

Curriculum

Vitae

of

Prof. Sylvain MARQUE

MARQUE Sylvain
Nationality: French
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13397 MARSEILLE
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e-mail : sylvain.marque@univ-provence.fr
Professor

10/2000 – 12/2008 : Maître de Conférences (assistant professor) at "Université de Provence",
MARSEILLE

Academic Records

- 10 June 2005** **Habilitation.**
Nitroxide Mediated Polymerization. Factors Influencing the C-ON Bond
Homolysis of Alkoxyamines $R_1R_2NO-CR_3R_4R_5$
Université de Provence, Aix-Marseille 1.
- 15 October 1996** **Ph.D. *cum Laude*.**
Generation and EPR Studies of Tetra(trialkylsilyloxy)phosphoranyl Radicals.
Applications to Dynamic Nuclear Polarization
Université Paul Cézanne, Aix-Marseille III

Experience

- 10/1991 – 06/1992** : 'DEA. in laboratory 'Structure et Réactivité des Espèces
Paramagnétiques, advisor: **Dr FINET J.-P.**
- 09/1993 – 10/1996** : Ph.D. in laboratory 'Structure et Réactivité des Espèces
Paramagnétiques': advisor **Prof. TORDO P.**
- 11/1996 – 10/1997** : Post doctoral fellowship in the group of **Prof. BARTON D.H.R.**
Texas A&M University, Department of Chemistry, College Station,
TX, USA.
- 12/1997 – 09/2000** : Post Doctoral position at Physikalisch-Chemisches Institut der
Universität Zürich-Irchel, in the group of **Prof. FISCHER H.** Zürich,
Switzerland.
- 09/2006 – 12/2006** : Visiting Researcher at International Tomography Center, SB RAS,
Institutskaya 3A, 630090 Novosibirsk, Russia.
- 2007 – 2015 (16 mois)** : Visiting Researcher at International Tomography Center, SB RAS,
Institutskaya 3A, 630090 Novosibirsk, Russia.
- 2015 – 2018** : **Team leader at Novosibirsk Institute of Organic Chemistry, SB
RAS, 9 Laurentiev Prospect, 630090 Novosibirsk, Russia.**

Academic Collaborations

1993 – 1996 : "Direction Générale de l'Armement-DRET/DCA", Paris France, on Dynamic
Nuclear Polarization.

- 1993 – 1996** : Dr M. Moussavi of "LETI CEA", Grenoble France, on Dynamic Nuclear Polarization.
- 1998 – 2000** : Prof. P. Tordo of Universités d'Aix-Marseille 1-3, on Nitroxide Mediated Polymerization.
- 1999 – 2001** : Prof. A. Studer of Fachbereich Chemie University of Marburg, Germany, on Nitroxide Mediated Polymerization.
- 2003 – now** : Pr E. Bagryanskaya of International Tomography Center SB RAS, Novosibirsk, Russia, on Nitroxide Mediated Polymerization and on Nitroxides applied to Supramolecular Chemistry.
- 2006 – now** : Pr A. Rockenbauer of Institut of Structural Chemistry, Budapest, Hungaria, on Nitroxide in Supramolecular Chemistry
- 2006 – now** : Prof. J.-M. Franconi of University of Bordeaux 2 on Overhauser effect enhanced MRI

Industrial Collaborations

- 2000 – 2006** : Dr B. Vuillemin, TotalPetroChemicals, Lacq-Mont, Lacq, France
- 2003 – 2006** : Dr A. Pfeil, Hilti, Research & Technology Chemistry, Kaufering, Deutschland
- 2005 – 2006** : Dr T. Roussel, Arkema Pôle R&D et Procédé de Lacq-Mont, Lacq, France
- 2013 – now** : Dr. S. Dorey, Sartorius, Aubagne, France.
- 2015 – now** : Dr J.-P. Disson, CRRRA Arkema, Pierre-Bénite, France

