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LISTA LUCR RILOR TIIN IFICE

Dr. Sergiu COSERI
Cercet tor tiin ific gradul II

a. Teza de doctorat:

„**Chimia izocianatilor**”, sub conducerea stiintifica a dlui Cercetator stiintific gradul I, profesor asociat, Dr. Adrian A. Caraculacu, 2001
Academia Româna , Institutul de Chimie Macromoleculara „Petru Poni” si Universitatea Tehnica “Ghe. Asachi”, Ia i

b. C r i:

S. Coseri, “Poliuretanii Aspecte privind reactivitatea izocianatilor cu compusii hidroxilici”, Editura Fides, Iasi, ISBN 973-8930-06-5, **2006**.

c. Capitole de carte:

1. **S. Coseri**, Chapter 4: Reaction mechanisms and kinetic methods used to describe the uncatalyzed reaction between isocyanates and hydroxyl compounds. *In Recent Research Trends in Polymer Science*, Ed. Elena Scortanu, Published by Transworld Research Network, **2009**; Transworld Research Network T.C. 37/661(2), Fort P.O., Trivandrum-695 023, Kerala, India. ISBN: 978-81-7859-427-1

2. T. Heinze, A. Koschella, T. Liebert, V. Harabagiu, **S. Coseri**; Chapter 10: Cellulose: chemistry of cellulose derivatisation; in The European Polysaccharide Network of Excellence (EPNOE) Research initiatives and results., pp. 283-327, Navard, Patrick (Ed.), **Springer, 2013**, ISBN 978-3-7091-0420-0

d. Articole publicate în reviste de specialitate

	Articol	Factor de impact
1.	A.A. Caraculacu, I. Agherghinei, P. Baron, G. Caraculacu, S. Coseri Dibenzilyc structures on macromolecular chain: IX The interaction of urethane-isocyanate groups in polyurethane formation <i>Eur. Polym. J.</i> , 32(10), 1235-1242, 1996 .	3.05
2.	A.A. Caraculacu, I. Agherghinei, P. Baron, S. Coseri Hydrogen bond self-association and chemical reactivity. I Kinetic study of reactions between glycols and phenylisocyanate <i>Rev. Roum. Chim.</i> , 41(7-8), 539-549, 1996 .	0.311
3.	S. Coseri , A. A. Caraculacu 1,2-ethylene-bis(p-N ₂ -phenylene-N ₁ ,N ₁ -dimethylformamidine) <i>Molecules</i> , 5, M165, 2000 .	2.416
4.	S. Coseri , A. A. Caraculacu 1,2-ethylene-bis(o-N ₂ -phenylene-N ₁ ,N ₁ -dimethylformamidine) <i>Molecules</i> , 5, M166, 2000 .	2.416
5.	A.A. Caraculacu, S. Coseri Hydrogen bond self-association and chemical reactivity. III. Urethane reaction and hydrogen bond life time <i>Rev. Roum. Chim.</i> , 45 (2), 139-147, 2000 .	0.311
6.	A.A. Caraculacu, S. Coseri Isocyanates in polyaddition processes. Structure and reaction mechanisms <i>Progr. Polym. Sci.</i> , 26 (5), 799-851, 2001 .	26.93
7.	Sergiu Coseri and Keith Ingold Distinguishing between Abstraction and addition as the First step in the Reaction of a Nitroxyl Radical with Cyclohexene <i>Org. Lett.</i> , 6 (10), 1641-1643, 2004 .	6.364
8.	Sergiu Coseri , G. David Mendenhall and K.U. Ingold Mechanisms of reactions of Aminoxyl (Nitroxide), Iminoxyl, and Imidoxyl Radicals with Alkenes and Evidence that in the Presence of Lead Tetraacetate, N-Hydroxyphthalimide Reacts with Alkenes by Both Radical and Nonradical Mechanisms <i>J. Org. Chem.</i> , 70, 4629-4636, 2005.	4.721
9.	Sergiu Coseri A New and Efficient Heterogeneous System for the Phthalimide-N-oxyl Radical (PINO) Generation <i>Eur. J. Org. Chem.</i> , 1725-1729, 2007.	3.065
10.	Sergiu Coseri The Effect of Various Additives on the Kinetic and Reaction Mechanism between	

