Capillary rise of a non-Newtonian liquid into a deformable porous material*, Journal of Porous Media, 14 (12), pp. 1087-1102

#### **5. Articolul:**

Raman Investigation of Some Polymeric Gels of Pharmaceutical Interest

M. Todica, E. Dinte, **C. V. Pop**, C. Farcau, S. Astilean

**Journal of Optoelectronics and Advanced Materials** Vol. 10, april, 2008, 823-825

#### **Citări: 2**

1. Li, W., Wei, A., Zhang, H., Kim, D., One-dimensional organic-inorganic nanocomposite synthesized with single-walled carbon nanotube templates, Materials, 7 (8), pp. 5858-5865
2. Authors of Document Cestari, A.R., Vieira, E.F.S., Silva, E.C.S., Alves, F.J., Andrade, M.A.S., *Synthesis, characterization and hydration analysis of a novel epoxy/superplasticizer oilwell cement slurry - Some mechanistic features by solution microcalorimetry*, Journal of Colloid and Interface Science, 392 (1), pp. 359-368

**6. Articolul:**

Preliminary investigation by Raman spectroscopy of some polymeric matrix with pharmaceutical applications

M. Todica, **C. V. Pop**, E. Dinte, C. Farcau, S. Astilean

**Modern Phys. Letters B, Vol. 21, Nr 16, 2007, 987-985**

**Citări: 1**

1. Chipara, D.M., Flores, M., Perez, A., Puente, N, Lozano, K., Chipara, M., *Adding autonomic healing capabilities to polyethylene oxide*, Advances in Polymer Technology, 32 (SUPPL.1), pp. E505-E513

**Sursa:**

[https://www.scopus.com/cto2/main.uri?origin=AuthorProfile&stateKey=CTOF\\_798615363&CTO\\_ID=CTODS\\_798615361&hIndex=3&docCount=15&hType=author&groupedAuthor=false](https://www.scopus.com/cto2/main.uri?origin=AuthorProfile&stateKey=CTOF_798615363&CTO_ID=CTODS_798615361&hIndex=3&docCount=15&hType=author&groupedAuthor=false)