Teaching

- 1998 – 2000** : Practical courses at the University of Zürich-Irchel.
- 2000 – 2002** : Initiation to Chemistry : 1st year students : 20H/y
- 2000 – 2003** : Pratical courses in General Chemistry : 4th year students : 60H/y
- 2000 – 2003** : Organic Chemistry : 3rd year students : 20H/y
- 2000 – 2004** : Kinetic : 3rd year students : 36H/y
- 2002 – 2003** : Radical Chemistry : 4th year students : 30H/y
- 2002 – 2004** : EPR : 3rd year students : 10H/y
- 2002 – 2004** : Radical Chemistry : 4th year students : 20H/y
- 2003 – 2008** : EPR : 5th year students : 10H/y
- 2003 – 2008** : Radical Chemistry : 5th year students : 55H/y
- 2003 – 2008** : Physical Organic Chemistry : 5th year students : 55H/y
- 2000 – 2007** : Organic Chemistry Practical courses : 3rd year students : 30H/y
- 2000 – 2007** : EPR Practical courses : 4th year students : 8H/y
- 2002 – 2007** : EPR : 4th year students : 20H/y
- 2007 – 2008** : Organic Chemistry : 2nd year students : 25H/y
- 2009 – 2012** : Organic Chemistry : 3rd year students : 30H/y
- 2011 – 2012** : Organic Chemistry : 1st year students : 15H/y
- 2011 – 2013** : Organic Chemistry (engineer school) : 1st year students : 10H/y
- 2011 – 2013** : Organic Chemistry (engineer school) : 2st year students : 22H/y
- 2012 – 2014** : Chemical Bonding for Engineers : 1st year students : 24H/y
- 2013 – 2015** : Chemical Bonding for Mathematics students : 1st year students : 10H/y
- 2013 – 2015** : Chemical Bonding for long distance teaching : 1st year students : 15H/y
- 2012 – now** : Chemical Bonding for Biologists : 1st year students : 24H/y
- 2012 – now** : Organic Chemistry (Star Licence) : 1st year students : 47H/y
- 2012 – now** : Kinetics : 3rd year students : 12H/y

2012 – now : From Organic Chemistry to Polymers : 4th year students : 6H/y

PhD supervision

2000 : Co-advisor of B. Knühl
2001 – 2004 : Co-advisor of A. Terrenoire
2001 – 2004 : Co-advisor of C. Galindo
2002 – 2005 : Co-advisor of M. Leblanc
2006 – 2008 : INTAS advisor (grant YS 05-109-5102) of D. Zubenko.
2007 – 2008 : ECONET advisor (grant 16321WD) of D. Polovyanenko
2008 – 2009 : CNRS/RAS advisor (grant ASR21245) of D. Polovyanenko
2008 – 2011 : CNRS/RAS advisor (grant ASR21245 and ASR23961) of M. Edeleva
2012 – 2013 : Ph.D advisor of G. Obase (grant from Gabon)
2012 – 2015 : Ph.D co-advisor (ANR SonRadls) of L. Bosco
2012 – 2015 : Ph.D advisor of M. Batsiandy Ibanou (grant from Gabon)
2013 – 2016 : Ph.D advisor of F. Gaston (Industrial grant)
2013 – 2014 : Ph.D. advisor of C. Khaliel (excellence grant from university)

Administrative Commitments

2000 – 2007 : Manager for the Organic Chemistry Practical courses
2003 – 2006 : Manager of the DESS/Master Pro Polymer and Organic Chemistry
2004 – 2008 : Elected member of the selection committee for Physical-Chemistry, Organic Chemistry, and Material Science, at Université de Provence (Aix-Marseille 1)
2005 – 2008 : Invited member of the selection committee for Organic Chemistry at Université Paul Cézanne (Aix-Marseille 3)
2006 – 2009: Invited member of the committee for the research at the Université de Provence (Aix-Marseille 1)
2009 : Member of Committees of Experts for Organic professorship position at the Université Paul Cézanne, and 3 assistant-professorship positions (radical chemistry, prebiotic chemistry, and EPR) at the University of Provence.
2009 – 2012 : Elected member of the committee for the research at Université de Provence
2009 – 2012 : Head of the Licence (3rd year of university) of Chemistry at University of Provence
2010 : Member of Committees of Experts for an assistant-professorship position (radical chemistry and EPR) at the University of Provence.
2012 – 2014: Member of the council for teaching in Chemistry at the Licence level
2013 – 2014: Member of the board for the **Regulations of Faculty of Sciences**
2012 – 2016 : **Elected** member to the council of Faculty of Science of Aix-Marseille University
2014 – now : Member of the board of the RENARD EPR Network
2000 – now : Head of the EPR machines pool of the Institute

Associative commitments

2005 – 2009 : Elected member of the ARPE board (EPR French group)
2006 – 2007 : Member of APES (Asian – Pacific EPR/ESR Society)
May 2006 : Member of the organization Committee of the French EPR summer school
May 2008 : Member of the board for the RCOM5
May 2010 : Chairman of RCOM6
2010 – 2014 : Elected member of board of the SCF PACA section
September 2011 : Member of the organization Committee of SPIN2011

