Name: Sergiu Coseri
Senior Researcher – "Petru Poni" Institute of Macromolecular Chemistry of Romanian Academy

Curriculum Vitae

PERSONAL DATA

Date and Place of Birth: July 14th 1967 in Siretel, Iasi, Romania
Married, Romanian (Nationality)

Research expertise: Developing of new catalytic systems for the selective derivatization of organic substrates (**especially polysaccharides**) in mild and "*ecofriendly*" environment; free radical processes involving *N*-hydroxyphthalimide (NHPI); chemical characterization of biopolymers; nanostructured polysaccharides, nanoparticles for the use in (bio) medical applications as sensors and for drug delivery systems. Organic chemistry; Physical organic chemistry.

WORK EXPERIENCE

October 1992 - present

"Petru Poni" Institute of Macromolecular Chemistry Iasi, (ICMPP)
Natural Polymers. Bioactive and biocompatible polymers Department
Deputy Head of the Natural Polymers Department, since July 2011
1992-1998 - Research Assistant
1998-2006 - Scientific Researcher
2007-November 2014 - Scientific Researcher III
November 2014-Present - Scientific Researcher II
Romanian Academy Research Institute (> 250 employers)
Research areas: developing of new organic chemistry routes for selective oxidation of polysaccharides; new catalysts for selective organic transformations; chemical characterization of organic compounds by using FTIR, GC-MS.
Responsibilities: scientific direction and management of research projects (European, academic and industrial), co-supervising PhD students and early stage postdocs.

October 1991 - September 1992

"Petru Rares" School, Harlau, Iasi, Romania
- Chemistry teacher for college students

EDUCATION

College and Scientific Education

June 2010 - March 2013

"Petru Poni" Institute of Macromolecular Chemistry Iasi, (ICMPP) Romania
Postdoctoral Fellow
- Postdoctoral Fellowship Grant, European Social Fund – "Cristofor I. Simionescu" Postdoctoral Fellowship Programme (ID POSDRU/89/1.5/S/55216), Sectorial Operational Programme Human Resources Development 2007-2013. "Petru Poni" Institute of Macromolecular Chemistry Iasi, Romania.
- **Supervisor:** Dr. Valeria Harabagiu

November 2005 - October 2008

"Petru Poni" Institute of Macromolecular Chemistry Iasi, (ICMPP) Romania
NATO Return Fellow
- Return Fellow, NATO Reintegration Grant, Award received from NATO, Grant code: PDD(CP)-(CBP.EAP.RIG 982044)

- Supervisor: Prof. Bogdan Simionescu

June 2003 - June 2005 **National Research Council Ottawa, Canada**
Visiting Fellow at the Canadian Government Laboratory
- Award received from Natural Sciences and Engineering Research Council of Canada, (NSERC) Canada.
- Supervisor: Dr. Keith U. Ingold.

April 2002 – May 2003 **Queen's University Kingston, Canada**
Postdoc Fellow
- Supervisor: Prof. Gregory Thatcher and Dr. Keith Ingold

November 1994 - May 2001 **"Ghe. Asachi" Technical University Iasi and "Petru Poni" Institute of Macromolecular Chemistry Iasi, Romania**
PhD in Chemical Sciences
- PhD thesis: Isocyanate chemistry (In Romanian "Chimia izocianatilor")
- Supervisor: Dr. Adrian A. Caraculacu

October 1986 – June 1991 **"Ghe. Asachi" Technical University Iasi, Romania**
Engineer diploma (MSc)
- Industrial Chemistry Faculty, *Organic Chemistry* specialization

EDITORIAL ACTIVITY

2012 – Present; Member of Editorial Board of:
- *Chemical Engineering and Science*
- *American Journal of Physical Chemistry*
- *ISRN Textiles*
- *Journal of Materials Science and Engineering with Advanced Technology*
- *Journal of Composites and Biodegradable Polymers*
- *Modern Chemistry*

INVITED REFEREE

Since 2005 **International Journals**
- Carbohydrate Polymers
- Organic Letters
- Biomacromolecules
- Cellulose

PERSONAL SKILLS AND COMPETENCIES

Languages	**Romanian**	native
	English	fluent
	French	beginner
IT - Skills	Windows 9x/2000/XP/NT/Vista/7, Microsoft Office, Lotus Notes, Corel Draw, Design Expert V6, EndNote X4, OriginLab 7.5 und SPSS	
Miscellaneous Interests	Travel, literature, scrabble (top 10 Romanian players), sport (jogging, tennis)	