- Ethanol and Phenylisocyanate
High Performance Polymers, 19(5), 520-530, 2007. **1.286**
- 11. Sergiu Coseri**
N-Hydroxyphthalimide (NHPI)/Lead Tetraacetate, a Peculiar System for the Phthalimide-N-Oxyl (PINO) Radical Generation.
Mini-Reviews in Organic Chemistry, 5(3), 222-227, 2008. **1.042**
- 12. Sergiu Coseri**
N-Hydroxyphthalimide (NHPI)/lead tetraacetate reactions with cyclic and acyclic alkenes
Journal of Physical Organic Chemistry, 22(5), 397 – 402, 2009. **1.380**
- 13. Sergiu Coseri**
Phthalimide-N-oxyl (PINO) Radical, a Powerful Catalytic Agent; Its Generation and Versatility Towards Various Organic Substrates,
Catalysis Reviews Science and Technology, 51 (2), 218-292, **2009**.
† top three most cited article published between 2009-2011 (listed are top five) **8.471**
- 14. Sergiu Coseri**
Natural products and their analogues as efficient anticancer drugs
Mini-Reviews in Medicinal Chemistry, 9 (5), 560 – 571, **2009**. **2.903**
- 15. S. Coseri, G. Nistor, L. Fras, S. Strnad, V Harabagiu, B. C. Simionescu**
Mild and Selective Oxidation of Cellulose Fibers in the Presence of N-Hydroxyphthalimide
Biomacromolecules, 10 (8), 2294-2299, **2009**. **5.750**
- 16. S. Coseri**
Diisocyanates reactivity with diols under pseudo-high dilution condition
Rev. Roum. Chim., 54(11-12), 1051-1055, 2009. **0.311**
- 17. Gabriela Biliuta, Lidia Fras, Simona Strnad, Valeria Harabagiu, Sergiu Coseri**
Oxidation of Cellulose Fibers Mediated by Nonpersistent Nitroxyl Radicals
Journal of Polymer Science, Part A: Polymer Chemistry, 48 (21), 4790-4799, **2010**. **3.113**
- 18. G. Biliuta, L.Fras, V.Harabagiu, S. Coseri**
Mild oxidation of cellulose fibers using dioxygen as ultimate oxidizing agent
Digest Journal of Nanomaterials and Biostructures, 6 (1), 293 – 299, **2011**. **0.945**
- 19. Marius Dobromir, Gabriela Biliuta, Dumitru Luca, Magdalena Aflori, Valeria Harabagiu, Sergiu Coseri**
XPS study of the ion-exchange capacity of the native and surface oxidized viscose fibers
Colloids and Surfaces A: Physicochemical and Engineering Aspects, 381 (1-3), 106-110, **2011**. **2.752**
- 20. M. Homocianu, G. Biliuta, A. Airinei, S. Coseri**
UV-vis study of some non persistent nitroxyl radicals
Optoelectronics and Advanced Materials – Rapid Communications (OAM-RC), 5(5), 567-571, **2011**. **0.394**
- 21. Sergiu Coseri, Gabriela Biliuta**
Bromide-free oxidizing system for carboxylic moiety formation in cellulose chain
Carbohydrate Polymers, 90, 1415-1419, **2012**. **4.074**
- 22. Simona Gabriela Muntean, Oana Paska, Sergiu Coseri, Georgeta Maria Simu, Maria Elena Grad and Gheorghe Iliu**
Evaluation of a functionalized copolymer as adsorbent on direct dyes removal process: Kinetics and equilibrium studies
Journal of Applied Polymer Science, 127(6), 4409-4421, 2013. **1.768**
- 23. Gabriela Biliuta, Lidija Fras, Mioara Drobeta, Zdenka Persin, Tatjana Kreze, Karin**