April 2012 : Member of the organization Committee for the JFI6
June 2012 : Member of the organization Committee for the RCOM7
September 2014 : Member of the organization Committee for the EFEPR
2005 – : Member of the ARPE
2009 – : Member of SCF (Chemical French Society)
2009 – : Member of IUPAC
2009 – : Member of CNC (Conseil National de la Chimie)

Research commitments

Coordinator/head/leader

2006 – 2007 : INTAS: grant YS 05-109-5102.
2007 – 2008 : ECO-NET: grant 16321WD, exchange franco-russo-magyar).
2007 – 2008 : **IRMPROTEOLYS** project
2008 – 2009 : exchange program from CNRS/RAS (Russian Academy of Science): ASR 21245.
2008 – 2009 : exchange program from CNRS/RAS (Russian Academy of Science): ASR 21244.
2009 – 2014 : **NITROMRI** project.
2009 – 2014 : chemistry team for the project **SPINFOLD**
2010 – 2011 : people exchange program from CNRS/RAS: grant ASR 23961.
2013 – 2016 : **industrial grant** supported by SARTORIUS company.
2015 – 2016 : chemistry team for the project **DYNACCO**
2015 – 2019 : **NAR** project
2015 – 2018 : **Russian Sciences Foundation (grant: 15-13-20020) project in NIOCh at Novosibirsk, Russia**

Participant

2009 – 2012 : EPR expert for the JCJC **D2R2** ANR: (head: Dr L. FERAY).
2011 – 2014 : EPR expert for the JCJC **FRaPE** ANR (Head: Dr V. MONTEIL)
2012 – 2015 : EPR and Physical-Chemistry expert for the JCJC **SonRadIs** ANR
2013 – 2017 : EPR expert for the JCJC **NewRap** ANR (Head: Dr E. BESSON)
2015 – 2016 : EPR expert for the project **PANACEE** AMIDEX (head Dr P. BREMOND)
2015 – 2016 : EPR expert for the project **PROBENZYME** AMIDEX (head Prof. G. AUDRAN)
2016 – 2020 : EPR expert for the project PULMOENZYME (head Dr P. MELLET)

Research Funding

11/2006 : COST P15 grant COST-STSM-P15-022268. **Project: 2500 €.**
2006 – 2007 : INTAS grant: YS 05-109-5102. **Project: 12000 €**
2007 – 2008 : ECO-NET grant: 16321WD. **Project: 15000 €**
2007 – 2008 : **IRMPROTEOLYS**. **Project: 50000 €**
2008 – 2009 : CNRS/RAS people exchange grant: ASR21245. **Project: 10000€**
2008 – 2009 : CNRS/RAS people exchange grant: ASR21244. **Project: 10000€**
2009 – 2013 : ANR **NITROMRI** grant: **480000 €** for the project.
2009 – 2013 : ANR **SPINFOLD** grant: **160000€** for the Chemistry team.
2010 – 2011 : CNRS/RAS people exchange program: grant ASR 23961. **Project: 10000€.**
2013 – 2016 : Industrial grant from SARTORIUS: **120000 €**
2015 – 2016 : AMIDEX call: **DYNACCO** grant: 120000€ for the Chemistry team
2015 – 2019 : ANR **NAR** grant: **608000 €** for the project.
2015 – 2018 : **RSF grant: 15-13-20020 with 600000 € for the project.**

Miscellaneous

- 2004 – 2008** : Excellence Scientific grant from University
- 2006 – 2007** : Sabbatical leave given at the national level
- 2008 – 2009** : Invited researcher at CNRS
- 02/2009** : Jury member of C. Dire Ph.D. (UMPC, Paris)
- 11/2010** : Jury member of E. Grau Ph.D. (UCB, Lyon)
- 19/03/2013** : President of the jury of R. Stretkowski Habilitation (AMU)
- 06/11/2013** : Referee for the Ph.D. of A. Morin. (INP, Toulouse)
- 12/11/2013** : Jury member of C. Dommengat Ph.D. (UCB, Lyon)
- 08/04/2014** : Member of the jury of P. Brémond Habilitation (AMU)
- 2014 – 2018** : Excellence Scientific grant from University
- 2014 – 2018** : Jury member to the “Ecole Polytechnique X” (Palaiseau)

Reviewer in US journals: JACS, JOC, J. Phys. Chem., Macromolecules, Progress in Polymer Sciences, EST and in European journals: Nature, New J. Chem., Angew. Chem. Int. Ed.; Eur. JOC, Macromolecular Chem. Phys., e-Polymer, Chimia, JPOC, Dyes & Pigments, Int. J. Kin. Chem., Polymer, Tetrahedron Letters and Eur. Polymer J.

