1. Ruthenium Polypyridyl Complexes; Their Interaction with DNA and Their Role as Sensitisers for its Photocleavage.

2. Ruthenium(II) Complexes of 1, 4, 5, 8-Tetraazaphenanthrene (TAP) and 2, 2'-Bipyridine (bpy). Ground- and Excited-State Basicities of Ru^{2+} (bpy)_{n} (TAP)_{3-n} (N=0,1,2):
   Their Luminescence Quenching by Organic Buffers
   A. Kirsch-De Mesmaeker, L. Jacquet and J. Nasielski

3. Resonance Raman Spectra and Spectroelectrochemical Properties of Mono- and Polymetallic Ruthenium Complexes with 1,4,5,8,9,12-Hexaazatriphenylene.
   A. Kirsch-De Mesmaeker, L. Jacquet, A. Masschelein, F. Vanhecke and K. Heremans

4. Ruthenium Complexes with 1,4,5,8-Tetraazaphenanthrene. Unusual Photophysical Behavior of the Tris-Homoleptic Compound.

5. ^99^Ru NMR Spectroscopy of Ruthenium(II) Polypyridyl Complexes.
   G. Orellana, A. Kirsch-De Mesmaeker and N.J. Turro


   A. Kirsch-De Mesmaeker, G. Orellana, J.K. Barton and N.J. Turro
   Photochemistry and Photobiology 52, 461-472 (1990)

7bis. Photophysics of Ru^{II} Complexes with 1,4,5,8-Tetraazaphenanthrene, incorporated into Sephadex SP C-25.
   A. Masschelein, A. Kirsch-De Mesmaeker, Ch.J. Willsher and F. Wilkinson

8. Medium dependence of the spectroscopic and photophysical properties of Ru(bpy)$_2$(HAT)$_2$$^{2+}$.
   The effect of solvent, pH and binding to polyelectrolytes.
   F. de Buyl, A. Kirsch-De Mesmaeker, A. Tossi and J.M. Kelly

   G. Orellana, A. Kirsch-De Mesmaeker, J.K. Barton and N.J. Turro
K. Karlsson and A. Kirsch-De Mesmaeker
J. Phys. Chem. 95, 10681-10688 (1991)

11. Photoinduced electron transfer from mononucleotides to Ruthenium-tris-1,4,5,8-tetraazaphenanthrene : model for the photosensitized DNA oxidation.
J.P. Lecomte, A. Kirsch-De Mesmaeker, J. Kelly, A. Tossi and H. Görner

12. Spectroelectrochemical Characteristics and Photophysics of a Series of RuII Complexes with 1,4,5,8,9,12-hexaazatriphenylene: Effects of Polycomplexation.
L. Jacquet, A. Kirsch-De Mesmaeker


J.P. Lecomte, A. Kirsch-De Mesmaeker, M. Demeunynck and J. Lhomme

15. Electrochemistry and Absorption and Emission Spectroscopy of New Ortho-Metalated Complexes of Rh(III) and Ir(III) with the Ligands 1,4,5,8-Tetraazaphenanthrene and 1,4,5,8,9,12-Hexaazatriphenylene.
P. Didier, I. Ortmans, A. Kirsch-De Mesmaeker and R.J. Watts


17. Photoaddition of ruthenium(II)-tris-1,4,5,8-tetraazaphenanthrene to DNA and mononucleotides.
M. Feeney, J. Kelly, A. Tossi, A. Kirsch-De Mesmaeker, J.P. Lecomte
19. Synthesis and Characterization by Fast Atom Bombardment and Electrospray Mass Spectrometry of New Copper(I) Complexes with Substituted 1,4,5,8,9,12-Hexaazatriphenylene and Macrocycles.
   C. Moucheron, C.O. Dietrich-Buchecker, J.P. Sauvage and A. Van Dorsselaer

20. Photophysics of Polyazaaromatic Ruthenium(II) Complexes Interacting with DNA.
   J.P. Lecomte, A. Kirsch-De Mesmaeker, G. Orellana

21. Spectroscopic and electrochemical characterization of novel copper(I) complexes with 1,4,5,8-tetraazaphenanthrene derivatives.
   K. Karlsson, C. Moucheron and A. Kirsch-De Mesmaeker

22. Quenching of excited polyazaaromatic Ru(II) complexes by oxygen: evidence for an electron transfer process by photoelectrochemical study.
   L. Tan-Sien-Hee, L. Jacquet and A. Kirsch-De Mesmaeker

23. Photochemistry of Ruthenium(II)-tris-1,4,5,8-tetraazaphenanthrene with mononucleotides: role of ligand photosubstitution.
   J.P. Lecomte, A. Kirsch-De Mesmaeker, J.M. Kelly