Research Grants

- Cellulose fibers oxidation using environmentally friendly reagents - Synthesis of various sorts of oxidized cellulose, using different reaction conditions – Industrial project between **"Petru Poni"** Institute and **Innventia SA Stockholm**, Sweden
  Budget: 120,000 SEK
  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)**
  Budget: 2,046,667 Euro
  Project manager

- Strengthening the Romanian research capacity in Multifunctional Polymeric, **STREAM, ID 264115, (2011-2013)**
  Budget: 4,500,00 Euro
  Research Area Leader
- **11.1.4. Polysaccharides Grant – EPNOE (2005 -2010)**
  NMP3-CT-2005-500375
  Budget: 400,000 euro
  Key member team
- **NATO Security Through Science Programme, NATO Reintegration Grant,** "Progresses in Free Radical Reactions Mechanism"; PDD(CP)-(CBP.EAP.RIG 982044) **(2005 – 2007)**
  Budget: 25,000 Euro
  Project manager
- **National Sciences and Engineering Research Council of Canada (NSERC Canada),**
  Sergiu Coseri, (NSERC Fellow) Keith U. Ingold, supervisor
  "Mechanism study of the reaction between nitroxyl radical with cyclic and acyclic alkenes"
  National Research Council Ottawa, (NRC Ottawa) Canada, 2004-2005.
  Budget: 100,000 $CAD

Major collaborations

- Prof. Tatiana Budtova, Centre de Mise en Forme des Materiaux Sophia Antipolis, France, Project title: "*Study of polysaccharides solutions behavior*". .
- Prof. Volker Ribitsch and Prof. Stefan Spirk; Graz University, Department of Organic Chemistry, Austria. Project title: "*Adsorption of cellulose thin films on PET monitored by QCM-D*"
- Prof. Karin Stana-Kleinschek and Prof. Simona Strnad; Laboratory for Characterization and Processing of Polymers, Faculty of Mechanical Engineering, University of Maribor, Smetanova 17, SI-2000 Maribor, Slovenia. Project title: "*Cellulose chemical functionalization using new nitroxyl radicals as mediators*".
- Prof. Tim Lindstrom, Innventia AB Stockholm, Sweden; Project title: "*Cellulose fibers oxidation using environmentally friendly reagents - Synthesis of various sorts of oxidized cellulose, using different reaction conditions*"

Publications (top 5)

- A. A. Caraculacu, **S. Coseri**. Isocyanates in polyaddition processes. Structure and reaction mechanisms; *Progress in Polymer Science*, **2001**, *26*(5), 799-851, **IF = 26.932**.
- **S. Coseri**; Phthalimide-*N*-oxyl (PINO) Radical, a Powerful Catalytic Agent; Its Generation and Versatility Towards Various Organic Substrates. *Catalysis Reviews*, **2009**, *51*(2), 218-292; Top three most cited article published between 2009-2011 (listed are top five), **IF = 8.471.** (Times cited = 75)
- **S. Coseri**, K. Ingold; Distinguishing between Abstraction and addition as the First step in the Reaction of a Nitroxyl Radical with Cyclohexene. *Organic Letters,* **2004**, *6*(10), 1641-1643; **IF = 6.364**.
- **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*, **2009**, *10*(8), 2294-2299, **IF = 5.75.**
- **S. Coseri**, G. David Mendenhall, 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, *Journal of Organic Chemistry*, **2005**, *70*, 4629-4636, **IF = 4.721**.

Invited lectures

- **Sergiu Coseri,** Cellulose – sustainable material, Invited course on the workshop: "Sustainable materials and technologies" Maribor, Slovenia, March 2-6, **2015.**
- **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**.
- **Sergiu Coseri**, Introduction of carboxyl moieties in cellulose chain by mimics natural occurring processes, Advances in Biomaterials, Viena, Austria, 12-16. 03. **2012**.
- **Sergiu Coseri,** Physical and chemical cellulose surface modification, International Conference on Nanotechnology for the Forest Products Industry, St. Louis, Missouri, USA, June 25-27, **2008**.
- **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**.
- **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**.
- **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**

November 2015