PROFESSIONAL DOSSIER

Guy BERTRAND

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TABLE OF CONTENTS

Guy BERTRAND

Personal Statistics

Born on July 17, 1952 in Limoges (France), married, three children ages 26, 20 and 7.

Professional Address

UCR/CNRS Joint Research Chemistry Laboratory (UMI 2957)
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Education

D.U.E.S. PC (Université de Limoges), *June 1972*
Ingénieur ENSC Montpellier, *June 1975*
Docteur ès-Sciences Physiques (Université Paul Sabatier, Toulouse), *September 1979*

Research Activities

Attaché de Recherche CNRS	(Université Paul Sabatier), *Oct. 1975 - Oct. 1980*
Research Associate	Sanofi-Recherche Company, *Oct. 1980 - Sept.1981*
Chargé de Recherche CNRS	(Université Paul Sabatier), *Nov. 1981 - Feb. 1988*
Directeur de Recherche CNRS, 2ème classe	(LCC-CNRS, Toulouse), *Mar. 1988 - Sept. 1994*
Directeur de recherche CNRS, 1ère classe	(LCC-CNRS), *Oct. 1994 - Dec. 1998*
	(Université Paul Sabatier), *Jan. 1999- Sept. 2001*
Directeur de Recherche CNRS, Classe Exceptionnelle	(Université Paul Sabatier), *Oct. - 2001-Dec. 2005*
Distinguished Professor	(University of California, Riverside), *Oct. 2001-present*

Administrative Responsabilities

Member of the Board of Directors of the International Council on Main Group Element, *1993-1999*
Elected Member of the Administrative Board of « Institut de Promotion Supérieure du Travail», *1993-2000*
Director of « Etudes CNAM Midi-Pyrénées », *1994 -1999*
Vice-Chairman of the European Chemical Society, *Jan. 1995-2000*
Director, UMR 5069 (Univ. Paul Sabatier, France), *Jan. 1999-Dec. 2005*
Member of « Comité National d'Evaluation de la Recherche (CNER) », *1999-2003*
Member of « Conseil Scientifique du département Sciences Chimiques du CNRS », *2000-2001*
Member of « Conseil Scientifique de l'ENS Lyon », *2001-2004*
Director of the UCR-CNRS Joint Research Laboratory (University of California, Riverside, USA), *2001-present*
Elected member of « Conseil Scientifique de l'Université Paul Sabatier », *2002-2006*
Adhoc Member of the MCHA Study Section (NIH), *June 2004*
Adhoc Member of the SBCB Study Section (NIH), *June 2005*
Adhoc Member of the SBCB Study Section (NIH), *October 2009*

Teaching Activities

Maître de Conférence, Ecole Polytechnique (Paris), *1992 - 1999*
Professor, Ecole Polytechnique (Paris), *2000-2004*
Professor, University of California, Riverside, USA, *2001-*

Diffusion of Scientific Information

Co-Chairman, EUCHEM-PSIBLOCS Conference, Palaiseau, *Sept. 1988*
Co-Chairman, XIIth International Conference on Phosphorus Chemistry (ICPC), Toulouse, *July 1992*
Member of the Advisory Committee of Heron Island Conferences on Reactive Intermediates, *1994-present*
Member of the Editorial Board, "Heteroatom Chemistry", *1989-present*
Member of the Editorial Board, "Chemical Reviews", *1989 present*
Member of the Editorial Board, "Bull. Soc. Chim. Fr.", *1996-1998*
Member of the Editorial Board, "Topics in Stereochemistry", *1996-2005*
Member of the Editorial Board, "C. R. Acad. Sc. Paris", *1998-present*
Guest Editor, "Phosphorus, Sulfur, and Silicon" Vol. 75-77, *1993*
Guest Editor, "Chemical Reviews", special issue on Phosphorus Chemistry, *August 1994*
Associate Editor, "Bull. Soc. Chim. Fr. ", *July 1991 - Dec. 1995*
Editor, "European Chemistry Chronicle", *1996 - 1998*
Regional Editor, "J. Organomet. Chem. ", *January 1999-present*
Member of the Editorial Board, "Eur. J. Inorg. Chem.", *December 2002-present*
Member of the Editorial Board, "Chemistry: an Asian Journal.", *2006-present*
Guest Editor, "Chemical Reviews", Special issue on Carbene Chemistry, *August 2009*
Guest Editor, "Chemical Reviews", Special issue on Main Group Chemistry, *August 2010*
Member of the Editorial Board, "Chemistry Letters", *2010-present*
Member of the Editorial Advisory Panel for Nature Communications*, 2010-present*
Member of the Advisory Editorial Board “Chemical Science”*, 2010-present*
Associate Editor, “Chemical Reviews”, *2010-present*

Honors

Visiting Associate Professor at Utah University, Salt Lake City, USA, *June-Sept. 1983*
Humboldt junior award at T. U. München, Germany, *Nov. 1988-May 1989*
International Council on Main Group Chemistry Award, *1993*
French-German Humboldt Award, *1994*
Membre Correspondant de l’Institut (French Academy of Sciences), *1996*
Visiting Professor at ETH Zürich, *June-Sept. 1998*
Kharasch Lecturer, University of Chicago, *1998*
Médaille d'Argent du CNRS, *1998*
Japanese Society for Promotion of Science Award, *1999*
Member of the Académie des Technologies, *2000*
Member of the Academia Europea, *2002*
Member of the European Academy of Sciences, *2003-*
Taiwan National Science Foundation Distinguished Lectureship, *2003*
Member the French Academy of Sciences, *2004*
Fellow of the American Association for Advancement of Science, *2006*
East Cost Lecturer (Scotland), *2007*
Novartis Lectureship at the Scripps Research Institute, La Jolla, *2009-2010*
Sir Ronald Nyholm Lectureship and Medal of the RSC, *2009-2010*

Anthony J. Arduengo, III Lectureship of the University of Alabama, *2010*
Senior Humboldt Research Award, Reinvitation, *2010*
Pattison Lectureship, University of Western Ontario, *2010-2011*
Bruker Lectureship, University of Toronto, *2010*
Grand Prix Le Bel of the French Chemical Society, *2010*
Eli Lilly Lectureship, University of Illinois, Urbana-Champaign, *2010-2011*
PKU-Eli Lilly Lecture, Peking University in Beijing, China, *2011*.

PUBLICATIONS

1 *Réarrangements thermiques d'oxa-6 sila-2 bicyclo[3.1.0]hexanes : oxa-1 sila-2 cyclohexènes-5 et sila-1 cyclopentanone-3*. M. Lesbre, G. Bertrand, G. Manuel, P. Mazerolles, **C. R. Acad. Sc. Paris Série C 1977**, *284*, 709-712

2 *Synthèse et réarrangements de cycles α-fonctionnels du germanium : oxa-6 diphényl-2,2 germa--2-bicyclo [3.1.0]hexane et diphényl-1,1 germa-1 cyclopentanol-2. Etude comparative avec les dérivés isologues du silicium*. G. Manuel, G. Bertrand, P. Mazerolles, **J. Organomet. Chem. 1978**, *146* (l), 7-16.

3 *Synthèses et réarrangements thermiques de sila-1 et sila-2 dichloro-6,6 bicyclo[3.1.0]hexanes*. G. Bertrand, G. Manuel, P. Mazerolles, **J. Organomet. Chem. 1978**, *144* (3), 303-315.

4 *Délocalisation à travers un atome de silicium. Formation d'un ion silicénium au cours du piégeage du méthyl-2 sila-2 butadiène-1,3*. G. Bertrand, G. Manuel, P. Mazerolles, **Tetrahedron Lett. 1978**, *19*, 2149-2152.

5 *Hypothèses sur la formation par pyrolyse du premier intermédiaire à silicium digonal*. G. Bertrand, G. Manuel, P. Mazerolles, **Tetrahedron 1978**, *34* (13), 1951-1956.

6 *Theoretical investigations on some C_2SiH_4 isomers*. J. C. Barthelat, G. Trinquier, G. Bertrand, **J. Am. Chem. Soc. 1979**, *101*, 3785-3789.

7 *Claisen rearrangement in the silicon series*. J. Ancelle, G. Bertrand, M. Joanny, P. Mazerolles, **Tetrahedron Lett. 1979**, *20*, 3153-3156.

8 *Asymmetric induction at silicon from prochiral silaethylenes*. G. Bertrand, J. Dubac, P. Mazerolles, J. Ancelle, **J. Chem. Soc., Chem. Commun. 1980,** 382-383.

9 *Photolytic rearrangement of phosphorus azide. Evidence for a transient metaphosphonimidate*. G. Bertrand, J.P. Majoral, A. Baceiredo, **Tetrahedron Lett. 1980,** *21*, 5015-5018.

10 *Le réarrangement de Claisen en séries siliciée et germaniée : silaéthylène et germaéthylène*. G. Bertrand, P. Mazerolles, J. Ancelle, **Tetrahedron 1981,** *37*, 2459-2466.

11 *Isomérisations thermiques originales de composés β-chlorés du silicium induites par un groupe β'-éthylénique*. G. Manuel, G. Bertrand, P. Mazerolles, J. Ancelle, **J. Organomet. Chem. 1981,** *212*, 311-323.

12 *Photolytic rearrangement of germanium azides. Evidence for transient germa-imines*. A. Baceiredo, G. Bertrand, P. Mazerolles, **Tetrahedron Lett. 1981,** *22*, 2553-2556.

13 *Le problème de la conjugaison à travers un atome de silicium π-lié dans les systèmes sila-2 butadiéniques*. G. Bertrand, G. Manuel, P. Mazerolles, G. Trinquier, **Tetrahedron 1981,** *37*, 2875-2880.

14 *Surprising reactivity of very crowded phosphinic derivatives*. A. Baceiredo, G. Bertrand, P. Mazerolles, J. P. Majoral, **J. Chem. Soc., Chem. Commun. 1981**, 1197-1198.

15 *Photolytic rearrangement of phosphorus, germanium and silicon azides: evidence for new hybridized species*. J. P. Majoral, G. Bertrand, A. Baceiredo, P. Mazerolles, **A.C.S. Series 1981,** *171*, 597-600.

16 *First asymmetric synthesis of functionalized mono-aromatic or non-aromatic silanes from prochiral silaethylenes*. G. Bertrand, J. Dubac, P. Mazerolles, J. Ancelle, **Nouveau J. de Chimie 1981,** *6*, 381-386.

17 *Les extraterrestres sont-ils en silicium ?* S. Ortoli, G. Bertrand, **Science et Vie, 1982,** *780*, 26-29.

18 *A new route to bis(2,4,6-tri-tert-butylphenyl)diphosphene via silylated compound.* G. Bertrand, C. Couret, J. Escudie, S. Majid, J. P. Majoral, **Tetrahedron Lett. 1982,** *23*, 3567-3570.

19 *An improved synthesis of key intermediates in metallole 4B chemistry*. G. Manuel, G. Bertrand, F. El Anba**, Organometallics 1983,** *2,* 391-394.

20 *Réarrangement de Curtius en série organométallique : photolyse d'azotures du phosphore tétra- coordonné pentavalent*. A. Baceiredo, G. Bertrand, J. P. Majoral, **Nouveau J. de Chimie 1983,** *7*, 255-261.

21 *Le rérrangement de Curtius en série siliciée : mécanismes et applications synthétiques*. A. Baceiredo, G. Bertrand, J. P. Majoral, P. Mazerolles, **Nouveau J. de Chimie 1983, *7*,** 645-651.

22 *Stannylene and germylene as powerful dechlorinated reagents : new route to diphosphene*. M. Veith, V. Huch, J. P. Majoral, G. Bertrand, G. Manuel, **Tetrahedron Lett. 1983,** *24*, 4219-4222.

23 *Synthèse et propriétés pharmacologiques du (d-1)thia-PAF*. A. Bernat, G. Bertrand, D. Delebassee, B. Garrigues, J. P. Maffrand, E. Vallee, **J. de Pharmacologie 1983,** *14*(1), 49.

24 *Photolysis of phosphonium and phosphorane azides*. J. P. Majoral, G. Bertrand, A. Baceiredo, M. Mulliez, R. Schmutzler, **Phosphorus Sulfur 18, 221-224 (1983)**

25 *First evidence for a Curtius type rearrangement involving a pentacoordinated atom*. A. Baceiredo, G. Bertrand, J. P. Majoral, U. Wermuth, R. Schmutzler, **J. Am. Chem. Soc. 1984,** *106*, 7065-7068.

26 *Synthesis and structure of the first cyclodiphosphazene. Dimerization of a phosphonitrile* $>P\equiv N$. A. Baceiredo, G. Bertrand, J. P. Majoral, G. Sicard, J. Jaud, J. Galy, **J. Am. Chem. Soc. 1984,** *106*, 6088-6089.

27 *First evidence for an intermediate nitrilo -*λ^5*-phosphane (*$>P\equiv N$*)*. G. Sicard, A. Baceiredo, G. Bertrand, J. P. Majoral, **Angew. Chem. Int. Ed. Engl. 1984,** *23*, 459-460.

28 *Thermolysis of 6-oxa-3-silabicyclo[3.1.0]hexanes : a new convenient route to silicon-oxygen* π*-bonded species*. G. Manuel, G. Bertrand, W. P. Weber, S. A. Kazoura, **Organometallics 1984,** *3*, 1340-1343.