Publications

Underlined the articles where I am the corresponding author.

***h* = 26, *G* = 35**

1996

1. "*Synthesis, X-Ray Geometry, and Anodic Behavior of Tris [2-(hydroxymethyl) phenyl]phosphane*" Chalier, F.; Berchadsky, Y.; Gronchi, G.; Finet, J.-P.; Marque, S.; Tordo P. **J. Phys. Chem.** 1996, *100*, 10, 4323-4330.

1997

2. "*Persistent Silylated Phosphoranyl Radical. Application to Dynamic Nuclear Polarization*" Marque, S.; Berchadsky, Y.; Lang, K.; Moussavi, M.; Fournel, A.; Bertrand, P.; Belorizky, J.; Tordo, P. **J. Phys. Chem. A** 1997, *101*, 31, 5640-5645.
3. "*PPN-type Nitrones: Preparation and Use of a New Series of β -Phosphorylated Spin-trapping Agents*" Ricci, C.; Marque, S.; Belin, F.; Bouteiller, J.-C.; Lauricella, R.; Tuccio, B.; Cerri, V.; Tordo P. **J. Chem. Soc., Perkin Trans. 2** 1997, 2513-2518.

1998

4. "*Radical Reaction Kinetics During Homolysis of N-alkoxyamines : Verification of the Persistent Radical Effect*" Kothe, T.; Marque, S.; Martschke, R.; Popov, M.; Fischer H. **J. Chem. Soc., Perkin Trans 2** 1998, 1553-1559.

2000

5. "*Factors Influencing the C-O-Bond Homolysis of Trialkylhydroxylamines*" Marque S.; Le Mercier, C.; Tordo, P.; Fischer, H. **Macromolecules** 2000, *33*, 12, 4403-4410.

2001

6. "*Factors Influencing the C-O-Bond Homolysis of Alkoxyamines: Effect of H-Bonding and Polar Substituents*" Marque, S.; Fischer, H.; Baier, E.; Studer, A. **J. Org. Chem.** 2001, *66*, 4, 1146-1156.
7. "*Absolute Rate Constants for the Addition of the 1-(tert-Butoxy)carbonyl-ethyl-1-yl Radical to Alkenes in Solution*" Knühl, B.; Marque, S.; Fischer, H. **Helv. Chim. Acta** 2001, *54*, 8, 2290-2300

2002

8. "*Design and Use of β -Phosphorus Nitroxides and Alkoxyamines in Controlled/"Living" Free Radical Polymerizations*" Le Mercier; C. Acerbis, A.; Bertin, D.; Chauvin; F.; Gigmes, D.; Guerret, O.; Lansalot, M.; Marque, S.; Le Moigne, F.; Fischer, H.; Tordo, P. **Macromol. Symp.** 2002, *182*, 225-247
9. "*Lack of Chain Length Effect on the Rate of Homolysis of Polystyryl-SG1 Alkoxyamines*" Bertin, D.; Chauvin, F.; Marque, S.; Tordo, P. **Macromolecules** 2002, *35*, 10, 3790-3791

2003

10. *"³¹P NMR Measurement of the Homolysis Rate Constant of the C-ON Bond of β -phosphorylated Alkoxyamines"* Bertin, D.; Gigmes, D.; Marque, S.; Tordo P. **e-Polymers** 2003, 2, 1-9
11. *"Tetrathiophosphoric Acid Tri(1-phenylethyl) Ester and 1-Phenylethyl Diphenyl phosphino Dithioate as Controlled Radical Polymerization Agents"* Gigmes, D.; Bertin, D.; Marque, S.; Guerret, O.; Tordo, P. **Tetrahedron Lett.** 2003, 44, 6, 1227-1229.
12. *"Steric Effects of Ring Substituents on the Decay and Reformation Kinetics of Piperazinone-Based Alkoxyamines."* Marque, S.; Sobek, J.; Fischer, H.; Kramer, A.; Nesvadba, P.; Wunderlich, W. **Macromolecules** 2003, 36, 9, 3440-3442.
13. *"The Influence of the Nitroxide Structure on Homolysis Rate of Alkoxyamines: A Taft-Ingold Analysis."* Marque, S. **J. Org. Chem.** 2003, 68, 20, 7582-7590.
14. *"Alkoxyamine-Mediated Radical Synthesis of Indolinones and Indolines."* Leroi, C.; Bertin, D.; Dufils, P.-E.; Gigmes, D.; Marque, S.; Tordo, P.; Couturier, J.-L.; Guerret, O.; Ciufolini, M. A. **Org. Lett.** 2003, 5, 26, 4943-4945