24. Spectroelectrochemical and Flash Photochemical Reduction of 1,4,5,8-Tetraazaphenanthrene and 1,4,5,8,9,12-Hexaazatriphenylene Mono- and Bi-metallic Ruthenium(II) Complexes.
   L. Tan-Sien-Hee, A. Kirsch-De Mesmaeker

25. Photoadduct between Tris(4,5,8-tetraazaphenanthrene)ruthenium(II) and Guanosine Monophosphate - a Model for a New Mode of Covalent Binding of Metal Complexes to DNA.
   L. Jacquet, J.M. Kelly, A. Kirsch-De Mesmaeker

26. New Charge Transfer Luminescent Polymetallic Complexes of Rhodium(III), Iridium(III), and Ruthenium(II) with the Bridging Ligand 1,4,5,8,9,12-Hexaazatriphenylene.
   I. Ortmans, P. Didier and A. Kirsch-De Mesmaeker

27. Ruthenium(II) Complexes with 1,4,5,8,9,12-Hexaazatriphenylene and 1,4,5,8-Tetraazaphenanthrene Ligands: Key Role Played by the Photoelectron Transfer in DNA Cleavage and Adduct Formation
   J.P. Lecomte, A. Kirsch-De Mesmaeker, M. Feeney and J.M. Kelly

28. Sonoelectrochemistry: the effects of ultrasound on organic electrochemical reduction
   A. Durant, H. François, J. Reisse and A. Kirsch-De Mesmaeker
   Electrochimica Acta 41, 277-284, 1996
29. Photoreactions of Metal Complexes with DNA, Especially Those Involving a Primary Photo-Electron Transfer
   A. Kirsch-De Mesmaeker, J.P. Lecomte, J.M. Kelly

30. Binding of Ru(II) polyazaaromatic complexes to DNA : a $^{23}$Na NMR spin-lattice relaxation study
   M. Casu, G. Saba, A. Lai, M. Luhmer, A. Kirsch-De Mesmaeker,
   C. Moucheron and J. Reisse
   Biophysical Chemistry 59, 133-138 (1996)

31. Interaction of a series of bimetallic ruthenium(II) bipyridyl complexes with DNA
   F. O’Reilly, J. Kelly and A. Kirsch-De Mesmaeker

32. Photoelectrochemistry at transparent SnO$_2$ electrodes : supersensitization in Nafion$^\text{-}$ films by mono- and dinuclear ruthenium(II) complexes with hydroquinone
   L. Tan-Sien-Hee, A. Kirsch-De Mesmaeker

33. Excited state properties of bis-tetraaza phenanthrene-Ru(II) diad complexes with a ferrocenyl unit
   S. Choua, A. Kirsch-De Mesmaeker, L. Jacquet, C. Marzin, N. Chabert

34. Synthesis and Characterization by Electrospray Mass Spectrometry of a Novel Dendritic Heptanuclear Complex of Ruthenium(II)
   C. Moucheron and A. Kirsch-De Mesmaeker

35. Photoinduced electron transfer from nucleotides to DNA intercalating viologens. A study by laser-flash photolysis and spectroelectrochemistry.
   C. Knapp, J.-P. Lecomte, A. Kirsch-De Mesmaeker, G. Orellana

36. Photophysics of Ru(phen)$_2$(PHEHAT)$_2^{2+}$: A Novel “Light Switch” for DNA and Photo-oxidant for Mononucleotides
   C. Moucheron, A. Kirsch-De Mesmaeker and S. Choua

37. A Phenanthroline Analogue of Tröger’s Base as Bridging Ligand in the Synthesis of a Bimetallic Ruthenium(II) Complex
   O. Van Gijte, A. Tatibouët, M. Demeunynck, J. Lhomme and A. Kirsch-De Mesmaeker

38. A novel metallic complex as photoreagent for the DNA guanine bases: Osmium(II) tris(tetraaza phenanthrene).
   S. Content and A. Kirsch-De Mesmaeker
   A. Del Guerzo, A. Kirsch-De Mesmaeker, M. Demeunynck, J. Lhomme

40. Stereoisomers of Mono-, Di- and Triruthenium (II) Complexes Containing the Bridging Ligand 1,4,5,8,9,12-Hexaazatriphenylene and Studies of Their Photophysical Properties
   T. Rutherford, O. Van Gijte, A. Kirsch-De Mesmaeker, F. Keene

41. Photoinduced electron transfer between ruthenium complexes and nucleotides or DNA
   J. Kelly, M. Feeney, L. Jacquet, A. Kirsch-De Mesmaeker, J.P. Lecomte

42. Photoreactions of ruthenium (II) and osmium (II) complexes with deoxyribonucleic acid (DNA)
   C. Moucheron, A. Kirsch-De Mesmaeker, J.M. Kelly