29 *Reactions of phosphorus electrophiles with* $[(\eta^5\text{-}C_5Me_5)Fe(CO)_2]^-$*: spectroscopic evidence for a phosphinidene complex*. H. Nakazawa, W. E. Buhro, G. Bertrand, J. A. Gladysz, **Inorg. Chem. 1984,** *23*, 3431-3433.

30 *First evidence for a Curtius type rearrangement involving a charged atom. An easy synthesis of an iminophosphonium salt*. M. Mulliez, J. P. Majoral, G. Bertrand, **J. Chem. Soc., Chem. Commun. 1984,** 284-285.

31 *An efficient synthesis of azathia analogs of platelet activating factor*. B. Garrigues, G. Bertrand, J. P. Maffrand, **Synthesis 1984,** 870-872.

32 *Synthèse de la d,1-(acetoxy-2 octadecylthio-1)propyl-3 phosphorylcholine ou Thia-PAF*. B. Garrigues, G. Bertrand, D. Frehel, J. P. Maffrand, **Phosphorus and Sulfur 1984,** *21*, 171-176.

33 *Versatile photochemical behavior of phosphorus azides : Curtius-type rearrangement and diverse fates of* α*-phosphorus nitrenes*. A. Baceiredo, G. Bertrand, J.P. Majoral, F. El Anba, G. Manuel, **J. Am. Chem. Soc. 1985,** *107*, 3945-3949.

34 *Synthesis of the first* α*-diazo phosphines. Phosphorus-carbon multiple bond character of phosphinocarbenes*. A. Baceiredo, G. Bertrand, G. Sicard, **J. Am. Chem. Soc. 1985,** *107*, 4781-4783.

35 *Kinetics and mechanism of the pyrolysis of 6-oxa-3,3-dimethyl-3-silabicyclo[3.1.0]hexane, a dimethylsilanone precursor*. I. M.T. Davidson, A. Fenton, G. Manuel , G. Bertrand, **Organometallics 1985,** *4*, 1324-1327.

36 *Binding phosphinidenes to transition-metal fragments*. G. Trinquier, G. Bertrand, **Inorg. Chem. 1985,** *24*, 3842-3856.

37 *The reactions of some azides with an anionic phosphorus(III) complex*. A. Baceiredo, G. Bertrand, J.P. Majoral, K.B. Dillon, **J. Chem. Soc., Chem. Commun. 1985,** 562-563.

38 *Azides of heavier main group elements : the reluctance of phosphine azides to undergo a Curtius type rearrangement*. E. Ocando, S. Majid, J. P. Majoral, A. Baceiredo, G. Bertrand **Polyhedron 1985,** *4*, 1667-1668.

39 *Synthèse de la d,1-(acetoxy-3 octadecylthio-1) propyl-2 phosphorylcholine : un isomère géométrique du thia-PAF*. B. Garrigues, G. Bertrand, J. P. Maffrand, **Phosphorus and Sulfur 1986,** *26*, 53-56.

40 *α-diazophosphines stables analogie λ^3-phosphinocarbene/λ^5-phosphaacetylene*. A. Baceiredo, G. Bertrand, **Phosphorus and Sulfur 1986,** *26*, 57-62.

41 *Phosphorus-nitrogen triple-bonded species*. J. P. Majoral, G. Bertrand, A. Baceiredo, E. Ocando-Mavarez, **Phosphorus and Sulfur 1986,** *27*, 75-80.

42 *First example of prototropism in iminobis(phosphines) induced by phosphorus alkylation*. A. M. Caminade, E. Ocando, J. P. Majoral, M. Cristante, G. Bertrand, **Inorg. Chem. 1986,** *25*, 712-714.

43 *Phosphonitriles : versatile intermediates*. J. Boske, E. Niecke, E. Ocando-Mavarez, J. P. Majoral, G. Bertrand, **Inorg. Chem. 1986,** *25*, 2695-2698.

44 *Phosphorus azides, powerful reagents in heterocyclic chemistry*. J. P. Majoral, G. Bertrand, E. Ocando-Mavarez, A. Baceiredo, **Bull. Soc. Chim. Belg. 1986,** *95*, 945-957.

45 *Phosphinocarbene-phosphaalkene rearrangement and intramolecular Wittig-like reaction involving a phosphorus vinyl ylide*. A. Baceiredo, A. Igau, G. Bertrand, M. J. Menu, Y. Dartiguenave, J. J. Bonnet, **J. Am. Chem. Soc. 1986,** *108*, 7868-7869.

46 *Triple-bonded-like tricoordinated phosphorus species >P≡*. G. Bertrand, A. Baceiredo, G. Sicard, M. Granier, **Phosphorus and Sulfur 1987,** *30*, 353-356.

47 *Synthesis and electrocyclic ring opening of 1,3,2λ^3,4λ^5-diazadiphosphetines*. J. Boske, E. Ocando-Mavarez, E. Niecke, J. P. Majoral, G. Bertrand, **J. Am. Chem. Soc. 1987,** *109*, 2822-2823.

48 *Synthesis and reactivity of diazomethylenephosphoranes (->P=C=N_2): new phosphacumulene ylides and first stable pseudounsaturated diazo derivatives*. J. M. Sotiropoulos, A. Baceiredo, G. Bertrand, **J. Am. Chem. Soc. 1987,** *109*, 4711-4712.

49 *Reaction of the (trimethylsilyl)diazomethane anion with metal complexes: synthesis and X-ray study of iodomethyltris(trimethylphosphine)rhodium(III)(trimethylsilyl)diazomethane, $RhICH_3(PMe_3)_3\{C(N_2)SiMe_3\}$*. M. J. Menu, P. Desrosiers, M. Dartiguenave, Y. Dartiguenave, G. Bertrand, **Organometallics 1987,** *6*, 1822-1824.

50 *A new route to nitrile oxides via α-nitrosodiazo derivatives*. G. Sicard, A. Baceiredo, G. Crocco, G. Bertrand, **Angew. Chem. Int. Ed. Engl. 1988,** *27*, 301-302.

51 *Synthesis and reactivity of a stable nitrile imine*. G. Sicard, A. Baceiredo, G. Bertrand, **J. Am. Chem. Soc. 1988,** *110*, 2663-2664.

52 *First direct evidence for nitrile imine-diazo isomerization. Synthesis of relatively stable N-silylated nitrile imines.* M. Granier, A. Baceiredo, G. Bertrand, **Angew. Chem. Int. Ed. Engl. 1988,** *27*, 1350-1351.

53 *Analogous α,α' bis carbenoid triply bonded species : synthesis of a stable λ^3-phosphinocarbene – λ^5-phosphaacetylene*. A. Igau, H. Grutzmacher, A. Baceiredo, G. Bertrand, **J. Am. Chem. Soc. 1988,** *110*, 6463-6466.

54 *Reactivity of $Rh(PMe_3)_4Cl$ with lithium derivatives of phosphorus-substituted diazomethanes. First evidence for a transient nitrogen-transition-metal nitrile imine. X-ray structure of $(PMe_3)_2RhNBuNCHP(N\text{-}i\text{-}Pr_2)_2$*. M. J. Menu, G. Crocco, M. Dartiguenave, Y. Dartiguenave, G. Bertrand, **Organometallics 1988,** *7*, 2231-2233.

55 *Synthesis of N-bonded diazoalkane complexes via the reaction of the trimethylsilyldiazomethane anion with $M(CO)_5PPh_3$ (M = Cr; W): X-ray structure of $W(CO)_4(PPh_3)[N_2C(SiMe_3)_2]$*. M. J. Menu, G. Crocco, M. Dartiguenave, Y. Dartiguenave, G. Bertrand, **J. Chem. Soc., Chem. Commun. 1988,** 1598-1599.

56 *[Bis(diisopropylamino)phosphino]trimethylsilylcarbene : a stable nucleophilic carbene*. A. Igau, A. Baceiredo, G. Trinquier, G. Bertrand, **Angew. Chem. Int. Ed. Engl. 1989,** *28*, 621-622.

57 *Reactivity of phosphonitriles with low-coordinated phosphorus double-bonded compounds*. J. Boske, E. Niecke, M. Nieger, E. Ocando, J. P. Majoral, G. Bertrand, **Inorg. Chem. 1989,** *28*, 499-504.

58 *Analogy α,α'-bis carbenoid - triply-bonded species: attempted synthesis of $\sigma^2\lambda^3$-phospha-carbene (-C-P=C<) – $\sigma^2\lambda^5$-phosphaacetylene (-C≡P=C<)*. A. Igau, A. Baceiredo, G. Bertrand, K. Kuhnel Lysek, E. Niecke, **New J. Chem. 1989, *13*,** 359-362.

59 *First structural characterization of an α-diazophosphane : crystal structure of bis[bis(diiso- propylamino)phosphanyl]diazomethane $[(i\text{-}Pr_2N)_2P]_2CN_2$*. M. J. Menu, M. Dartiguenave, Y. Dartiguenvae, J. J. Bonnet, G. Bertrand, A. Baceiredo, **J. Organomet. Chem. 1989,** *372*, 201-206.

60 *A distillable C- and N-silylated nitrile imine*. F. Castan, A. Baceiredo, G. Bertrand, **Angew. Chem. Int. Ed. Engl. 1989,** *28*, 1250-1251.

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63 *Synthesis and reactivity of stable phosphorus-substituted nitrilimines; X-ray crystal structure of C-[bis(diisopropylamino)thioxophosphoranyl]-N-[bis(diisopropylamino)-phosphanyl]nitrilimine*. M. Granier, A. Baceiredo, Y. Dartiguenave, M. Dartiguenave, M. J. Menu, G. Bertrand, **J. Am. Chem. Soc. 1990,** *112*, 6277-6285.

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65 *Electron-impact and flash-vacuum pyrolysis of trivalent and pentavalent phosphorus azides: generation of original unsaturated mono-, di- and tricoordinated phosphorus cations*. A. Maquestiau, L. Z. Chen, R. Flammang, J. P. Majoral, G. Bertrand, **Inorg. Chem. 1990,** *29*, 3097-3102.

66 *Synthesis and reactivity of the first stable λ^5-phosphaacetylene*. G. Bertrand, A. Igau, A. Baceiredo, H. Grutzmacher, **Phosphorus, Sulfur, and Silicon 1990,** *49/50*, 301-304.

67 *Use of phosphorus for stabilizing highly reactive organic species: nitrileimines and pseudo-diazo-alkenes*. A. Baceiredo, M. Granier, F. Castan, J. M. Sotiropoulos, G. Bertrand **Phosphorus, Sulfur, and Silicon 1990,** *49/50,* 131-134.

68 *Stereospecific formation of a 1,2λ^3-azaphosphetane in the thermolysis of bis[bis(diisopropyl- amino)phosphanyl]diazomethane*. M. J. Menu, Y. Dartiguenave, M. Dartiguenave, A. Baceiredo, G. Bertrand, **Phosphorus, Sulfur, and Silicon 1990,** *47*, 327-334.

69 *An N-phosphino C-thiophosphinoyl nitrilimine as a formal 1,4 dipole : synthesis of 1,2,3λ^5-diaza- and 1,2,4,3λ^5-triazaphosphinines*. M. Granier, A. Baceiredo, M. Nieger, G. Bertrand **Angew. Chem. Int. Ed. Engl. 1990,** *29*, 1123-1125.

70 *Spontaneous formation of stable phosphino(silyl)-carbenes from unstable diazo compounds*. G. Gillette, A. Baceiredo, G. Bertrand, **Angew. Chem. Int. Ed. Engl. 1990,** *29*, 1429-1431.

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72 *Synthesis and reactivity of stable silyl-substituted nitrilimines*. F. Castan, A. Baceiredo, D. Bigg, G. Bertrand, **J. Org. Chem. 1991,** *56*, 1801-1807.

73 *Bis(diisopropylamino)phosphanyldiazomethane: a building block for the synthesis of stable carbene and nitrilimines*. G. Bertrand, **Heteroatom. Chem. 1991,** *2*, 29-38.

74 *X-ray crystal structure and reactivity of an N- phosphonio-substituted nitrilimine : a stable electrophilic nitrilimine*. M. Granier, A. Baceiredo, V. Huch, M. Veith, G. Bertrand, **Inorg. Chem. 1991,** *30*, 1161-1162.

75 *Preparation of novel low-coordinate chloro and azido P-N compounds. Attempted synthesis of cyclodiphosphazenes*. H. Rolland, E. Ocando-Mavarez, P. Potin, J. P. Majoral, G. Bertrand, **Inorg. Chem. 1991,** *30*, 4095-4098.

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77 *Stable N-phosphanyl nitrilimines: reactivity on the periphery of the nitrilimine skeleton*. F. Castan, M. Granier, T. Straw, A. Baceiredo, K. B. Dillon, G. Bertrand, **Chem. Ber. 1991,** *124*, 1739-1746.

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79 *Synthesis of stable boryl-substituted diazomethane and nitrilimines*. M. P. Arthur, H. Goodwin, A. Baceiredo, K. B. Dillon, G. Bertrand, **Organometallics 1991,** *10*, 3205-3210.