2004

15. *"Diastereomeric Excess upon Cleavage and Reformation of Diastereomeric Alkoxyamines".* Ananchenko, G.; Marque, S.; Gigmes, D.; Bertin, D.; Tordo, P. **Org. Biomol. Chem.** 2004, 2, 709-715
16. *"Evolution of the Partition Coefficients of Peroxide Initiators during the Synthesis of High-Impact PolyStyrene "* Bertin, D.; Coutand, F.; Duc, M.; Galindo, C.; Gigmes, D.; Marque, S.; Tordo, P.; Vuillemin, B. **e-Polymer** 2004, paper 10, 1-10
17. *"Leveled Steric Effect in Alkoxyamines of SG1-Type"* Acerbis, A.; Beaudoin, E.; Bertin, D.; Gigmes, D.; Marque, S.; Tordo, P. **Macromol. Chem. Phys.** 2004, 205, 7, 973-978
18. *"Switched External Magnetic Field CIDNP Studies of Coupling the Reaction of Carbon-Centered Radicals with TEMPO"* Lebedeva, N. V.; Zubenko, D. P.; Bagryanskaya, E. G.; Ananchenko, G. S.; Marque, S.; Bertin, D.; Tordo, P.; Sagdeev R. Z. **Phys. Chem. Chem. Phys.** 2004, 6, 2254-2259
19. *"Synthesis of a Series of SG1 2-(N-tert-Butyl-N-(1-diethoxyphosphoryl-2,2-dimethylpropyl)aminoxyl Based Alkoxyamines, SG1-CH(Me)CO₂R and Measurement of the Homolysis Rate Constants of the C-ON Bond."* Bertin, D.; Gigmes, D.; Marque, S.; Maurin, R.; Tordo, P. **J. Polym. Sci.: Part A: Polym. Chem.** 2004, 42, 14, 3504-3515.

20. "Factors Influencing C-ON Bond Homolysis in Alkoxyamines: Unexpected Behavior of SG1 (N-(2-Methyl-2-propyl)-N-(1-diethylphosphono-2,2-dimethylpropyl)-N-Oxyl) – Based Alkoxyamines." Bertin, D.; Gigmes, D.; Le Mercier, C.; Marque, S.; Tordo P. **J. Org. Chem.** 2004, 69, 15, 4925-4930
21. "Long-Range Polar Effect on the C-ON Bond Homolysis in SG1 (N-(2-Methyl-2-propyl)-N-(1-diethylphosphono-2,2-dimethylpropyl)-N-oxyl) – Alkoxyamines" Bertin, D.; Gigmes, D.; Marque, S. R. A.; Milardo, S.; Peri, J.; Tordo P. **Collect. Czech. Chem. Commun.** 2004, 69, 12, 2223-2238

2005

22. "SG1 based Alkoxyamines as Radical Initiators for the Synthesis of Lactones and Lactams" Bertin, D.; Gigmes, D.; Marque, S. R. A.; Tordo, P. **Tetrahedron** 2005, 61, 8752-8761
23. "Polar, Steric, and Stabilization Effects in Alkoxyamines C-ON Bond Homolysis: A Multiparameters Analysis." Bertin, D.; Gigmes, D.; Marque, S. R. A.; Tordo, P. **Macromolecules** 2005, 38, 7, 2638-2650.
24. "Steric and Polar Effects of the Cyclic Nitroxyl Fragment on the C-ON Bond Homolysis Rate Constant." Fischer, H.; Kramer, A.; Marque, S. R. A.; Nesvadba, P. **Macromolecules** 2005, 38, 24, 9974-9984.