43. Photoaddition of Ru(tap)2(bpy)2 to DNA: A New Mode of Covalent Attachment of Metal Complexes to Duplex DNA
   A photophysical study.
   L. Jacquet, R.J.H. Davies, A. Kirsch-De Mesmaeker and J.M. Kelly

44. Femtosecond transient dynamics of a heptametallic HAT-ruthenium(II) complex.
   A photophysical study.
   L. Latterini, G. Schweitzer, F.C. De Schryver
   C. Moucheron, A. Kirsch-De Mesmaeker

45. Photophysics of Ru(phen)2(PHEHAT)2+: A Novel “Light Switch” for DNA and Photo-oxidant for Mononucleotides
   C. Moucheron, A. Kirsch-De Mesmaeker and S. Choua

46. Ru(II) polypyridine complexes with a high oxidation power. Comparison between their photoelectrochemistry with transparent SnO2 and their photochemistry with deoxycyribonucleic acids.
   I. Ortmans, C. Moucheron, A. Kirsch-De Mesmaeker
   Coordination Chemistry reviews, 168, 233-271 (1998)

47. Photophysics and Photochemistry of Metal Polypyridyl and Related Complexes with Nucleic Acids
   C. Moucheron, A. Kirsch-De Mesmaeker, J. Kelly

48. Mono- and polynuclear ruthenium(II) complexes, photoprobes and reagents for targeted DNA sites.
   A. Kirsch-De Mesmaeker, C. Moucheron, N. Boutonnet
49. New DNA-binding ruthenium(II) complexes as photoreagents for mononucleotides and DNA.
   C. Moucheron, A. Kirsch-De Mesmaeker

   A. Del Guerzo, M. Demeunynck, J. Lhomme, A. Kirsch-De Mesmaeker

51. Heterogeneous molybdate catalysts for the generation of singlet molecular oxygen (1Dg) from H2O2
   F. van Laer, D. De Vos, D. Vanoppen, B. Sels, P.A. Jacobs, A. Del Guerzo,
   F. Pierard and A. Kirsch-De Mesmaeker

52. The dinuclear ruthenium(II) complex [{Ru(Phen)2}2(HAT)]4+
   (HAT = 1,4,5,8,9,12-hexaaazatriphenylene), a new photoreagent for nucleobases and photoprobe for denatured DNA
   O. Van Gijte, A. Kirsch-De Mesmaeker

53. Ru-Labeled Oligonucleotides for Photoinduced Reactions on Targeted DNA Guanines.
   I. Ortmans, S. Content, N. Boutonnet, A. Kirsch-De Mesmaeker,
   W. Bannwarth, J.F. Constant, E. Defrancq and J. Lhomme

54. Oligonucleotides derivatized with luminescent and potoreactive Ru(II) complexes: models for photoelectron transfer and photocrosslinking
   J.F. Constant, E. Defrancq, J. Lhomme, N. Boutonnet, S. Content,
   I. Ortmans, A. Kirsch-De Mesmaeker,
   Nucleosides & Nucleotides, 18, 1319-1320 (1999)

55. Is Singlet Molecular Oxygen Involved in Oxidations Catalyzed by Ti Molecular Sieves?
   F. van Laer, D. De Vos, D. Vanoppen, P.A. Jacobs, A. Brodkorb,
   F. Pierard and A. Kirsch-De Mesmaeker
   12th International Zeolite Conference, July 1998, Baltimore, USA

56. Layered Double Hydroxides Exchanged with Tungstate as Biomimetic Catalysts for Mild Oxidative Bromination
   B. Sels, D. De Vos, M. Buntinx, P.Jacobs, F.Pierard and A.Kirsch-De Mesmaeker

   B. Sels, D. De Vos, P.J. Grobet, P.Jacobs, F.Pierard and A.Kirsch-De Mesmaeker
58. Formation of a covalently-linked bimetallic compound upon irradiation of tris (1,4,5,8-tetraazaophenanthrene) ruthenium (II) in the presence of 5’-guanosine-monophosphate
L. Jacquet, J.M. Kelly, A. Kirsch-De Mesmaeker

59. Characterisation of bifunctional ruthenium(II) complexes, potential DNA
photo-probes. Presence of folded and unfolded conformers.
A. Del Guerzo, A. Kirsch-De Mesmaeker, M. Demeunynck, J. Lhomme

60. STM Imaging of a Heptanuclear Ruthenium(II) Dendrimer, Mon-Add Layer on Graphite
L. Latterini, G. Pourtois, C. Moucheron, R. Lazzaroni, J.-L. Brédas ,
Kirsch-De Mesmaeker, F.C. De Schryver.