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12 Des intermédiaires réactionnels stables
Journées de Chimie Organique de Palaiseau (France), September 1992

13 New stable free carbenes and new types of phosphorus cations
Gordon Research Conference on Organometallic Chemistry, Rhode Island (USA), July 1993

14* Aromaticity and anti-aromaticity : what can we do with phosphorus ?
Worshop on Phosphaalkynes and Phosphaalkenes - Milestones in the Chemistry of Low-coordinate Phosphorus, Kaiserslautern (Germany), October 1993

15* Antiaromatic inorganic ring systems
VIIth International Conference on Inorganic Ring Systems (IRIS VII), Banff (Canada), August 1994

16 Phosphorus substituted "CN_2" groups: building blocks in heterocyclic chemistry
XVIth European Colloquim on Heterocyclic Chemistry, Bled (Slovenia), September 1994

17* Cyclodiphosphazenes-polyphosphazenes and related rings and polymers
VIth International Kyoto Conference on New Aspects of Organic Chemistry (IKCOC-6), Kyoto (Japan), November 1994

18 New aspects of the chemistry of azido and diazo groups : building blocks for original heterocycles
International Conference on Chemistry of Functional Organic Chemicals (IFOC), Tokyo (Japan) November 1994

19 Silicon and Tin: two very different cousins
Workshop on Silicon Chemistry, Tsukuba (Japan), November 1994

20 Synthesis and reactivity of 4-π-electron 4-membered phosphorus heterocycles
Worshop on Organic and Inorganic Chemistry of Reactive C=X π-systems, Münster (Germany), November 1994

21 Synthesis and reactivity of relatively stable isodiazirine
International Chemical Congress of Pacific Basin Societies, Honolulu (USA), December 1995

22 The trimethylsilyl diazomethane: a wonderful building block
The 3rd Munich Silicondays, Munich (Germany), April 1996

23 Phosphorus in a highly versatile element
Summer School on Modern Main Group Chemistry, Champéry (Switzerland), September 1996

24 Double and triple bonded phosphorus derivatives
Summer School on Modern Main Group Chemistry, Champéry (Switzerland), September 1996

25 Phosphorus in organic chemistry
Summer School on Modern Main Group Chemistry, Champéry (Switzerland), September 1996

26 Phosphorus in transition metal chemistry
Summer School on Modern Main Group Chemistry, Champéry (Switzerland), September 1996

27 Des résidus de produits phytosanitaires et des métaux lourds
Festival de l'eau. Eau et santé, Rodez (France), October 1996

28 Group 13 to 15 elements: from small membered rings to polymers through macrocycles

23rd Symposium on Heteroatom Chemistry, Okayama (Japan), December 1996

29 Des molécules exotiques aux applications
Assemblée SFC Midi-Pyrénées, Toulouse (France), March 1997

30 Nouvelles bases fortes non ioniques
IIIème Rencontres "Recherche, Science et Technologies des deux côtés des Pyrénées", Andorre (Andorra), June 1997

31 Phosphorus Analogs of 2H- and 1H-diazirines, diazirinium and Diazirinyl radical
International Conference on Reactive Intermediates and Unusual Molecules, Lake Tahoe, California (USA), July 14-19, 1997

32 From exotic molecules to applied chemistry
Gordon Research Conference on Inorganic Chemistry, Salve Regina (USA), July 20-25, 1997

33 Des molécules exotiques aux applications
Club CRIN, Hétérochimie, Paris (France), September 24, 1997

34 A new type of benzene valence isomer and one-electron phosphorus-phosphorus bond
FACS, Cannes (France), June 2-5, 1998

35 One-electron phosphorus-phosphorus bond
XIVth International Conference on Phosphorus Chemistry, Cincinnatti (USA), July 13-17, 1998

36 Let's play with bon order in phosphorus chemistry
Niecke 60th Birthday Symposium, Bonn (Germany), January 16, 1999

37* Are stable silyl carbenes genuine carbenes ?
XIIth International Conference on Organosilicon Chemistry, Sendai (Japan), 23-28/05/99

38 Phosphorus-phosphorus half bonds do exist. What about silicon-silicon half bonds?
ISOS XIIth, Kyoto (Japon), May 28-30, 1999

39 Heterocyclic bis(carbene) and cationic carbene as ligands for transition metals
Pre-OMCOS Symposium, Rennes (France), July 15-16, 1999

40 Main group element half bonds
218th ACS National Meeting, JOM Symposium on "Frontiers in Organometallic Chemistry" New Orleans (USA), August 22-26, 1999

41 A tetraphosphabenzene valence isomer unkown in the carbon series
KISPOC III, Fukuoka (Japan), September 29 - October 02, 1999

42 Sometimes it's not organic but main group chemistry, which leads the way

German Chemical Society (GDCh), Berlin (Germany), April 17-18, 2000

43 Nouveaux types de carbènes comme ligands pour les métaux de transition
Gecom Concoord 2000, Dijon (France), May 14-19, 2000

44 Des concepts simples et des résultats originaux
SFC/Section Midi-Pyrénées, Toulouse (France), May 25, 2000

45 A cyclic carbanionic valence isomer of a carbocation
Conference on Reactive Intermediates and Unusual Molecules, Vienne (Austria), August 26-31, 2000

46 Exploiting the phosphorus trick
Symposium on Electron Transfer in Inorganic and Organic Chemistry, Münster (Germany), November 15-17, 2000

47 Stable versions of transient push-pull carbenes
Pacifichem, Symposium on Reactive Intermediates and Unusual Molecules, Honolulu (USA), December 14-21, 2000

48 Phosphorus analogs of amidinium salts
Pacifichem, Inorganic Chemistry, Honolulu (USA), December 14-21, 2000

49 La chimie avec ou sans hétéroélément(s) : quelle différence !
Micro-symposium IUF, Talence (France), March 3, 2001

50 Chemistry of organophosphorus compounds
International Symposium CHIREX, Jacksonville (USA), April 23-27, 2001

51 New types of bonding in main group chemistry
84ème Canadian Society for Chemistry Conference & Exhibition, Montréal (Canada), May 26-30, 2001

52 Chemistry with and without main group element : what a difference !
1st International Rhodia Conference, Lyon (France), July 02-05, 2001

53 Stable singlet biradicals in phosphorus chemistry
15th International Conference on Phosphorus Chemistry, Sendai (Japan) July 29 – August 3, 2001 (Cancelled)

54 Quelques spécificités de la chimie des éléments principaux
42ème Groupe d'Etudes de Chimie Organique, Batz-sur-Mer (France), September 02-07, 2001

55 Chemistry with and without heavier main group elements : what a difference for reactive intermediates
International Symposium on Reactive Intermediates and Unusual Molecules, Nara (Japan), September 08-13, 2001

56 New types of bonding in main group chemistry
ACS Meeting, Chicago (USA), August 25-26, 2001

57 Stable carbenes in organic synthesis
Cost D12 Workshop, La Laguna, Tenerife (Spain), September 20-23, 2001 (Cancelled)

58 New stable carbenes and diradicals
ACS Meeting, "Inorganic Chemistry Award Symposium" New Orleans (USA), March 23-27, 2003

59 Chemistry with and without main group element: what a difference!
Inorganic Chemistry Colloquium, **Cambridge (UK), June 5, 2003 (Cancelled)**

60* Chemistry with and without main group element: what a difference!
Encuentro de Química Inorgánica Cuernavaca 2003 , **(Mexico), June 12-14, 2003**

61 New types of stable carbenes
Gordon Conference on Organometallic Chemistry, Newport (USA), July 20-25, 2003

62* Stable diradicals based on heavier main group elements
10th International Symposium on Inorganic Ring Systems, Burlington (USA) August 17-22, 2003 (Cancelled)

63 New types of stable carbenes as ligands for transition metals
ACS Meeting "Frontiers in Organometallic Chemistry Symposium" New York (USA) September 7-11, 2003

64* Exotic lithium derivatives
The Third Conference on the Chemistry of the Alkali and Alkaline Earth Metals (ALKCHEM-3), Würzburg (Germany) September 28-10, 2003 (Cancelled)

65* Stable Singlet Diradicals and Tetraradicals Based on Group 13 and 15 Elements
Center of Excellence International Symposium on Elements Science. Kyoto (Japan) January 9-10, 2004

66 Stable diradicals and tetraradicals
ACS Meeting "Main group Chemistry Symposium" Anaheim (USA) March 28 – April 4, 2004

67* Towards libraries of Carbenes via Substitution Reactions at a Carbene Center: Application in catalysis
Symposium of the French-Japanese Society for Medicinal and Fine Chemistry, Sendai (Japan) May 17-20, 2004

68 New Stable Diradicals based on Phosphorus

XVIth International Conference on Phosphorus Chemistry, Birmingham (UK) July 4-9, 2004

69* Stable Non N-Heterocyclic Carbenes: New ligands for transition metal catalysts
XXIst International Conference on Organometallic Chemistry (ICOMC), Vancouver (Canada) July 25-30, 2004

70 Stable non-NHCs
ACS Meeting "NHCarbenes Symposium" Philadephia (USA) August 22-27, 2004

71 Stable Carbenes based on boron
ACS Meeting, "Albert Cotton Award Symposium" San Diego (USA), 3/13-16/2005

72* New Families of Stable Cyclic Carbenes for the Preparation of Highly Active Catalysts and Low Ligated transition metals
XVIth FECHEM Conference on Organometallic Chemistry, Budapest (Hungary) September 3-8, 2005.

73* New Families of Stable Cyclic Carbenes for the Preparation of Highly Active Catalysts and Low Ligated transition metals
International Symposium on Dynamic Complexes, Sendai (Japan) October 23-25, 2005.

74 Chemistry with and without silicon and other main group elements: what a difference!
Japanese Silicon Meeting, Hiroshima (Japan) October 28-29, 2005.

75 New Families of Stable Cyclic Carbenes (non NHCs) for the Preparation of Highly Active Catalysts
6th Annual UCSD/Merck Symposium on Perspectives in Organic Synthesis, San Diego (USA) December 12, 2005.

76 New families of stable carbenes
2005 Pacifichem Conference "Symposium on Reactive Intermediates and Unusual Molecules" Hawai (USA) December 2005

77 Stable cyclic (amino)(alkyl)carbenes as ligands for transition metal complexes featuring very high catalytic activity
2005 Pacifichem Conference "Symposium on New Organometallic Compounds for Applications in Homogeneous Catalysis" Hawai (USA) December 2005

78 New Families of Stable Cyclic Carbenes (non NHCs) for the Preparation of Highly Active Catalysts
DFG symposium, **Tagungshotel Schleiden-Bonn (Germany) 5/7-9/2006**

79 Chemistry with and without main group elements: what a difference!
Grand Opening Symposium of the Main Group Chemistry Research Center, Bristol (UK) July 28, 2006.

80* Diradicals
11th International Symposium on Inorganic Ring Systems, Oulu (Finland) 7/30-8/4/2006

81 Stable singlet diradicals, polyradicals and carbenes based on boron
ACS Meeting, "Polyfunctional Organoboranes: From Molecules to Materials Symposium" San Francisco (USA), 9/10-14/2006

82* Stable carbenes can help, and even do the job of transition metals
42nd EUCHEM Conference on Stereochemsitry, Burgenstock (Switzerland) April 14-20, 2007

83* Chemistry with and without main group elements: what a difference!
Contemporary Main Group Chemistry Symposium, St-Andrews (Scotland) June 5, 2007

84 Can a non-metal do the job of a transition metal?
Inorganic Chemistry Gordon Research Conference, Newport (USA) July 15-20, 2007

85 Can a carbene do the job of a metal?
ACS Meeting "Frontiers in Organometallic Chemistry" Boston (USA) 8/19-23/2007

86* Activation of small molecules and unreactive XH bonds by Stable Singlet Carbenes
Heavier Heterocycles and Heteroatoms Zing Conference, Cancun (Mexico) February 25-28, 2008

87 Bent-allenes
2008 SynCon Meeting, (UCLA), May 10, 2008

88*. Activation of White Phosphorus by Stable Singlet Carbenes (Cancelled)
XV International Conference on Chemistry of Phosphorus Compounds (Saint-Petersburg, Russia) May 25-30, 2008.