2006

25. " β -Fragmentation of Alkoxy Radicals: A Natural Bond Orbital (NBO) Analysis." Leblanc, M.; Siri, D.; Marque, S. R. A.; Grimaldi, S.; Bertin, D.; Tordo, P. **Int. J. Quant. Chem.** 2006, 106, 3, 676-685.
26. "Alkoxyamine C-ON Bond Homolysis: Stereoelectronic Effects" Beaudoin, E.; Bertin, D.; Gigmes, D.; Marque, S. R. A.; Siri, D.; Tordo, P. **Eur. J. Org. Chem.** 2006, 7, 1755-1768.
27. "PS-*b*-POE from Nitroxide Mediated Polymerization. Detection of Minor Species by Coupled Chromatographic Techniques." Beaudoin, E.; Dufils, P.-E.; Gigmes, D.; Marque, S.; Petit, C.; Tordo, P., Bertin, D. **Polymer** 2006, 47, 98-106.
28. "Long-Range Polar and Steric Effects in Propionate-SG1-Type Alkoxyamines (SG1-CHMeCOOX): A Multiparameter Analysis." Ananchenko, G.; Beaudoin, E.; Bertin, D.; Gigmes, D.; Lagarde, P.; Marque, S. R. A.; Revalor, E.; Tordo, P. **J. Phys. Org. Chem.** 2006, 19, 4, 269-275.
29. "Laser Flash Photolysis and CIDNP Studies of Steric Effects on Coupling Rate Constants of Imidazolidine Nitroxides with Carbon-Centered Radicals, Methyl isoButyrate-2-yl and tert-Butyl Propionate-2-yl" Zubenko, D.; Tsentelovich, Y.; Lebedeva, N.; Kirilyuk, I.; Roshchupkina, G.; Zhurko, I.; Reznikov, V.; Marque, S. R. A.; Bagryanskaya, E. **J. Org. Chem.** 2006, 71, 16, 6044-6052.

30. "Nitroxide Bound β -Cyclodextrin: Is There an Inclusion Complex?" Bardelang, D.; Rockenbauer, A.; Jicsinszky, L.; Finet, J.-P.; Karoui, H.; Lambert, S.; Marque, S. R. A.; Tordo, P. **J. Org. Chem.** 2006, 71, 20, 7657-7667.
31. "Persilylated Phosphoranyl Radicals: The First Persistent Non-Cyclic Phosphoranyl Radicals" Berchadsky, Y.; Bernard-Henriet, C.; Finet, J.-P.; Lauricella, R.; Marque, S. R. A.; Tordo, P. **Chem. Eur. J.** 2006, 12; 27, 7084-7094.
32. "Nitroxide Mediated Polymerization of Methyl Methacrylate using an SG1-Based Alkoxyamine. How Penultimate Effect could Lead to Uncontrolled and Unliving Polymerization" Guillaneuf, Y.; Gimes, D.; Marque, S. R. A.; Tordo, P.; Bertin, D. **Macromol. Chem. Phys.** 2006, 207, 6, 1278-1288.
33. "Nitroxide Mediated Polymerization: The Pivotal Role of the k_d Value of the Initiating Alkoxyamine and the Importance of the Experimental Conditions" Chauvin, F.; Dufils, P.-E.; Gimes, D.; Guillaneuf, Y.; Marque, S. R. A.; Tordo, P.; Bertin, D. **Macromolecules** 2006, 39, 16, 5238-5250.
34. "Living Character of poly(Methyl Methacrylate)s Prepared via Nitroxide-Mediated Controlled Free-Radical Polymerization at Low Temperature, in the Presence of a Small Amount of Styrene." Nicolas, J.; Dire, C.; Mueller, L.; Belleney, J.; Charleux, B.; Marque, S. R. A.; Bertin, D.; Magnet, S.; Couvreur, L. **Macromolecules** 2006, 39, 24, 8274-8282.
35. "Intramolecular Hydrogen Bonding: The Case of β -Phosphorylated Nitroxyl Radical. Hydrogen Bonding and Electrostatic Interactions." Acerbis, S.; Bertin, D.; Boutevin, B.; Gimes, D.; Lacroix-Desmazes, P.; Le Mercier, C.; Lutz, J.-F.; Marque, S. R. A.; Siri, D.; Tordo, P. **Helv. Chim. Acta** 2006, 89, 10, 2119-2132.
36. "Alkoxyamines of Stable Aromatic Nitroxides: N—OC vs NO—C Bond Homolysis." Gimes, D.; Gaudel-Siri, A.; Marque, S. R. A.; Bertin, D.; Tordo, P.; Astolfi, P.; Greci, L. Rizzoli, C. **Helv. Chim. Acta** 2006, 89, 10, 2312-2326.
37. "Absolute Rate Constants for the Addition of the 1-(tert-Butoxy)carbonylethyl Radical onto Cyclic Alkenes in Solution." Fischer, H.; Knühl, B.; Marque, S. R. A. **Helv. Chim. Acta** 2006 89, 10, 2327-2329.
38. "Reformation Reaction of Cyclic-Nitroxyl Based Alkoxyamines: Steric and Polar/Stabilization Effects." Fischer, H.; Marque, S. R. A.; Nesvadba, P. **Helv. Chim. Acta.** 2006, 89, 10, 2330-2340.
39. "2,5-Dihydro-1H-Imidazol Based Nitroxides as Prospective Mediators in Radical Polymerization" Zubenko, D.; Kirilyuk, I.; Roshchupkina, G.; Zhurko, I.; Reznikov, V.; Marque, S. R. A.; Bagryanskaya, E. **Helv. Chim. Acta** 2006, 89, 10, 2341-2353.