- Stana-Kleinschek, Volker Ribitsch, Valeria Harabagiu, **Sergiu Coseri**
Comparison study of TEMPO and phthalimide-N-oxyl (PINO) radicals on
oxidation efficiency toward cellulose
Carbohydrate Polymers, 91(2), 502-507, **2013**. **4.074**
24. C. Prisacariu, E. Scortanu, , **S. Coseri**, B. Agapie
Characterization of Shape-Memory Trifunctionally Cross-Linked Polyurethanes, with
Varying Hard and Soft Segments
International Journal of Polymer Analysis and Characterization, 18, 154-161, **2013**. **1.264**
25. C. Prisacariu, E. Scortanu, **S. Coseri**, B. Agapie
Effect of Soft Segment Polydispersity on the Elasticity of Polyurethane Elastomers
Industrial and Engineering Chemistry Research, 52(6), 2316-2322, **2013**. **2.587**
26. **Sergiu Coseri**, Gabriela Biliuta, Bogdan C. Simionescu, Karin Stana-Kleinschek,
Volker Ribitsch, Valeria Harabagiu
Oxidized cellulose—Survey of the most recent achievements
Carbohydrate Polymers, 93(1), 207-215, **2013**. **4.074**
27. C. Prisacariu, E. Scortanu, B. Agapie, V. Prisacariu, **S. Coseri**
Inelastic response of copolyurethane elastomers with varying soft segment molecular
weight and preparation procedure
Polymer International, 62(11), 1600-1607, **2013**. **2.409**
28. **S. Coseri**, A. Doliska, K. Stana-Kleinschek
Immobilization of Water-Soluble 6-Carboxylcellulose on Poly(ethylene terephthalate)
Films Monitored by a Quartz Crystal Microbalance with Dissipation
Industrial and Engineering Chemistry Research, 52(22), 7439-7444, **2013**. **2.587**
29. Mioara Drobot, Zdenka Persin, Lidija Fras Zemljic, Tamiselvan Mohan, Karin Stana-
Kleinschek, Ales Doliska, Matej Bracic, Volker Ribitsch, Valeria Harabagiu, **Sergiu
Coseri**
Chemical modification and characterization of poly(ethylene terephthalate) surfaces
for collagen immobilization
Central European Journal of Chemistry, 11 (11), 1786-1798, **2013**. **1.329**
30. Daniela Suteu, Doina Balba, **Sergiu Coseri**
Macroporous polymeric ion exchangers as adsorbents for the removal of cationic dye
basic blue 9 from aqueous solutions
Journal of Applied Polymer Science, 131(1), article number 39620, **2014**. **1.768**
31. Alina Spatareanu, Maria Bercea, Tatiana Budtova, Valeria Harabagiu, Liviu
Sacarescu, **Sergiu Coseri**
Synthesis, characterization and solution behaviour of oxidized pullulan
Carbohydrate Polymers, 111, 63-71, **2014**. **4.074**
32. D. Suteu, **S. Coseri**, M. Badeanu, C. Zaharia
Valorization of food wastes as sorbent for dye retention from aqueous medium
Desalination and Water Treatment, 54 (9), 2570-2580, **2014**. **1.173**
33. Doris Breitwieser, Margit Kriechbaum, Heike M.A. Ehmman, Uwe Monkowius,
Sergiu Coseri, Liviu Sacarescu, Stefan Spirk
Photoreductive generation of amorphous bismuth nanoparticles using polysaccharides
– Bismuth-cellulose nanocomposites
Carbohydrate Polymers, 116, 261-266, **2015**. **4.074**
34. **Sergiu Coseri**, Alina Spatareanu, Liviu Sacarescu, Cristina Rimbu, Daniela Suteu,
Stefan Spirk, Valeria Harabagiu
Green synthesis of the silver nanoparticles mediated by pullulan and 6-
carboxypullulan
Carbohydrate Polymers, 116, 9-17, **2015**. **4.074**

35. D. Suteu, G. Biliuta, L. Rusu, **S. Coseri**, G. Nacu
Cellulose cellets as new type of adsorbent for the removal of dyes from aqueous media **1.065**
Environmental Engineering and Management Journal, 14(3), 525-532, **2015**.
36. D. Suteu, **S. Coseri**, L. Rusu
Kinetics studies on the adsorption behaviour of Basic Blue 9 dye on macroporous ion exchanger resins **1.173**
Desalination and Water Treatment, 54(9), 2570-2580, **2015**.
37. **Sergiu Coseri**, Gabriela Biliuta, Lidija Fras-Zemljic, Jasna Stevanic Srndovic, Tomas Larsson, Simona Strnad, Tatjana Kreze, Ali Naderi, Tom Lindstrom
One-shot carboxylation of microcrystalline cellulose in the presence of nitroxyl radicals and sodium periodate **3.84**
RSC Advances, 5, 85889-85897, **2015**.
38. **Sergiu Coseri**, Alina Spatareanu, Liviu Sacarescu, Vlad Socoliuc, Ioan Sorin Stratulat, Valeria Harabagiu
Pullulan: A versatile coating agent for superparamagnetic iron oxide nanoparticles **1.768**
Journal of Applied Polymer Science, 133 (5), 1091, **2016**.