89 1,3-Diborata-2,4-diphosphoniocyclobutane-1,3-diyls Communicate through a para-Phenyl Linker
Dalton Discussion 11, The Renaissance of Main Group Chemistry (Berkeley) June 21-25, 2008

90* Stable diradicals, bond-stretch isomers, and carbenes based on boron
IMEBORON XIII Barcelona- Platja d´Aro (Spain) September 21-25, 2008

91* Stable carbenes and bent-allenes as strong donor ligands for Transition Metal Catalysts
Catalysis, NMR, Symmetry, Theory: A tribute to Paul Pregosin, ETH Zurich, (Switzerland) October 27 2008

92 From crazy molecules (A tribute to Edgar) to catalysis.
Edgar Niecke Feast, Bonn, (Germany) January 5, 2009

93 Novel families of carbon ligands, novel catalytic reactions
Carbene Zing Conference, Cancun (Mexico) February 18-21, 2009

94 Novel families of carbon ligands, novel catalytic reactions
237th ACS meeting "2009 ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry: Alan H. Cowley Symposium" March 22-26, 2009, Salt lake City (USA)

95* Interplay between radicals, carbenes, bent-allenes and phosphorus chemistry.
6th European Workshop on Phosphorus Chemistry, Florence (Italie) March 26-27, 2009

96* Nouvelles familles de ligands carbones, Nouvelles reactions catalytiques
Congrès de l'ACFAS (Association Canadienne-Francaise pour l'Avancement des Sciences) Ottawa (Canada) May 11-15, 2009

97 Abnormal carbenes
2008 SynCon Meeting, (USC) May 23, 2009

98 Carbene activation of P4
92th Canadian Chemistry Conference, Hamilton, Ontario (Canada) May 30- June 3, 2009

99* Carbenes and Bent-Allenes in Phosphorus Chemistry
9th International Conference on Heteroatom Chemistry (ICHAC-9) Oviedo (Spain) June 30th -July 4th, 2009

100* Carbenes and Bent-Allenes in Phosphorus Chemistry
Biannual German Chemical Society Meeting, Frankfurt (Germany) August 30-September 2, 2009

101 Interplay between radicals, carbenes, bent-allenes and phosphorus and boron chemistry.
The Diversity of Main Group Element Chemistry Symposium, Nottingham (UK), September 7, 2009

102* Interplay between radicals, carbenes, bent-allenes and phosphorus and boron chemistry.
Recent Adventures in Carbene Chemistry Symposium, Durham (UK), September 8, 2009

103* Interplay between radicals, carbenes, bent-allenes and phosphorus and boron chemistry.
Royal Society of Chemistry, Main Group Chemistry Annual Symposium, Manchester (UK) September 11, 2009

104 Interplay between radicals, carbenes, bent-allenes and main group chemistry.

International symposium on "Elemento- and Metallo-Organic Chemistry toward Materials Science", Riken, Tokyo (Japan) November 5-6, 2009

105 Title unknown (cancelled)
International Schulich Mini-Symposium on Frontiers in Computational Chemistry and Bridging Chemistry and Biology, Haifa (Israel) December 8, 2009

105 Novel families of carbon ligands, novel catalytic reactions
Dutch National Symposium on Organic Chemistry, Amsterdam (The Netherlands) April 8-9, 2010

106 Novel families of carbon ligands, novel catalytic reactions
Rencontres de Chimie Organique 2010, Paris (France) April 15, 2010

107 Novel families of carbon-based ligands, novel catalytic reactions
38th Stauffer Symposium, USC Los Angeles (USA) April 28, 2010

108 Stable Triazolylidenes
2010 SynCon Meeting, (Caltech) May 22, 2010

109 New stable carbon-based ligands, novel catalytic reactions.
93rd Canadian Chemistry Conference and Exhibition (CSC2010) (Toronto, Canada) May 29-June 2, 2010

110 NH_3-hydroamination of unactivated CC multiple bonds
DOE Contractor's Meeting (Anapolis, Maryland) June 1-4, 2010

111 Novel families of carbon-based ligands, novel catalytic reactions
Organometallic Chemistry Gordon Research Conference, Newport, RI (USA) July 11-16, 2010

112 Novel families of carbon-based ligands, novel catalytic reactions
Symposium "Frontiers in Organometallic Chemistry" PACIFICHEM Conference, Honolulu, Hawaii (USA) December 14-20, 2010

. at Companies (day/month/year)

1-2 Phosphonitriles and cyclodiphosphazenes
Ethyl Corporation, Baton Rouge-Louisiana (USA), 25/9/1985
Stauffer Chemical Company, Dobbs Ferry-New York (USA), 4/10/1985

3 Phospholipids : Structural Analogs of Platelet Activating Factor
Monsanto Company, St. Louis-Missouri (USA), 28/9/1985

4 Nouveaux synthons en chimie hétérocyclique
Etablissements Pierre Fabre Médicaments, Castres (France), 10/2/1988

5 Stabilisation d'espèces hautement réactives : leur utilisation en synthèse organique
SNPE, Vert le Petit (France), 25/10/1988

6 Les éléments lourds principaux en chimie organique.
Sanofi Recherche, Toulouse (France), 21/11/1989

7 Carbènes et nitrilimines : de la curiosité de laboratoire à l'outil de synthèse
Rhone-Poulenc, Lyon - St Fons (France), 14/6/1990

8 Electron deficient species: from laboratory curiosities to synthetic tools
BASF, Ludwigshafen (Germany), 4/9/1990

9 Use of heavier main group elements for stabilizing highly reactive organic species
Du Pont Experimental Station, Wilmington (USA), 3/9/1991

10 Main group elements are useful
ARCO Chemical Co., Newton Square (USA), 4/9/1991

11 Les nitrilimines
Flamel Technologies, Lyon (France), 5/11/1991

12-13 Stable carbenes, nitrilimines and diazocumulenes : powerful building blocks for heterocyclic synthesis
Sumitomo Chem. Co., Takarazuka (Japan), 18/1/1992
Mitsui Petrochem. Co., Hiroshima (Japan), 22/1/1992

14-15 New results in polyphosphazene chemistry and potential building blocks for non linear-optic materials
Nippon Soda Co., Tokyo (Japan), 28/1/1992
Idemitsu Petrochemical Co., Tokyo (Japan), 30/1/1992

16 Intermédiaires réactionnels stables : de la curiosité de laboratoire à l'outil de synthèse
Groupe Fournier, Dijon (France), 10/6/1992

17 New aspects of the chemistry of azido and diazo groups: building blocks for original heterocycles
Sankyo Co. LTD, Tokyo (Japan), 14/11/94

18 Stable carbenes and nitrilimines as a source of new heterocycles
Takeda Chemical Industries, LTD, Osaka (Japan), 9/11/94

19 Les éléments lourds principaux. Applications en synthèse organique
Sanofi, Toulouse, 29/05/96

20 Nouveaux outils en synthèse organique
Rhône-Poulenc, Paris (France), 28/10/97

21 New aspects of the chemistry of a-silyldiazo compounds
Dow Corning Asia, Tokyo (Japan), 5/12/97

22 New stable radicals and carbenes
Procter and Gamble, Cincinnati (USA), 14/01/98

23 New progress in phosphorus chemistry
Monsanto Company, Saint Louis (USA), 15/01/98

24 New polymerization catalysts
ICI, Bruxelles (Belgium), 11/02/98

25 New building blocks for heterocyclic synthesis and biocompatible polymers as drug delivery systems
Otsuka Pharmaceutical Co. Ltd, Tsukuba (Japan), 16/10/99

26 New Families of Stable Cyclic Carbenes for the Preparation of Low Ligated Transition Metals, and Highly Active Catalysts. Can a Carbene do the Job of a Metal?
The Dow Chemical Company (Midland, USA) May 8, 2007

27 What is new with carbenes?
Rhodia Inc (Bristol, USA) October 2, 2007

28 Novel families of carbon ligands, novel catalytic reactions
Materia, Pasadena, June 11, 2010

. at Universities (day/month/year)

1-3 Curtius rearrangement in organometallic series : a route to new hybridized species
University of Durham, Durham (UK), 15/11/1982
University of Leicester, Leicester (UK), 16/11/1982
University of Sussex, Brighton (UK), 18/11/1982

4-9 Unusually hybridized silicon, germanium and phosphorus species
Louisiana State University, Baton Rouge-Louisiana (USA), 11/2/1983
North Texas State University, Denton-Texas (USA), 14/2/1983
San Diego State University, San Diego-California (USA), 17/2/1983
University of Southern California, Los Angeles-California (USA), 18/2/1983
California State University, Los Angeles-California (USA), 23/2/1983
University of California Los Angeles, Los Angeles-California (USA), 24/2/1983

10-14 Photochemical behaviour of phosphorus azides
Duke University, Durham-North Carolina (USA), 7/2/1983
University of Texas, Austin-Texas (USA), 9/2/1983
Texas Christian University, Forth-Worth-Texas (USA), 15/2/1983

University of Nevada, Reno-Nevada (USA), 25/2/1983
University of Utah, Salt Lake City-Utah (USA), 29/2/1983

15 Rearrangements in silicon and germanium series
University of Wisconsin, Madison-Wisconsin (USA), 1/6/1983

16 Réarrangements thermiques et photochimiques de composés phosphorés et siliciés
Université de Montpellier II (France), 10/3/1984

17 Rearrangement of heavier main group element azides
"Anorganisch-Chemisches Kolloquium", Aachen (Germany), 21/1/1985

18-22 Phosphorus nitrenes, phosphonitriles and phosphinidenes
Fakultät für Chemie, Bielefeld (Germany), 22/1/1985
Fachbereich Chemie, Kaiserslautern (Germany), 23/1/1985
Anorganisch-Chemisches Institut, Bonn (Germany), 25/1/1985
Organisch-Chemisches Institut, Heidelberg (Germany), 28/1/1985
Institut für Anorganische Chemie, Würzburg (Germany), 29/1/1985

23 The chemistry of the phosphorus-nitrogen triple bond
Institut für Anorganische und Analytische Chemie der Freie Universitat, Berlin (Germany), 24/1/1985

24-28 The Chemistry of double and triple bonded phosphorus compounds
The University of North Carolina, Chapel Hill-North Carolina (USA), 20/9/1985
The University of Utah, Salt Lake City-Utah (USA), 23/9/1985
Tulane University, New Orleans-Louisiana (USA), 26/9/1985
California Institute of Technology, Pasadena-California (USA), 30/9/1985
University of Massachusetts, Amherst-Massachusetts (USA), 2/10/1985

29-33 λ^5-phosphonitriles and λ^5-phosphaacetylenes
Fakultät für Chemie, Bielefeld (Germany), 4/7/1986
Institut für Anorganische Chemie, Göttingen (Germany), 7/7/1986
Fachbereich Chemie, Oldenburg (Germany), 8/7/1986
Institut für Anorganische Chemie, Regensburg (Germany), 10/7/1986
Technischen Universität München, Garching (Germany), 11/7/1986

34 Composés du phosphore triplement lié
Université de Strasbourg (France), 8/12/1986

35-41 The diazo group in carbon, phosphorus, sulfur and transition metal chemistry : new route to highly unsaturated organic and inorganic molecules
Philipps Universität, Marburg (Germany), 1/6/1987
Gmelin Institut, Frankfurt (Germany), 2/6/1987
Anorganisch-chemisches Institut, Bonn (Germany), 3/6/1987
Fachbereich Chemie, Essen (Germany), 4/6/1987
Vrije Universiteit, Amsterdam (Netherland), 9/6/1987

Institut für Anorganische Chemie, Frankfurt (Germany), 10/6/1987
Institut für Anorganische Chemie, München (Germany), 11/6/1987

42-45 Composés diazoïques α-hétéroatomiques
Université de Montpellier (France), 22/9/1987
Université de Rennes (France), 8/10/1987
Université de Nantes (France), 9/10/1987
Université de Bordeaux (France), 10/10/1987

46 Nitrènes et carbènes stabilisés
Université de Paris Sud, Orsay (France), 14/11/1987

47-50 New aspects of the chemistry of the diazo group.
University of Utah, Salt Lake City-Utah (USA), 26/5/1988
Queen's University, Kingston (Canada), 30/5/1988
Université de Montreal, Montreal (Canada), 31/5/1988
Université de Laval, Quebec (Canada), 1/6/1988

51 Carbenes : from transient intermediates to isolable compound
Technische Universität, München - Garching (Germany), 8/11/1988

52-54 Stable carbenes and nitrile-imines
Anorganisch Chemisches Institut, Saarbrucken (Germany), 30/5/1989
Fachbereich Chemie, Kaiserslautern (Germany), 1/6/1989
Max Planck Institut, Mülheim/Ruhr (Germany), 3/6/1989

55-59 Use of heavier main group element for stabilizing highly reactive organic molecules
Institut für Anorganische Chemie, Karlsruhe (Germany), 24/11/1989
Westfalische Wilhelms Universität, Münster (Germany), 27/11/1989
Carolo Wilhelmina Universität, Braunschweig (Germany), 29/11/1989
Institut für Anorganische Chemie, Göttingen (Germany), 30/11/1989
Institut für Organische Chemie, Erlangen-Nürnberg (Germany), 1/12/1989

60 Les éléments principaux en chimie organique
Université de Caen (France), 22/3/1990

61-62 Heteroatoms and highly reactive organic species
PennState, Pennsylvania (USA), 23/8/1991
University of Pennsylvania, Philadelphia (USA), 30/8/1991

63 Stable carbenes
Université d'Aix-Marseille, Marseille (France), 19/10/1991

64-69 Diazo compounds and their isomers
Institut für Anorganische Chemie, Bonn (Germany), 11/11/1991
Organisch-Chemisches Institut, Heidelberg (Germany), 12/11/1991
Fachbereich Chemie, Tübingen (Germany), 14/11/1991
Fakultät für Chemie, Freibourg (Germany), 15/11/1991
Anorganisch-Chemisches Institut, Aachen (Germany), 18/11/1991

Fakultät für Chemie, Bielefeld (Germany), 19/11/1991

70 Triple-bonded heavier main group elements
Frei Universität, Berlin (Germany), 21/11/1991

71 Let us play with the coordination states of phosphorus
"Graduiertenkolleg", Berlin (Germany), 22/11/1991

72-73 New types of low coordinated phosphorus compounds
Hiroshima University, Hiroshima (Japan), 21/1/1992
Tohoku University, Sendai (Japan), 27/1/1992