2007

- 40 "A DFT Study of the Hydrogen Atom Abstraction from 2,4,6-Trimethylheptane: A Model of Syndio Polypropylene Degradation" Bertin, D.; Grimaldi, S.; Leblanc, M.; Marque, S. R. A.; Siri, D.; Tordo P. **J. Mol. Struct. (THEOCHEM)** 2007, 811, 255-266.
- 41 "First Effective Nitroxide-Mediated Polymerization of Methyl Methacrylate" Guillaneuf, Y.; Gigmes, D.; Marque, S. R. A.; Tordo, P.; Bertin, D. **Macromolecules** 2007, 40, 9, 3108-3114.
- 42 "Intermolecular Radical Addition of Alkoxyamines onto Olefins: An Easy Access to Advance Macromolecular Architecture Precursors" Dufils, P.-E.; Chagneux, N.; Gigmes, D.; Trimaille, T.; Marque, S. R. A.; Bertin, D.; Tordo, P. **Polymer**, 2007, 48, 18, 5219-5225.
- 43 "PBN-type Nitroxide Bound to β -Cyclodextrins: Syntheses, Thermokinetics of Self-Inclusion and Application to Superoxide Spin-Trapping" Bardelang, D.; Charles, L.; Finet, J.-P.; Jicsinszky, L.; Karoui, H.; Marque, S. R. A.; Monnier, V.; Rockenbauer, A.; Rosas, R.; Tordo, P. **Chem. Eur. J.** 2007, 13, 33, 9344-9354.

2008

- 44 "Effect of the Penultimate Unit on the C—ON Bond Homolysis in SG1-Based Alkoxyamines" Bertin, D.; Dufils, P.-E.; Durand, I.; Gigmes, D.; Giovanetti, B.; Guillaneuf, Y.; Marque, S. R. A.; Phan, T.; Tordo, P. **Macromol. Chem. Phys.** 2008, 209, 220-224.
- 45 "Effect of Carboxylate-Salt on the C—ON Bond Homolysis of SG1-based Alkoxyamines: DFT Calculations, Natural Bond Orbital (NBO) Analysis, and Kinetics Study" Bertin, D.; Gigmes, D.; Marque, S. R. A.; Siri, D.; Tordo, P.; Trappo, G. **ChemPhysChem** 2008, 9, 272-281.
- 46 "Synthesis of Highly Labile SG1-Based Alkoxyamines under Photochemical Conditions" Guillaneuf, Y.; Couturier, J.-L.; Gigmes, D.; Marque, S. R. A.; Tordo, P.; Bertin, D. **J. Org. Chem.** 2008 73,12, 4728-4731.
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19. *"Persistent Radicals for DNP, NMP, and Spin-Labeling."*
Marque, S. **Laboratoire de Chimie Inorganique et Biologie**, 17th March 2008, CEA Grenoble, France.
20. *"Nitroxide Mediated Polymerization: The Fundamentals "*
Marque, S. **Novosibirsk Institut of Organic Chemistry**, 12th December 2008, Novosibirsk, Russia

2009

- 21 *"Proteolysis Events Investigated by Magnetic Resonance Imaging "*
Marque, S.; Roubaud, V.; Thiaudière, E.; Franconi, J.-M.; Massot, P.; Harte, E.; Madelin, G.; Mellet, P. **Physics, Chemistry, and Biology meet together under the pine trees**, 30th September – 3rd October 2009, Fréjus, France.
- 22 *"Homolysis, Re-formation, and H-transfer Reactions in Alkoxyamines: The Key Reactions in Nitroxide Mediated Polymerization"*
Marque, S., **Laboratoire de Chimie et Procédés de Polymérisation** 29th October 2009, Chimie Physique Electronique Lyon, France
- 23 *"Nitroxide Mediated Polymerization: 25 years of Mechanistic Investigations "*
Marque, S. **International Tomography Center**, 4th December 2009, Novosibirsk, Russia

2011

- 24 *"New Procedures and New Objects for Materials Applications"*
Marque, S. **Brokerage Event of ERA.Net RUS Program**, 1st – 2nd March 2011, Ekaterinburg, Russia.
- 25 *"Radical Chemistry of Alkoxyamines: Past, Present, and Future"*
Marque, S. **Magnetic and Spin Phenomena in Chemistry and Biology**, 11th – 12th December 2011, Novosibirsk, Russia.