e. Articole publicate in extenso in reviste de specialitate din strainatate (reviste necotate ISI)

1. **Sergiu Coseri**
2-(1-ethyl-but-2-enyloxy)-isoindole-1,3-dione
Molbank, M459, **2006**.
2. **Sergiu Coseri**
2-(cyclohex-2-enyloxy)-isoindole-1,3-dione
Molbank, M460, **2006**.
3. **Sergiu Coseri**
2-(cyclooct-2-enyloxy)-isoindole-1,3-dione
Molbank, M461, **2006**.

f. Articole publicate in extenso in reviste de specialitate din tara recunoscute de catre CNCSIS

g. Lucrări publicate în extenso în volume de manifestări științifice

1. S. Coseri, A. Caraculacu

The 4th Electronic Conference on Synthetic Organic Chemistry, September 1- 30, 2000, at:
<http://www.unibas.ch/mdpi/ecsoc-4.htm>

Synergetic effect of urethane formation

2. S. Coseri

Fifth International Electronic Conference on Synthetic Organic Chemistry (ECSOC-5),
<http://www.mdpi.org/ecsoc-5.htm>, 1-30 September 2001

Contributions to the Mechanism of the Reactions of Isocyanates with Alcohols and Glycols

3. C. Prisacariu, S. Coseri, A. Caraculacu

COPEX 2000, Exchange June 5-6, Vienne, Austria

“Experimental and Theoretic Investigation of complex polymer structure in the field of Polyurethane Elastomers Based on Hard Segments With Variable Geometry”

4. Cristina Prisacariu, Sergiu Coseri

5th International Conference Polymeric Materials in Automotive PMA 2013 & 21th Slovak Rubber Conference SRC 2013, 23-25 April, 2013, Bratislava, Slovak Republic

Optimizing mechanical performance of nanostructured polyurethane elastomers and films;

h. Conferințe prezentate la manifestări științifice

1. Sergiu Coseri

Reactivitatea asociatelor alcoolice fata de izocianati

Sesiune de comunicari, 26-27 oct. 2001, Zilele Universitatii “Al. I. Cuza” Iasi

2. Sergiu Coseri

Reaction Mechanisms for Nitric Oxide Release from Nitrates.

Lecture la NRC Canada, Steacie Institute of Molecular Science, 100 Sussex Drive, K1N 0R6, Ottawa, April 15, 2003.

3. Sergiu Coseri

A new method to distinguish between abstraction and addition as a first step of the cycloalkenes reaction with nitroxy radicals.

Lecture la NRC Canada, Steacie Institute of Molecular Science, 100 Sussex Drive, K1N 0R6, Ottawa, April 27, 2004.

4. Sergiu Coseri

Mechanisms of Reaction of Aminoxyl (Nitroxide), Iminoxyl and Imidoxyl Radicals with Alkenes.

Lecture la NRC Canada, Steacie Institute of Molecular Science, 100 Sussex Drive, K1N 0R6, Ottawa, April 5, 2005.

5. Sergiu Coseri

Discriminarea mecanismelor competitive in reactia alchenelor cu radicalii liberi.

Zilele Academice Iesene, a XX-a sesiune de comunicari stiintifice a Institutului de Chimie Macromoleculara "Petru Poni", Iasi, 27-30 septembrie, 2006.

6. Sergiu Coseri

Radicali liberi. Studii mecanicistice in diverse sinteze organice.
Zilele Universitatii "Al. I. Cuza", Iasi, 27-28 octombrie, 2006.

7. Sergiu Coseri

Utilizarea ¹H-RMN in elucidarea mecanismului reactiei dintre nitroxi radicali si alchene
A XXIX-a Conferinta Nationala de Chimie Calimanesti-Caciulata, 4-6 octombrie, 2006.
1.