74-76 New aspects of the diazo group in organic and inorganic chemistry
Nat. Chem. Lab. Ind., Tsukuba (Japan), 14/1/1992
Mie University, Tsu (Japan), 23/11/1992
Tsukuba University, Tsukuba (Japan), 24/1/1992

77-78 New stable carbenes
ETH, Zürich (Switzerland), 3/6/92
Université de Lausanne (Switzerland), 4/6/92

79 Espèces hautement réactives : de la caractérisation en matrice à l'outil de synthèse à température ambiante
Université Joseph Fourier, Grenoble (France), 14/1/93

80 Le phosphore dans les systèmes π-liés : liaisons multiples, aromaticité et non aromaticité
Université de Montpellier, (France), 18/3/93

81 Aromaticity and anti-aromaticity in organic and inorganic ring systems
Institut fur Anorganische Chemie, Göttingen (Germany), 30/11/1993

82 Nouvelles perspectives dans la chimie des azotures et des composés diazoïques
Ecole Normale Supérieure, Paris (France), 7/12/93

83 Nouveaux ligands phosphorés
Université de Rennes (France), 20/12/93

84 Taming reactive intermediates
Ecole Polytechnique de Zürich (Switzerland), 7/02/94

85 New phosphorus ylides
Kaiserslautern University (Germany), 16/9/94

86-88 Playing tricks with highly reactive intermediates. How to make them stable?
Bergen University (Norway), 10/10/94
Trondheim University (Norway), 12/10/94
Oslo University (Norway), 14/10/94

89-96 Synthesis and reactivity of 4-π electron 4-membered heterocycles featuring main group element(s): antiaromatic inorganic systems?
Ecole Polytechnique de Zürich, (Switzerland), 20/1/95
Marburg University (Germany), 23/1/95
Göttingen University (Germany), 25/1/95
Berlin University (Germany), 27/1/95
Böchum University (Germany), 30/1/95
Giessen University (Germany), 31/1/95
Utrecht University (Netherland), 2/2/95
Université de Strasbourg (France), 6/2/95

97-98 The trimethylsilyl diazomethane.
Ljubljana University (Slovenia), 22/3/96
CNR Bologne (Italy), 25/3/96

99-100 New types of 4-π-electron 4-membered rings
Bologne University (Italy), 26/3/96
Florence University (Italy), 27/3/96

101 Cycles à 3 ou 4 chaînons et 2, 3, 4 ou 6 électrons-π
Université de Paris VI (France), 25/11/96

102 Que peut-on apprendre des molécules exotiques ?
Académie des Sciences, Paris (France) 4/11/96

103 Diazo compounds in Silicon Chemisry
National Institute of Materials and Chemical Research, Tsukuba (Japan), 3/12/96

104-105 New stable radicals, diradicals and carbenes
Tokyo University (Japan), 4/12/96
Kyoto University (Japan), 9/12/96

106-109 New aspects of phosphorus chemistry
Shiba University (Japan), 6/12/96
Kyoto University (Japan), 10/12/96
Osaka University (Japan), 11/12/96
Tsukuba University (Japan), 16/12/96

110 Molécules contre nature : de la curiosité intellectuelle aux applications
Université de Bourgogne et Franche-Comté, Dijon (France), 13/05/97

111 From exotic molecules to applied chemistry
University of Southern California, Los Angeles (USA), 15/7/97

112 New stable radicals, diradicals and carbenes
Bielefeld University (Germany), 13/10/97

113 The use of main group elements for stabilizing highly reactive organic species
Münster University (Germany), 14/10/97

114 New stable radicals, diradicals and carbenes
Wurzburg University (Germany), 15/10/97

115 New stable radicals, diradicals and carbenes
Konstanz University (Germany), 16/10/97

116 The use of main group elements for stabilizing highly reactive organic species
Bonn University (Germany), 17/10/97

117 The use of main group elements for stabilizing highly reactive organic species
Université de Bâle (Switzerland), 27/11/97

118 New stable radicals, diradicals and carbenes
Munich University (Germany), 28/11/97

119 The use of main group elements for stabilizing highly reactive organic species
Mainz University (Germany), 01/12/97

120 New stable radicals, diradicals and carbenes
Karlsruhe University (Germany), 02/12/97

121 From exotic molecules to applied chemistry (group 13 to 15 elements)
Braunschweigh University (Germany), 03/12/97

122 Le phosphore, un élément très versatile
Université de Genève (Switzerland), 9/03/98

123 Aromaticité et anti-aromaticité en chimie du phosphore
Université de Genève (Switzerland), 10/03/98

124 Nouveaux cations et radicaux en chimie des hétéroéléments
Université de Genève (Switzerland), 11/03/98

125 Des molécules exotiques aux applications
Université de Genève (Switzerland), 12/03/98

126 Les carbènes stables
Université de Lausanne (Switzerland), 13/03/98

127 Aromaticity and antiaromaticity in phosphorus chemistry
ETH Zürich (Switzerland), 02/07/98

128 Stable carbenes: are they useful?
ETH Zürich (Switzerland), 03/07/98

129 New stable cations, radicals and diradicals
ETH Zürich (Switzerland), 06/07/98

130 What can we do with diaminoamide ligands?
ETH Zürich (Switzerland), 07/07/98

131 Phosphorus is useful
ETH Zürich (Switzerland), 25/08/98

132 Les éléments lourds principaux: des outils puissants
Université d'Orsay (France), 22/09/98

133 Sometimes it's phosphorus, not carbon chemistry that leads the way
Chicago University, Chicago (USA), 09/11/98

134 Are stable carbenes genuine carbenes ? But what is a carbene anyway?
Chicago University, Chicago (USA), 11/11/98

135 Biocompatible materials from super Lewis acid polymerization catalysts
Chicago University, Chicago (USA), 18/11/98

136 The importance of main group elements
University of Southern California, Los Angeles (USA), 19/11/98

137-141 Les éléments lourds principaux : des outils puissants
Université de Grenoble (France), 03/02/99
Université de Lyon (France), 04/02/99
Université de Marseille (France), 18/02/99
Université de Strasbourg (France), 12/03/99
Université de Rennes (France), 14/06/99

142-154 New types of bonding in main group element chemistry
Stable carbenes and related species
From exotic molecules to applied chemistry
Main group elements are useful
Tohoku University (Japan), 26/09/99
Kyushu University (Japan), 30/09/99
Hiroshima University (Japan), 2/10/99
Okayama University (Japan), 3/10/99
Kyoto University (Japan), 6/10/99
Kyoto Institute for Material Sciences (Japan), 7/10/99
Mie University (Japan), 8/10/99
Nara University (Japan), 10/10/99
Nagoya University (Japan), 11/10/99
Tokyo University (Japan), 13/10/99
Chiba University (Japan), 14/10/99
Tsukuba University (Japan), 15/10/99

National Institute of Materials & Chemical Research, Tsukuba (Japan), 16/10/99

155-156 Main group chemistry : from exotic molecules to applied chemistry
University of Pennsylvania, Philadelphia (USA), 23/03/00
University of California Riverside, Riverside (USA), 25/03/00

157-158 Exploiting the phosphorus trick
University of Castilla de la Mancha (Spain), 08/11/00
University of Sevilla (Spain), 09/11/00

159 Liaisons à un électron et différence entre liaison à deux électrons et biradicaux singulets
Institut de Recherche sur les Systèmes Atomiques Moléculaires Complexes, Université Paul Sabatier (France), 05/03/01

160 What is new in main group chemistry
University of California, Davis (USA), 04/09/02

161-162 Chemistry with and without main group element : what a difference !
University of California, Berkeley (USA), 06/09/02
University of Texas, El Paso (USA), 01/11/02

163 Chemistry with and without main group element : what a difference !
University of California, Los Angeles (USA), 10/04/03

164 Stable carbenes, diradicals and tetraradicals
Texas A&M University, College Station (USA), 10/12/2003

165 Stable carbenes, diradicals and tetraradicals
Rice University, Houston (USA), 11/12/2003

166 Stable Carbenes and Diradicals
Academie Sinica, Taipei (Taiwan) 5/12/2004

167 Chemistry with and without main group element: what a difference!
Taiwan National University, Taipei (Taiwan) 5/13/2004

168 Carbenes: Emerging Ligands for Catalysis
National Tsing Hua University, Tsing Hua (Taiwan) 5/14/2004

169 Carbenes: Emerging Ligands for Catalysis
Tokyo Institute of Technology, Tokyo (Japan) 5/17/2004

170 Stable carbenes as ligands for transition metals, and stable diradicals as building blocks for materials.
"MIT/Harvard Inorganic Seminar Series" Boston (USA) 11/17-18/2004.

171 Stable carbenes as ligands for transition metals, and stable diradicals as building blocks for materials.
"Lacan Lecture" University of Montreal (Canada) 11/19/2004.

172 Stable carbenes as ligands for transition metals, and stable diradicals as building blocks for materials.
CALTECH (USA) 11/24/2004.

173 Stable singlet carbenes and diradicals.
Rutgers University (USA) 6/29/2005

174 Stable carbenes and diradicals: From curiosities to powerful tools.
Tokyo University (Japan) October 26, 2005

175 New Families of Stable Cyclic Carbenes for the Preparation of Highly Active Catalysts and Low Ligated transition metals
Nagoya University (Japan) October 27, 2005.

176 Stable carbenes and diradicals: From curiosities to powerful tools.
Amsterdam University (Netherland) October 31, 2005

177 New Families of Stable Cyclic Carbenes for the Preparation of Highly Active Catalysts and Low Ligated transition metals
Lectures in Modern Chemistry Series, University of British Columbia (Canada) November 28, 2006

178 Stable carbenes and diradicals: From curiosities to powerful tools
University of Edmonton (Canada) November 30, 2006

179 New Families of Stable Cyclic Carbenes for the Preparation of Highly Active Catalysts and Low Ligated transition metals
University of Calgary (Canada) December 1, 2006

180 Stable carbenes can help, and even do the job of transition metals
The University of Edinburgh (Scotland) May 29, 2007

181 New Families of Stable Cyclic Carbenes for the Preparation of Low Ligated Transition Metals, and Highly Active Catalysts. Can a Carbene do the Job of a Metal?
The University of Durham (England) May 30, 2007

182-184 New trends in Group 13-15 chemistry
The University of StAndrews (Scotland) June 1 and 4, 2007

185 Stable carbenes can help, and even do the job of transition metals
UC San diego (USA) October 12, 2007

186-188 The use of stable carbenes and related ligands in catalysis: New developments (cancelled)
Michigan State (USA) April 2, 2008
University of Michigan (USA) April 3, 2008
University of Toledo (USA) April 4, 2008

189 Stable carbenes and bent-allenes as ligands for transition metal catalysts
UC San diego (USA) June 20, 2008

190 "New families of carbon-based ligands for transition metal catalysts"
Berlin University (Germany) October 22, 2008

191 Stable Neutral Divalent Carbon Compounds with One or Two Lone Pairs of Electrons as Strong Donor Ligands for transition metal catalysts.
Bochum University (Germany) October 23, 2008

192 New families of carbon-based ligands, novel catalytic reactions
UC Irvine (USA) April 3, 2009

193 Stable Neutral Divalent Carbon Compounds with One or Two Lone Pairs of Electrons as Strong Donor Ligands for transition metal catalysts.
UC Santa Cruz (USA) April 13, 2009

194 Novel families of ligands, novel catalytic reactions.
The Scripps Research Institute, La Jolla (CA), April 24, 2009.

195 Novel families of ligands, novel catalytic reactions (cancelled)
University of Porto Rico, May 1, 2009.

196 Novel families of carbon ligands, novel catalytic reactions
University of Sussex, September 4, 2009 (UK)

197 Novel families of carbon ligands, novel catalytic reactions
University of Strathclyde, September 9, 2009 (UK)

198 Novel families of carbon ligands, novel catalytic reactions
Tokyo Institute of Technology, Tokyo Nov 7, 2009 (Japan)

199 Novel families of carbon ligands, novel catalytic reactions
UC Santa Barbara, January 14, 2010 (USA)

200 Bending the rules
The University of Alabama, Tuscaloosa (USA) March 25, 2010

201 Novel stable non-Arduengo carbenes and related species
The University of Alabama, Tuscaloosa (USA) March 26, 2010

202 Stable carbenes and related species: Powerful tools in organic and inorganic chemistry
University of Aachen (Germany) April 13, 2010

203 Novel families of stable carbon-based L ligands: Activation of small molecules and catalysis.
Technical University of Munich (Germany) April 26, 2010

204 Stable carbenes and related species: Powerful tools in organic and inorganic chemistry
University of Toronto (Canada) September 17, 2010

205 Novel families of carbon ligands, novel catalytic reactions
University of Regensburg (Germany) October 25, 2010

206 Novel families of carbon ligands, novel catalytic reactions
University of Liepzig (Germany) October 27, 2010

207 Novel families of carbon ligands, novel catalytic reactions
University of Wurzburg (Germany) October 28, 2010

208 Novel stable carbenes and related species: Activation of small molecules and catalysis.
University of Heidelberg (Germany) October 29, 2010