2012

- 26 *"Spin Directed Site Labeling and Cybotactic Effect"*
Marque, S. **7th Contemporary Problems in Organic Chemistry**, 9th – 12th July 2012, Novosibirsk, Russia
- 27 *"Alkoxyamines (Trialkyl hydroxylamines). A New Family of Radical Initiator: Past, Present, and Future"*
Marque, S. **8th Voedvosky Conference: Physics and Chemistry of Elementary Processes**, 16th – 19th July 2012, Novosibirsk, Russia.
- 28 *"Investigation of Unusual Alkyl Radicals by Spin-Trapping"*
Marque, S.; Maury, J.; Feray, L.; Diri, D.; Bertrand, M. **1st Joint Meeting ARPE – GERSE – GIRSE**, 3rd – 6th October 2012, Palermo, Italy.

2013

- 29 *"Alkoxyamines: A new Family for Theranostic"*
Marque, S. **Novosibirsk Institut of Organic Chemistry**, 12th February 2013, Novosibirsk, Russia

2014

- 30 *"Theranostic: A Future for Alkoxyamines?"*
Marque, S. **Novosibirsk Institute of Organic Chemistry**, 24th February 2014, Novosibirsk, Russia

- 31 *“Solvent Effects in β -Phosphorylated Nitroxides”*
 Marque, S. **SPIN 2014**, 14th – 19th September 2014, Zelenogradsk, Russia
- 32 *“Radicals: Foes or Friends?”*
 Marque, S. **Novosibirsk State University**, December 10th 2014, Novosibirsk, Russia
- 33 *“Controlled Radical Polymerization: The GRAIL of Polymer Chemists”*
 Marque, S. **Novosibirsk State University**, December 11th 2014, Novosibirsk, Russia
- 34 *“Alkoxyamines: Past, Present, and Future”*
 Marque, S. **Novosibirsk State University**, December 17th 2014, Novosibirsk, Russia

2015

- 35 *“Controlled Radical Polymerization: The Grail of Polymer Chemist”*
 Marque, S. **Current Topics in Organic Chemistry 2015**, 21st – 26th February 2015, Sheregesh, Russia
- 36 *“Non-Radical Enzymatic Activity Monitored by Electron Paramagnetic Resonance: Application to Overhauser-Enhanced Magnetic Resonance Imaging”*
 Audran, G.; Bosco, L.; Brémond, P.; Franconi, J.-M.; Koonjoo, N.; Marque, S.; Massot, P.; Mellet, P.; Parzy, E.; Thiaudière E. **Journée PR2I/FLI/FBI**; 9th April 2015, Marseille, France.
- 37 *“Spin Probes for Site Directed Spin Labeling and Overhauser-enhanced Magnetic Resonance Imaging”*
 Marque, S. **CEA**, April 15th 2015, Saclay, France
- 38 *“Alkoxyamines: 40 years of investigations and now?”*
 Marque, S. **Physical-Chemistry Institut II Morgilescu Romanian Academy of Sciences**; 3rd June 2015, Bucarest, Romania.
- 39 *“Resonance frequency-shifting nitroxide for probing proteolytic activity in vivo using the Overhauser-enhanced MRI technique”*
Koonjoo, N.; Audran, G.; Bosco, L.; Brémond, P.; Parzy, E.; Massot, P.; Lepetit-Coiffé, M.; Franconi, J.-M.; Marque, S. R. A.; Thiaudière, E.; Mellet, P. **ISMRM 23rd Annual Meeting & Exhibition**, 30th May – 05th June 2015, Toronto, Ontario, Canada.
First Prize at ISMRM (summa cum laude, http://ismrm.org/15/program_files/TueSci05.htm)
- 40 *“Spin Probes for Overhauser-enhanced Magnetic Resonance Imaging”*
 Marque, S. **Modern Development of Magnetic Resonance MDMR2015**, September 22nd – 26th, 2015, Kazan, Russia
- 41 *“?????????”*
 Marque, S. **?????**, September????, 2015, Saint-Petersbourg, Russia
- 42 *“?????????”*
 Marque, S. **?????**, September????, 2015, Saint-Petersbourg, Russia