8. Sergiu Coseri,

Cellulose – sustainable material, Invited Course on the Workshop: "Sustainable Materials and Technologies", Maribor University, Slovenia, March 2-6, 2015.
(Invited Lecture and Cours)

i. Comunic ri prezentate la manifest ri tiin ifice

1. A. Caraculacu, I. Agherghinei, G. Caraculacu, S. Coseri

"Zilele Academice Iesene", Ed. a X-a, 6-9 octombrie, Iasi, 1994
Interactia grupelor uretan-izocianat in reactia de formare a uretanilor

2. A. Caraculacu, I. Agherghinei, S. Coseri

"Zilele Academice Iesene", Ed. a XI-a, 5-8 octombrie, Iasi, 1995
Mecanismul si cinetica reactiei izocianatilor cu alcoolii, la grade avansate de autoasociere ale alcoolilor.

3. Caraculacu, S. Coseri, I. Agherghinei

"Zilele Academice Iesene", Ed. a XII-a, 10-13 octombrie, Iasi, 1996
Reactivitatea formelor asociate ale alcoolilor in reactia de formare a uretanilor

4. S. Coseri, A. Caraculacu

"Zilele Academice Iesene", Ed. a XIV-a, 7-9 octombrie, Iasi, 1999
Timpul de viata al legaturii de hidrogen in reactia de formare a uretanului

5. S. Coseri, A. Caraculacu

"Zilele Academice Iesene" 28-30septembrie, Iasi, 2000
Studiu asupra ecuatiilor cinetice utilizate in tratarea reactiei de formare a uretanilor

6. S. Coseri, G. Nistor, G. Ioanid, A. Ioanid, M. Aflori, S. Strnad, V. Harabagiu

Cellulose Fibers' Surface Activation
European Polysaccharide Network of Excellence, Scientific meeting, Iasi, November 7-8, 2007

7. S. Coseri

N-Hydroxyphthalimide (NHPI) reactions with cyclic and acyclic alkenes
19th IUPAC Conference on Physical Organic Chemistry, 13-18 July 2008, Santiago de Compostela, Spain

8. S. Coseri, G. Nistor, L. Fras, S. Strnad, V. Harabagiu, B. C. Simionescu

Non persistent nitroxyl radicals as efficient mediators for poly(oligo)saccharides oxidation
EPNOE 2009, Polysaccharides as a Source of Advanced Materials, September 21-24, 2009
Turku/Abo, Finland

9. Sergiu Coseri, Gabriela Biliuta, Lidija Fras, Valeria Harabagiu

Oxidation of viscose fibers mediated by nonpersistent nitroxyl radicals
10th Austrian Polymer Meeting and 2nd Joint Austrian-Slovenian Polymer Meeting in Leoben, Austria, September 8th-10th, 2010

10. Sergiu Coseri

Viscose fibers oxidation performed by non persistent nitroxyl radicals.
Second End-Year Meeting of STEP-ITN and EPNOE, September 28 – October 1, 2010,
MINES ParisTech / Cemef, Sophia Antipolis, France

11. S. Coseri

Introduction of carboxyl moieties in cellulose chain by mimics natural occurring processes;
Advances in Biomaterials, 12-16.03.2012, Viena, Austria.

12. Alina Spatareanu, Liviu Sacarescu, Cristina Rambu, Valeria Harabagiu, Sergiu Coseri;
Sinteza nanoparticulelor de argint, mediata de pululan si 6-carboxil pululan
Zilele Academice Iesene, 3-5 octombrie, Iasi, 2013

13. Sergiu Coseri, Alina Spatareanu, Liviu Sacarescu, Cristina Rimbu, Valeria Harabagiu;
The use of pullulan and 6-carboxyl pullulan for the silver nanoparticles formation;
3rd EPNOE International Polysaccharide Conference, Nice, France, 21-24 October 2013.