209 Metal-free activation of small molecules
University of Braunsweig (Germany) November 1, 2010

210 Stable carbenes and related species: Powerful tools in organic and inorganic chemistry
University of Erlangen (Germany) November 2, 2010

211 Stable carbenes and related species: Powerful tools in organic and inorganic chemistry
University of Marburg (Germany) November 3, 2010

212 Novel stable carbenes and related species: Activation of small molecules and catalysis.
Max Plack Institute, Mulheim (Germany) November 5, 2010

213 Stable carbenes and related species: Powerful tools in organic and inorganic chemistry
University of Gottingen (Germany) November 5, 2010

RESEARCH TRAINING

. Ph.D. Degrees Conferred

1 *J. ANCELLE* : "Photolyse et thermolyse de composés organosiliciés et germaniés. Intermédiaires à double liaison métal-carbone" (juillet 80)

2 *A. BACEIREDO* : "Réarrangement photochimique d'azotures organométalliques" (mars 82)

3 *S. MAJID* : "Stabilité et réactivité particulières de composés organophosphorés induites par le substituant 2,4,6-tri-tert-butylphényle" (octobre 83)

4 *F. EL ANBA* : "Réarrangements de composés organométalliques du silicium, du germanium et du phosphore" (octobre 83)

5 *E. OCANDO-MAVAREZ* : "Phosphonitriles : Nouveaux synthons en chimie hétérocyclique" (Mars 88)

6 *G. SICARD* : "Analogie α,α' bis carbénoïdes - triple liaison" (juillet 88)

7 *A. IGAU* : "Utilisation du phosphore pour la stabilisation d'espèces à déficience électronique. Synthèse et réactivité d'un carbène stable" (juin 89)

8 *M. GRANIER* : "Synthèse, structure et réactivité de nitrilimines stables" (juillet 90)

9 *F. CASTAN* : "Apport du silicium et du phosphore dans la chimie des dérivés diazoïques et de leurs isomères nitrilimines " (septembre 91)

10 *H. ROLLAND* : "Polyphosphazènes à liaison Phosphore-Carbone" (octobre 91)

11 *J. M. SOTIROPOULOS* : "Les diazométhylènephosphoranes" (décembre 91)

12 *M.P. ARTHUR* : "Synthèse et réactivité de dérivés diazoïques et de nitrilimines α-borés" (juillet 92)

13 *M. SOLEILHAVOUP* : "Synthèse et réactivité de phosphanyl, thiophosphanyl et phosphonioyl carbènes" (juillet 93)

14 *G. VENEZIANI* : "Utilisation des isomères stannylés du diazométhane dans des réactions de transfert du fragment CN_2" (juin 94)

15 *E. BON* : "Utilisation de complexes amine - chlorure d'aluminium en synthèse organique" (octobre 94)

16 *N. DUBAU-ASSIBAT* : “Influence de la nature des substituants sur la stabilité relative des dérivés diazoïques et leus isomères structuraux” (juin 95)

17 *G. ALCARAZ* : “Espèces déficientes en électrons et cycles tendus α-phosphorés” (juin 95)

18 *Y. CANAC* : “Le cation diphosphirénium : un cycle à trois chaînons et deux électrons π-non aromatique (juillet 96)

19 *G. BOUHADIR* : “Réactivité du premier phosphazide cis stable et du phosphazène correspondant. Préparation de nouveaux composés onio du phosphore” (novembre 96)

20 *N. EMIG* : “Nouveaux catalyseurs pour la polymérisation d’hétérocycles : synthèse d’acides de Lewis du groupe 13 possédant des ligands tridentates diamido-amines” (juillet 1997)

21 *O. GUERRET* : Nouveaux ligands carbéniques : 1,2,4-triazolbis(ylidène) et 1,2,4-triazoliumylidène. Utilisation de ces ligands en chimie organométallique” (décembre 97)

22 *M. SANCHEZ* : “Hétérocycles insaturés à 4 chaînons possédant un atome de phosphore tétracoordiné (décembre 97)

23 *V. PIQUET* : “Influence de substituants phosphorés sur la réactivité de 3H-diazirines, nitrilimines et 2H-diazirines (décembre 97)

24 *D. BOURISSOU* : "Synthèse de nouvelles espèces phosphorées hautement réactives" (janvier 98)

25 *S. GOUMRI-MAGNET* : « Nouvelles utilisations de dérivés organophosphorés : les ylures de phosphore, des bases fortes non nucléophiles ; les phosphinocarbènes, de véritables synthons » (décembre 1998)

26 *J.-L. FAURE* : « Etude des nitrilimines en solution et utilisation de ligands bisamidoamines pour la synthèse de nouveaux catalyseurs de polymérisation » (décembre 98)

27 *H. N’GUYEN* : « Nouveaux catalyseurs à ligands diamidoamines : synthèse et utilisation pour la polymérisation d’hétérocycles » (juillet 99)

28 *C. BURON* : " Les diaminocarbènes : de nouveaux ligands pour les métaux de transition. Les phosphinocarbènes : synthèse des premiers alkyl- et arylcarbènes stables" (novembre 2000)

29 *T. KATO* : "Le phosphore en chimie des carbènes, des carbocations et des radicaux" (5 juillet 2001)

30 *A. DUMITRESCU* : "Basses valences en chimie du phosphore, de l'étain et du zinc : des espèces hautement réactives, des catalyseurs de polymérisation (12 novembre 2001)

31 *D. AMSALLEM* : "Implication du groupement (dialkylamino)phosphino dans la stabilisation et la réactivité de phosphinocarbènes et de phosphinoaldéhydes (14 novembre 2001)

32 *E. DESPAGNET* : "Phosphinocarbenes : modes de stabilisation, coordination (June 20, 2002)

33 *S. SOLE* : "Carbenes singlets stables : Migration 1,2 dans les carbenes hétérocycliques et carbenes a substituant spectateur (June 24, 2002)

34 *N. MERCERON-SAFFON* : "Nouveaux aminocarbènes *C*-phosphorés : synthèse, caractérisation et réactivité " (June 19, 2003).

35 *M. OTTO*: "Une nouvelle approche vers des carbenes stables et des cations cyclopentadienyles" (March, 26 2004)

36 *D. MARTIN* : "Rôle du phosphore dans la stabilisation des cations et des carbènes. Synthèse de nouveaux cumulènes organophosphorés" (September 24, 2004)

37 *X. CATTOEN* : "Amino-carbènes : réarrangements originaux, complexation" (July 8, 2004)

38 *C. LYON-SAUNIER* : "Synthese et reactivite de nouveaux phosphinocarbenes : Applications en synthese organique et catalyse organometallique (May 12, 2006)

39 *J. VIGNOLLE* "Approches de complexes carbeniques heterosubstitues originaux **"***New routes to stable heterosubstituted carbenes and their use as ligands for transition metals"* (December 21, 2006)

40 *J.B BOURG* "Etudes de diradicaux heterocycliques" *"Studies of heterocyclic diradicals"* (April 23, 2007)

41 *M. SONG "*New synthetic routes to amino-carbenes and investigation of cyclic amino-phosphino-carbene (*P*-NHC) systems" (May 22, 2007)

42 *G. FUKS* "Etude de Diradicaux hétérocyclique" *"Heterocyclic Diradicals"* (November 7, 2007)

43 *V. LAVALLO* "From Alkyl(Amino) and Carbocyclic Carbenes to Bent Allenes: Synthesis, Reactivity, and Ligand Properties" (March 26, 2008)

44 *M. ASAY* "Ylides: Stabilization of Novel, Low Valent Carbon-Based Ligands with Applications in Catalysis" (February 6, 2009)

45 *G. KUCHENBEISER* "Reactivity of Bis(amino)cyclopropenylidenes (BACs) and Cyclic (Alkyl)(amino)carbenes (CAACs): Coordination Chemistry, Catalysis, and Small Molecule Activation" (August 2009)

. Postdoctoral Associates

1 *P. DESROSIERS* (USA) : "Complexes métalliques α-diazoïques" (sept. 86-déc. 86)

2 *G. CROCCO* (USA) : "Reactivité de dérivés diazoïques sur des métaux de transition" (avril 86-mai 87)

3 *H. GRUTZMACHER* (RFA) : " Diazophosphines et phosphinocarbenes" (nov. 87-sept. 88)

4 *G. GILLETTE* (USA) : "Synthèse de carbènes stables" (mars 89-juin 90)

5 *D. GUYOT* (France) : "Synthèse d'acylisocyanates" (jan. 90-déc. 92)

6 *A. STRUBE* (RFA) : "Métaux de transition et diazos" (avril 90-sept. 91)

7 *K. HORCHLER* (RFA) : "Ylures mixtes bore-phosphore" (avril 90-avril 91)

8 *G. LABAT* (France) : "Réactivité de carbènes stables avec des boranes" (oct. 91- mai 92)

9 *R. REED* (Canada) : "Complexation de carbènes stables" (déc. 91-juin 93)

10 *J. TAJEDA* (Espagne) : "Synthèse de composés anti-aromatiques" (oct. 92-août 93)

11 *K. BIEGER* (RFA) : "Les composés diazoïques de l'étain" (oct. 92- oct. 93)

12 *M. GRANIER* (France) : "Synthèse d'acylisocyanates" (janv. 92-sept. 93)

13 *A. POLOZOV* (Russie) : "Nouveaux cations du phosphore" (avril 93-jan. 94)

14 *C. LEROUX* (France) : "Synthèse d'acylisocyanates" (août. 93-fev. 94)

15 *U. WECKER* (Allemagne) : "Synthèse d'azirines phosphorées" (sept. 93-sept. 94)

16 *P. DYER* (Angleterre) : "Nouveaux composés anti-aromatiques" (jan. 94-oct. 95)

17 *H. GORNITZKA* (Allemagne) : "Nouveaux composés du gallium I" (jan. 96-)

18 *N. FACKLER* (USA) : "Synthèse de cation silicéniums (juin-juillet 96)

19 *O. POLISCHUK* (Ukraine) : "Chimie de P2" (oct. 96-déc. 97)

20 *M. FARKENS* (Allemagne) : "Catalyseurs de Friedel-Craft"(fév. 97-juillet 97)

21 *L. STELZIG* (Allemagne) : "Nouveaux catalyseurs d'hydrocyanation" (mars 97-fév. 98)

22 *I. COLLADO* (Espagne) : "Cycles à 3 chaînons phosphorés" (oct. 96-fév. 98)

23 *S. MAZIERES* (France) : "Nouveaux carbènes stables" (oct. 97-juillet 98)

24 *S. ITO* (Japon) : "Radical diphosphirényl" (avril 98-mars 99)

25 *J. BYRNE (*Irlande) : "Nouveaux acides de Lewis" (sept 98-août 99)

26 *E. GAVRILOVA* (Russie) : "Nouveaux carbènes stables" (nov. 99-juin 2000)

27 *M. STURMANN* (Allemagne) : "Cumulènes des groupes 14 et 15" (nov. 99- fév. 2000)

28 *D. SCHESCHKEWITZ* (Allemagne) : "Cycles aromatiques à 4 chaînons" (janv. 2000-août 2001)

29 *T. HAPPEL* (Allemagne) : "Nouveaux supports carbonés" (mai 2000-novembre 2001)

30 *A. LEMEUNE* (Russie) : "Nouveaux catalyseurs basiques utiles pour la polymérisation de polysiloxanes cycliques (mai 2000-avril 2001)

31 *V. RUDZEVICH* (Ukraine): "Molécules phosphorée à basse coordinence" (septembre 2000- mars 2001)

32 *J. KRYSIAK* (Pologne) : "Les carbènes en synthèse asymétrique" (novembre 2000- fév. 2001)

33 *H. AMII* (Japon) : "Carbènes stables" (décembre 2000-décembre 2001)

34 *R. RODRIGUEZ CURIEL* (Cuba) : "Activation du P4" (mars 2001-août 2001)

35 *K. KOLLISCH* (Allemagne) : "Nouveaux carbènes" (mars 2001-août 2001)

36 *K. MIQUEU* (France) : "Etude de nouveaux types de liaisons chimiques : approches expérimentale (diffraction des rayons X) et théorique (calculs *ab initio*)" (novembre 2001-juillet 2002)

37 *A. DUMITRESCU* (Roumanie) : "Polymères biodégradables de masse moléculaire faible " (décembre 2001-août 2002)

38 *O. DECHY-CABARET* (France) : "Encapsulation de l'apomorphine et ses dérivés dans les polymères " (décembre 2001-août 2002)

39 *F. BEN* (France) : "Nouveaux catalyseurs basiques utiles pour les réactions d'oligomérisation des silicones" (février 2002-janvier 2003)

40 *L. VRANICAR* (Slovénie) : "Encapsulation de l'adatanserine et ses dérivés dans les polymères " (avril 2002-mars 2003)

41 *J. KRYSIAK* (Pologne) : "Les carbènes en synthèse asymétrique" (avril 2002-juillet 2002)

42 *R. RODRIGUEZ CURIEL* (Cuba) : "Activation of P_4" (September 2001-April 2002)

43 *K. KOLLISCH* (Allemagne) : "New Stable Carbenes" (September 2001-August 2002)

44 *D. SCHESCHKEWITZ* (Allemagne) : "Stable Diradicals" (September 2001-October 2002)

45 *V. RUDZEVITCH* (Ukraine) *:* "Antiaromaticity" (May 2002- May 2003)

46 *S. CONEJERO* (Espagne) : "Stable Aminocarbenes" (May 2002- December 2004)

47 *A. RODRIGUEZ* (Espagne) *:* " Stable Diradicals " (May 2002- December 2004)

48 *V. GANDON* (France): " Stable Diradicals " (September 2002 – September 2003)

49. *C. PRASANG* (Germany): "Carbenes based on boron" (May 2003 – August 2005)

50 *H. LIANG* (Japan): "Stable carbenes" (January 2004 – December 2004)

51 *Y. ISHIDA* (Japan): "New Stable Diradicals" (March 2004-May 2007)

52 *R. JAZZAR* (France): "Heterocyclic carbenes" (January 2005-August 2006)

53 *J. MASUDA* (Canada) : "Activation of P_4" (september 2005-August 2007)

54 *R. DEWHURST* (New-Zealand): " Carbenes and catalysis " (May 2006-April 2007)

55 *G. FREY* (Germany): “Carbenes and catalysis " (July 2006-July 2008)

56 *A. OUALI* (France): “Carbenes and catalysis" (November 2006-November 2007)

57 *A. DYKER* (Canada): “New basic ligands” (January 2007-August 2009)

58 *R. KINJO* (Japan): “Cyclopropenylidenes” (April 2007-present)

59 *E. ALDECO* (Mexico): “Abnormal carbenes” (April 2008-present)

60 *X. ZENG* (China, China Scholarship Council): “Hydroamination” (September 2007-September 2009)

61 *D. MENDOZA-ESPINOZA* (Mexico): “Abnormal carbenes” (September 2009-present)

62 *G. GUISADO* (Spain): “Carbenes and catalysis" (November 2009-present)

63 *N. LASSAUQUE* (France)*:* “Carbenes and catalysis" (November 2009-present)

64 *J. BOUFFARD* (Canada) “Stable radicals” (November 2009-present)

. Visiting Professors

1 *Pr. K. B. DILLON* (United Kingdom) : “Phosphore hypervalent” (oct. 86-mai 87)

2 *Pr. C. WENTRUP* (Australia) : “Nitrilimines” (sept. 92-jan. 93)

3 *Pr. C. REED* (Canada) :"Synthèse de silicéniums stables (juin 96)

4 *Pr. J. MICHL* (USA) : "Physico-chimie des carbènes (février 99)

5 *Pr. J. RIGBY* (USA) : « Carbènes nucléophiles » (sept-nov. 99)

6 *Pr. V. ROMANENKO* (Ukraine) : "Hétérocycles à visée vétérinaire" (sept 98-)

7 *Pr. W.W. SCHOELLER* (Allemagne) : "Approche théorique des carbènes" (août/septembre 2000)

8 *Pr. W. NAKANISHI* (Japon) : "Hypervalence du phosphore" (septembre 2000)

9 *Pr. A. DE MEIJERE* (Allemagne) : "Cyclopropanation" (octobre 2000)

10 *Pr. W. SCHOELLER* (Allemagne) : "Méthodes modernes de la chimie quantique et espèces hautement réactives" (mars 2002)

11 *Pr. K. LAMMERSTMA* (Hollande) : "Chimie physique et espèces hautement réactives" (mai 2005)

12 *Pr. W. SCHOELLER* (Allemagne) : "Méthodes modernes de la chimie quantique et espèces hautement réactives" (sept-oct 2005)

PRESENT COLLABORATORS

. CNRS Research Associates

1 Michele SOLEILHAVOUP (France): September 2001-present
2 Bruno DONNADIEU (France): November 2003-present
3 Mohand MELAIMI (France): October 2006-present
4 David MARTIN (France): January 2010-present

. Postdoctoral Associates

1 Rei KINJO (Japan, JSPS Fellowship): April 2007-present
2 Eugenia ALDECO (Mexico, UC Mexus Fellowship): Mars 2008-present
3 Daniel MENDOZA-ESPINOZA (Mexico): September 2009-present
4 Gregorio GUISADO (Spain): November 2009-present
5 Nicolas LASSAUQUE (France)*:* November 2009-present
6 Jean BOUFFARD (Canada): November 2009-present

. Graduate Students

1 Alan DEHOPPE (USA): October 2006-present
2 Olivier BACK (France): October 2007-present
3 David WEINBERGER (USA): September 2008-present
4 Gael UNG (France): September 2009-present
5 Martin HENRY-ELLINGER (France): September 2009-present
6. Aliobama ESCOBAR (USA): September 2009-present
7 Xiaoyu YAN (China Scholarship Council): October 2010-present
8 Amos ROSENTHAL (Switzerland): October 2010-present

PAST COLLABORATORS (in the US 2001-2009) AND PRESENT POSITION

. CNRS Research Associates

1 Yves CANAC (CR1): November 2001-April 2006
Present: Charge de Recherche CNRS (UPR 8241, Toulouse)
2 Huy NGOC HOA TRAN (DR2): September 2008- August 2009
Present: Directeur de Recherche CNRS (Nanyang University, Singapor)

. Post-Doctoral Associates

1 David SCHESCHKEWITZ (Germany, Humboldt Fellowship): Sept. 2001-October 2002
Present: Senior Lecturer (Imperial College, London)
2 Valentyn RUDZEVITCH (Ukraine): May 2002- May 2003
Present: Lecturer (Johannes Gutenberg Universität, Mainz)

3 Salvador CONEJERO (Spain, Spanish Fellowship): May 2002- December 2004
Present: Research Scientist (University of Sevilla)
4 Amor RODRIGUEZ (Spain, Spanish Fellowship): May 2002- December 2004
Present: Research Scientist (University of Sevilla)
5 Vincent GANDON (France): September 2002 – September 2003
Present: Professor (University of paris VI)
6 Carsten PRASANG (Germany, Humboldt Fellowship): 5/2003-9/2005
Present: Habilitant (Technische Universiat, Berlin)
7 Hongze LIANG (China): January 2004 – December 2004
Present: Assistant Professor (University of Nottingham-Ningbo)
8 Yutaka ISHIDA (Japan, JSPS Fellowship): March 2004-March 2007
Present: Assistant Professor (Tokyo Institute of Technology)
9 Rodolphe JAZZAR (France): January 2005-August 2006
Present: Charge de Recherche CNRS (UMR 5181, Lyon)
10 Jason MASUDA (Canada, NSERC Fellowship): September 2005-August 2007
Present: Assistant Professor (StMary's University, Halifax)
11 Ryan DEWHURST (New Zealand): February 2006-march 2007
Present: Habilitant (Wurzburg University)
12 Guido FREY (Germany, Humboldt Fellowship): July 2006-July 2008
Present: Research Chemist, (OXEA Inc, Heidelberg)
13 Armelle OUALI (France, Lavoisier Fellowship): November 2006-November 2007
Present: Charge de Recherche CNRS (UPR 8241, Toulouse)
14 Adam DYKER (Canada, NSERC Fellowship): January 2007-August 2009
Present: Assistant Professor (University of New Brunswick)

. Graduate Students

1 Jean-Baptiste BOURG (France): 12/2003-8/2006
Present: Research Chemist, (Materia Inc, Pasadena, CA)
2 Joan VIGNOLLE (France): 1/2005-12/2005
Present: Charge de Recherche CNRS, (Bordeaux University)
3 Gade FUCKS (France): 1/2006-12/2006
Present: Assistant Professor (Strasbourg University)
4 Maoying SONG (China): 9/2002-6/2007
Present: Research Chemist, (CombiPhos Catalysts, Princeton, NJ)
5 Matt ASAY (USA): 10/2003-2/2009
Present: Postdoctoral Humboldt fellow (Technische Universiat, Berlin)
6 Vincent LAVALLO (USA, ACS Organic Division Fellowship): 10/2005-
Present: NIH Postdoctoral fellow (Caltech, Pasadena, CA)
7 Glenn KUCHENBEISER: 9/2007-8/2009
Present: Research Scientist, Air Liquide (Wilmington)

. Visiting Graduate Students
1 Shazia KOUSAR (Pakistan, HEC Fellowship): 8/2006-6/2008
Present: Graduate Student (Pakistan)
2 Asra MUSTAFA (Pakistan, HEC Fellowship): 12/2006-5/2007
Present: Graduate Student (Pakistan)
3 Emrah GIZIROGLU (Turkey, Turkish Fellowship): 7/2007-6/2008

Present: Assistant Professor (Adnan Menderes University, Turkey)

4 *Xiaoming ZENG* (China Scholarship Council): 9/2007-8/2009
Present: Postdoctoral fellow (University of Tokyo)

. Under Graduate Students

1 Jianchen GENG 4/2005-8/2005
Present: Medical School (UCLA)

2 Joana AQUINO (Dean Fellowship) 6/2005-8/2005
Present: Unknown

3 Linda TRUONG (Dean Fellowship) 6/2005-8/2005 and 6/2006-8/2006
Present: Undergraduate Student (UC Berkeley)

4 Ali SARKESHIK 10/2005-4/2006
Present: Research Chemist, (The Scripps Research Institute)

5 Athena ALEXANDER (Nova Fellowship) 6/2006-8/2006
Present: Medical School (UCLA)

6 Marysa ISHIGE (Dean Fellowship) 6/2006-8/2006
Present: Undergraduate Student (UCR)

7 Donna DORRIZ 4/2007-6/2007
Present: Medical School (UCLA)

8 Hiba Ali QASQAS (Dean Fellowship) 4/2007-6/2008
Present: Undergraduate Student (UCR)

9 Eric Chengchieh LEE (Dean Fellowship) 6/2007-12/2007
Present: Undergraduate Student (UCR)

10 Nicole TARUI (Dean's Fellowship) 6/2008-8/2008
Present: Undergraduate Student (UCR)

11 David Ruiz (MSRIP Fellowship) 6/2009-8/2009
Present: Undergraduate Student (Cal State San Bernardino)

12 Katie Keating (MSP, Fellowship) 6/2009-8/2009
Present: Undergraduate Student (UCR)

13 Melissa J. Gray (MSRIP Fellowship) 6/2009-8/2009
Present: Undergraduate Student (UCR)

CONTRACTS AND GRANTS IN FRANCE

. Contracts with Companies

1 Nouveaux dipôles-1,3
Sociéte Pierre Fabre Médicaments, oct. 88-sept. 91

2 Polyphosphazènes
SNEAP, oct. 88-sept. 91

3 Synthèse d'acyle isocyanates
SNPE, fév. 89-déc. 92

4 Réactions d'ouverture d'hétérocycles
Sociéte Pierre Fabre Médicaments, oct. 91-sept. 94

5 Azotures et composés diazoïques pour la pyrotechnie
GIAT Industries, déc. 92-déc. 95

6 Synthèse d'acyl isocyanates
SNPE, jan. 93-déc. 93

7 Macrocycles et environnement
Compagnie Générale des Eaux, jan. 94-déc. 96

8 Synthèse de nouvelles bases non ioniques
Société Expansia, oct. 94-oct. 97

9 Catalyseurs de la réaction de Friedel-Craft
Rhône-Poulenc, jan. 97-juin 97

10 Nouveaux catalyseurs d'hydrocyanation.
Rhône-Poulenc, jan. 97-déc. 97

11 Piégeage d'ions ammonium
CGE, jan. 97-déc. 98

12 Catalyseurs de polymérisation
Société Expansia, sept. 97-août. 98

13 Synthèse et propriétés catalytiques de nouveaux complexes organométalliques
Rhône-Poulenc, oct. 97-sept. 2000

14 Synthèse de molécules insecticides
Virbac, sept. 97-juin 2001

15 Mise au point et fourniture de catalyseurs pour préparation de polymère lactide glycolide
Beaufour Ipsen, sept 98-août 2003

16 Synthèse de réactifs chimiques supportés sur fibres et filaments de carbone
Messier-Bugatti / Expansia, mars 2000-sept. 2001

17 Nouveaux catalyseurs basiques utiles pour les réactions d'oligomérisation des oligomères silicones
Rhodia Chimie, mai 2000-avril 2001

18 Synthèse et études de la réactivité de nouveaux composés organophosphorés comportant des motifs phosphorés et fluorés
Rhodia Organique, déc. 2000-nov. 2001

19 Synthèse d'un tétrachlorophénol et d'un tétrachloroanisole substitués
Diaclone, janv. 2001-juin 2001

20 Modification chimique des polymères organiques
Peintures Maestria, janv. 2001-janv. 2003

21 Activations du P4
Rhodia Chimie, fév. 2001-sept. 2001

22 Acide quinoxaline carboxylique
Finorga, sept. 2001-oct. 2001

. Grants from French Agencies

1 Les azotures organométalliques précurseurs de composés à valences inusuelles et d'hétérocycles originaux
A.T.P. Concepts Nouveaux de l'objectif Chimie fine, jan. 83-déc. 84

2 Espèces carbénoïdes, précurseurs de composés organométalliques à coordinence inusuelle et d'hétérocycles originaux
Crédit exceptionnel au titre de soutien de base des unités de recherche, jan. 85-déc. 85

3 Utilisation de nitrilimines à la synthèse d'hétérocycles originaux. Applications
Aide aux projets d'innovation de l'enseignement supérieur (ANVAR) (janv. 91-juin 91)

4 Utilisation de diazométhylènephosphoranes comme synthons en chimie pharmaceutique
Aide aux projets d'innovation de l'enseignement supérieur (ANVAR) (jan. 91-juin 91)

5 Sans titre
Aide du Conseil Régional Midi-Pyrénées dans le cadre des échanges internationaux (jan. 91-déc. 92)

6 Elimination des phosphates dans l'eau
Contrat Région (Midi-Pyrénées), jan. 94-déc. 96

7 Elimination des phosphates dans l'eau
Agence Régionale pour l'Environnement (Toulouse) jan. 94-déc. 96

8 Polymères biocompatibles
Contrat Région (Midi-Pyrénées), jan. 97-déc. 98

9 Synthèse de nouveaux copolymères biodégradables en vue de l'utilisation comme support dans des compositions thérapeutiques à libération prolongée
Contrat Région (Midi-Pyrénées), déc. 99-déc. 2002

. Grants from International Agencies

1 Synthesis and coordinating ability of novel phosphorus derivatives
NATO Grants for International Collaboration in Research, oct. 83-sept. 85
(avec J.F. NIXON, University of Sussex, Angleterre)

2 Phosphonitriles et cyclodiphosphazènes
Action incitative Europe, janv. 86-déc. 87 (avec E. NIECKE, Université de Bonn, RFA).