14. A. Spatareanu, M. Bercea, T. Budtova, V. Harabagiu, G. Biliuta, S. Coseri;
Synthesis and solution behaviour of highly hydrophilic pullulan derivatives;
XI eme Colloque Franco-Roumain sur les Polymères, Pite ti (Cornul Vîn torului), 27–29 août
2014, Romania

15. Sergiu Coseri, Gabriela Biliuta

Water soluble cellulose carboxylate preparation by one shot reaction
4th EPNOE International Polysaccharide Conference, Warsaw, Poland, 19-22 October 2015.

j. Granturi/proiecte câ tigate prin competi ie

- ca director de proiect

1. S. Coseri, (director proiect) E. Hitruc, A. Caraculacu

“Sinteza si caracterizarea structurilor de tip uretan-eter-coroana”, grant tineret, etapa **2000**

Beneficiar: “Agentia Nationala pentru stiinta, Tehnologie si Inovare” Bucuresti

Valoare grant: 14.000.000 lei

2. S. Coseri, (director proiect) E. Hitruc, A. Caraculacu

“Sinteza si caracterizarea structurilor de tip uretan-eter-coroana”, grant tineret, etapa **2001**

Beneficiar: “Agentia Nationala pentru stiinta, Tehnologie si Inovare” Bucuresti

Valoare grant: 15.750.000 lei

3. Sergiu Coseri, (NSERC Fellow) Keith U. Ingold

National Sciences and Engineering Research Council of Canada (**NSERC Canada**),

“Mechanism study of the reaction between nitroxyl radical with cyclic and acyclic alkenes”

Beneficiar: National Research Council Ottawa, (**NRC Ottawa**) Canada, **2004-2005**.

Valoare grant: 100,000 \$CAD

4. Sergiu Coseri

NATO Security Through Science Programme ; NATO Reintegration Grant, **2005-2007**.

“Progresses in Free Radical Reactions Mechanism”,

PDD(CP)-(CBP.EAP.RIG 982044)

Valoare grant : 25.000 EUR.

5. Sergiu Coseri, Project Manager

Co-operation of SEE science parks for the promotion of transnational market update of R&D results and technologies by SMEs, SEETechnology - SEE/D/0224/1.2/X, 2012-2014, **2012 – 2014**

Valoarea totala a proiectului: 2,046,667.70 EUR.

6. Sergiu Coseri, Project Manager

Bilateral project between “Petru Poni” Institute and Innventia AB Stockholm Sweden, "Cellulose fibers oxidation using environmentally friendly reagents - Synthesis of various sorts of oxidized cellulose, using different reaction conditions", **2012-2014**.

Valoarea totala a proiectului : 120,000 SEK.

- ca membru in echipa

1. E. Scortanu, A. Caraculacu, Cr. Prisacariu, **S. Coseri** (1998)

Contract de cercetare nr. 60 / 1997, Act additional nr. 1/1998 incheiat cu ICPE-Trafil S.A Iasi, in cadrul Programului Zonal: Materiale noi cu elaborare si utilizari neconventionale

(materiale pentru senzori, semiconductori organici, polimeri si aliaje compozite) bazate pe potentialul inovativ zonal, de nivel national, cu perspectiva competitiva mondiala, finantat de Ministerul Cercetarii si Tehnologiei, Tema C:

“Absorbanti UV benzotriazolici cu structuri diverse, inclusiv parabanice” contract 1/1998, valoare 5.000.000 lei

2. E. Scortanu, A. Caraculacu, **S. Coseri**, E. Hitruc, (2000)
“Polimeri heterociclici cu structuri diazopentaatomice prin reactii chimice pe polimeri”
Program national de C-D, “Orizont 2000”
Valoare contract: 50.000.000 lei
3. Fondul Social European - Program de burse postdoctorale "Cristofor I. Simionescu"
POSDRU/89/1.5/S/55216, responsabil Acad. B. C. Simionescu, (**S. Coseri** - postdoctorand),
19 486 466 RON, 2010-2013
4. REGPOT-2010-1 „Strengthening the Romanian research capacity in Multifunctional Polymeric Materials” coordonator Dr. Valeria Harabagiu, membru in echipa de implementare **S. Coseri** – research area leader (RAL), 2,8 milioane EUR, 2011-2013

i. Indicele Hirsh = 12 (la data de 26 noiembrie 2015)

26 noiembrie 2015

Dr. Ing. Sergiu COSERI,
Cercetator științific gradul II