3 Synthèse et reactivité de nouveaux dérivés du phosphore triplement lié
Programme PROCOPE de collaboration Franco-Allemande, jan. 88-déc. 89 (avec E. NIECKE, Université de Bonn, RFA)

4 Inter and intramolecular cycloaddition on silaethylene
Deutsche Forschungsgemeinschaft, oct. 89-sept. 91 (avec N. AUNER, T.U. München, Allemagne)

5 Composés diazoïques d'espèces siliciées à basse coordinence
Programme PROCOPE French/German collaboration, jan. 91-déc. 92 (avec P. Jutzi, Université de Bielefeld, Allemagne)

6 Synthèse de nouveaux cations hétéroatomiques
NATO Grants for International Collaboration in Research, déc. 93-déc. 95
(avec C. Reed, University of Southern California, USA)

7 Bases fortes non-ioniques
Contrat Trans-Pyrénéen, jan. 97-déc. 98 (avec F. Palacios, Université Victoria, Espagne)

8 Composés diazoïques d'espèces siliciées à basse coordinence
Programme PROCOPE French/German collaboration, jan. 98-déc. 99 (avec D. Stalke Université de Würzburg, Allemagne)

9 Réactions de cyclopropanation asymétrique avec les carbènes stables
Polish Academy of Sciences, Centre of Molecular and Macromolecular Studies, Lodz, Pologne (Laboratoire Européen Associé), janv. 98-déc.- 2001

CONTRACTS AND GRANTS IN THE US

(Departmental Equipment Grants are not included)

. Expired Funded Grants

1 Unrestricted
UCR
$ 1,000,000 direct cost

2 Phosphorus promoted rearrangements of cationic to anionic centers: En route to original cations and anions
ACS-PRF (38192-AC4), July 2002 - June 2004
$ 80,000 direct cost

3 Stable localized 1,3-diradicals based on boron and heavier main group elements
NSF (CHE-0213510), August 2002 - July 2005
$ 400,000 total cost

4 gift
Fabre&Kramer Pharmaceutical Company
$ 20,000

5 New routes to stable carbenes
RHODIA Inc. (000698-003), July 2003 - June 2004
$ 81,000 total cost

6 New transition metal complexes for homogeneous catalysis
RHODIA Inc. (000698-004), July 2003 - June 2004
$ 64,000 total cost

7 New materials based on group 13 and group 15 element containing heterocycles
RHODIA Inc. (000698-005), November 2003 – October 2004
$ 64,000 total cost

8 Stable diradicals: New chemical reagents
RHODIA Inc. (000698-006), November 2003 – October 2006
$ 192,000 total cost

9 Unrestricted
UCR
$ 500,000 direct cost (November 2004 – October 2009)

10 Transition Metal Complexes with new carbenes ligands for coupling reactions and asymmetric catalysis
RHODIA Inc. (000698-007), November 2004 – October 2005
$ 69,000 total cost

11 Three dimensional cations of group 14 elements
UC MEXUS, July 2004 – June 2006
$ 10,000 direct cost (for UCR)

12 Pd-catalyzed coupling reactions
RHODIA Inc. (000698-008), March 2005 – February 2006
$ 69,000 total cost

13 Stable localized 1,3-diradicals based on boron and heavier main group elements
NSF (CHE-0518675), August 2005 - July 2008
$ 435,000 total cost

14 Pd- and Cu catalyzed coupling reactions
RHODIA Inc. (000698-009), November 2005 – October 2006
$ 70,000 total cost

15 Catalytic CH-activation
RHODIA Inc. (000698-010), January 2006 –December 2008
$ 210,000 total cost

16 New tunable stable carbenes as organic catalysts
RHODIA Inc. (000698-011), March 2006 – February 2007
$ 70,000 total cost

17 Optimization of the design of stable CAACs and their use as ligands for transition metal based catalysts
RHODIA Inc. (000698-012), January 2007 – December 2007
$ 72,000 total cost

18 Activation of small molecules with stable carbenes
RHODIA Inc. (000698-013), Mars 2007 – February 2008
$ 72,000 total cost

19 Stable Carbenes: Emerging Ligands for Catalysis
NIH (R01 GM 68825), August 2005 – June 2009
$ 848,781 total cost

Current Grants

20 P_4 activation
RHODIA Inc., January 2008 – December 2011
$ 300,000 total cost

21 Stabilization of Neutral Divalent CarbonCompounds with One or Two Lone Pairs of Electrons: En Route to Strong Donor Ligands
NSF (CHE- 0808825), July 2008 – June 2011
$ 444,000 total cost

22 New carbon-based Ligands for Hydroamination and Olefin Metathesis Catalysts
NIH (2 R01 GM 68825-05), July 2009 – June 2013
$ 1,505,288 total cost

23 Transition-Metal-Catalyzed Hydroamination of Non-Activated Carbon-Carbon Multiple Bonds with Ammonia
DOE, September 2009 – August 2012
$ 450,000 total cost

24 International Collaboration in Chemistry: carbenes as Stabilizing and Activating Agents in Boron, carbon, and Phosphorus Chemistry
NSF, July 2009 – June 2012
$ 354,000 total cost

25 Unrestricted
UCR
$ 500,000 direct cost (November 2009 – October 2014)

COMMENTS ON OUR RESEARCH (2000-present)

186 Stable versions of transient push-pull carbenes : extending lifetimes from nanoseconds to weeks
C. BURON, H. GORNITZKA, V. ROMANENKO, G. BERTRAND
Science, 288, 834-836 (2000)

C&E News [78(19), 57 (2000)]
Chemistry in Britain (August 2000)

191 A cyclic carbanionic valence isomer of a carbocation: diphosphino analogs of diaminocarbocations
T. KATO, H. GORNITZKA, A. BACEIREDO, W.W. SCHOELLER, G. BERTRAND
Science, 289, 754-756 (2000)

Science Perspective [289, 737 (2000)]

195 (Amino)(aryl)carbenes : stable singlet carbenes featuring a spectator substituent
S. SOLE, H. GORNITZKA, W.W. SCHOELLER, D. BOURISSOU, G. BERTRAND
Science, 292, 1901-1903 (2001)

Science Perspective [292, 1846 (2001)]
C&E News [79(24), 22 (2001)]

199 Singlet diradicals: from transition states to crystalline compounds
D. SCHESCHKEWITZ, H. AMII, H. GORNITZKA, W.W. SCHOELLER, D. BOURISSOU, G. BERTRAND
Science, 295, 1880-1881 (2002)

Science Perspective [295, 1846 (2002)]2002, *295*, 1846
C&E News [80(10), 12 (2002)]
EE Times [March 11, 2002]
Liberation [March 13, 2002]
Nyteknik [May 2, 2002]
Observatorio [June, 2002]
Science et Avenir [July, 2002]
Angew. Chem. ***Highlight*** [41, 4006 (2002)]
C&E News 2002, Highlights of 2002, [80(50), 42 (2002)]
Science et Vie [January, 2003]

205 The stable pentamethylcyclopentadienyl cation remains unknown
M. OTTO, D. SCHESCHKEWITZ, T. KATO, M. M. MIDLAND, J. B. LAMBERT, G. BERTRAND
Angew. Chem. Int. Ed., 41, 2275-2276 (2002)

C&E News [80(21), 44 (2002)]

206 Stable (amino)(phosphino)carbenes: difunctional molecules
N. MERCERON, K. MIQUEU, A. BACEIREDO, G. BERTRAND
J. Am. Chem. Soc., 124, 6806-6807 (2002)

C&E News [80(25), 31 (2002)]

224 σ Bond Stretching: a Static Approach for a Dynamic Process
SCHESCHKEWITZ, D.; AMII, H.; GORNITZKA, H.; SCHOELLER, W. W.; BOURISSOU, D.; BERTRAND, G.
Angew. Chem. Int. Ed. 2004, *43*, 585-587

C&E News [82(19), 39-42 (2004)]

238 A Stable P-Heterocyclic Carbenes
MARTIN, D.; BACEIREDO, A.; GORNITZKA, H.; SCHOELLER, W. W BERTRAND, G.
Angew. Chem. Int. Ed. 2005, *44*, 1700-1703

Angew. Chem. Highlight [2006, *46*, 1348]

244 Stable Cyclic (Alkyl)(Amino)Carbenes as Rigid or Flexible, Bulky, Electron-Rich Ligands for Transition Metal Catalysts: a Quaternary Carbon Makes the Difference!
LAVALLO, V.; CANAC, Y.; PRASANG, C.; DONNADIEU, B.; BERTRAND, G.
Angew. Chem. Int. Ed. 2005, *44*, 5705-5709

C&E News [2005, 83(32), 15]
Science Editors'Choice [2005, 309, 1155]

250 CO Fixation to Stable Acyclic and Cyclic Alkyl Amino Carbenes: Stable Amino Ketenes with a Small HOMO-LUMO Gap
LAVALLO, V.; CANAC, Y.; DONNADIEU, B.; SCHOELLER, W. W.; BERTRAND, G.
Angew. Chem. Int. Ed. 2006, *45*, 3488-3491

Angew. Chem. ***Highlight*** [2006, *45,* ASAP]

251 Cyclopropenylidenes: From Interstellar Space to an isolated Derivative in the Laboratory
LAVALLO, V.; CANAC, Y.; DONNADIEU, B.; SCHOELLER, W. W.; BERTRAND, G.
Science. 2006, *312*, 722-724

C&E News [2006, 84(16), 33]

265 Facile Splitting of Hydrogen and Ammonia by Nucleophilic Activation at a Single Carbon Center
G. D. FREY, V. LAVALLO, B. DONNADIEU, W. W. SCHOELLER, G. BERTRAND*
Science 316, 439-441 (2007)

C&E News [2007, 85(19), 67]
Angew Chem Highlight 47, 38-41 (2008)
Angew Chem Highlight 47, 831-833 (2008)

271 Carbene Activation of P_4 and Subsequent Derivatization.
J. D. Masuda, W. W. Schoeller, B. Donnadieu, G. Bertrand*,
Angew. Chem. Int. Ed. 2007, *46*, 7052-7055.

Angew Chem Highlight 47, 831-833 (2008)

278 Synthesis of a Strongly Bent Acyclic Allene (A "Carbodicarbene"): A Novel Type of Strong Donor Ligand.
C. A. Dyker, V. Lavallo, B. Donnadieu, G. Bertrand,*
Angew. Chem. Int. Ed. 2008, *47*, 3206-3209

Angew Chem Highlight 47, 4057-4061 (2008)

290 Isolation of Bicyclopropenylidenes, Derivatives of the Smallest Member of the Fulvalene Family
R. Kinjo, Y. Ishida, B. Donnadieu, G. Bertrand*
Angew. Chem. Int. Ed. 2009, *48*, 517-520.

C&ENews [2009, 87(19), 32-33]

304. Isolation of a C-5-Deprotonated Imidazolium, a Crystalline "Abnormal" N-Heterocyclic Carbene
E. Aldeco-Perez, A. J. Rosenthal, B. Donnadieu, P. Parameswaran, G. Frenking, G. Bertrand*
Science 2009, *326*, 556-559.

Science Perspective [2009, *326*, 532-533]
C&E News [2009, *87(43)*, 9]

308 Isolation of Crystalline Carbene-Stabilized P_2-Radical Cations and P_2-Dication.
O. Back, B. Donnadieu, P. Parameswaran, G. Frenking, G. Bertrand,
Nature Chem. 2010, 2, 369-373.

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311 Isolation of a Carbene-Stabilized Phosphorus Mononitride and its Radical Cation ($PN^{+\cdot}$)
R. Kinjo, B. Donnadieu, G. Bertrand,
Angew. Chem. Int. Ed. 2010, *49*, 5930-5933.

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