61. Generation of Singlet Molecular Oxygen from H2O2 with Molybdate-exchanged
Layered Double hydroxides: Effects of Catalyst Composition and Reaction Conditions
F. van Laar, D.D. De Vos, F. Pierard, A. Kirsch-De Mesmaeker, L.Fiermans
and P.A. Jacobs
Journal of Catalysis 197, 139-150 (2001)

62. Quantitative analysis of the effect of derivatisation of [Ru(BPY)2phen]2+ with a quinoline
moiety on the interaction with DNA
F.Piérard, A.Del Guerzo, A.Kirsch-De Mesmaeker, M.Demeunynck, J.Lhomme

63. Stereoselective Interactions and Photo-Electron Transfers between Mononucleotides or
DNA and the Stereoisomers of a HAT-Bridged Dinuclear RuII Complex
(HAT = 1,4,5,8,9,12-hexaazatriphenylene)
A. Brodkorb, A. Kirsch-De Mesmaeker, T.J. Rutherford and F.R. Keene

64. Spectroscopic studies of structurally similar DNA-binding Ruthenium (II)
complexes containing the dipyridophenazine ligand
C. G. Coates, P. Callaghan, J. J. McGarvey, J. M. Kelly, L. Jacquet,
A. Kirsch-De Mesmaeker

65. Tetrapyridol [3,2-α:2',3'-c :3'',2'''-h:2''',3'''-j] acridine (tpac) : a new extended polycyclic
bis-phenanthroline ligand
M. Demeunynck, C. Moucheron , A. Kirsch-De Mesmaeker

66. Luminescence Quenching of Ru-Labeled Oligonucleotides by Targeted Complementary Strands
D. Garcia-Fresnadillo, N. Bouttonnet, S. Schumm, C. Moucheron,
A. Kirsch-De Mesmaeker, E. Defrancq, J.F. Constant and J. Lhomme

67. Novel DNA Sensor for Guanine Content
A. Del Guerzo, A. Kirsch-De Mesmaeker
68. Influence of the Sequence Dependent Ionization Potentials of Guanines on the Luminescence Quenching of Ru-Labeled Oligonucleotides: A Theoretical and Experimental Study
   S. Schumm, M. Prévost, D. Garcia-Fresnadillo, O. Lentzen, C. Moucheron, and A. Kirsch-De Mesmaeker

69. In vitro inhibition of gene transcription by novel photo-activated polyazaaromatic ruthenium(II) complexes
   M. Pauly, I. Kayser, M. Schmitz, M. Dicato, A. Del Guerzo, I. Kolber, C. Moucheron and A. Kirsch-De Mesmaeker

70. Picosecond studies of Ruthenium and Rhenium dipyridophenazine complexes in solution and when bound to polynucleotides

71. Ultrafast Transient Absorption Studies of Ruthenium and Rhenium Dipyridophenazine Complexes Bound to DNA and Polynucleotides

72. Photocrosslinking in Ruthenium-Labelled Duplex Oligonucleotides

73. Comparison of the NMR enantiodifferentiation of a chiral Ruthenium(II) complex of C2 symmetry using the TRISPHAT anion and a lanthanide shift reagent
   G. Bruylants, C. Bresson, A. Boisdenghien, F. Piérard, A. Kirsch-De Mesmaeker, J. Lacour and K. Bartik

74. Synthesis and characterization of optically active and racemic forms of cyclometalated Rh(III) complexes. An experimental and theoretical emission study.
   L. Ghisdavu, O. Lentzen, S. Schumm, A. Brodkorb, C. Moucheron and A. Kirsch-De Mesmaeker

75. Photoadduct leading to crosslinking in Ru(II) derivatized oligonucleotides.
   O. Lentzen, J-F. Constant, E. Defrancq, C. Moucheron, P. Dumy, A. Kirsch-De Mesmaeker

76. Synthesis of an oxyamino-containing phenanthrolin e derivative for the efficient preparation of phenanthroline oligonucleotide oxime conjugates
   S. Deroo, E. Defrancq, C. Moucheron, A. Kirsch-De Mesmaeker and P. Dumy
77. Determination of DNA guanine sites forming photo-adducts with Ru(II)-labeled oligonucleotides; DNA polymerase inhibition by the resulting photo-crosslinking

78. Photophysical properties of Ruthenium(II) polyazaaromatic compounds: A Theoretical insight.
G. Pourtois, D. Beljonne, C. Moucheron, S. Schumm, A. Kirsch-De Mesmaeker, R. Lazzaroni and J-L. Bredas

79. ([Ru(TAP)_2(dppz)]^2+): A DNA intercalating complex, which luminesces strongly in water and undergoes photo-induced proton-coupled electron transfer with guanosine-5'-monophosphate
I. Ortmans, B. Elias, J-M. Kelly, C. Moucheron and A. Kirsch-De Mesmaeker

80. A mixed-bridging ligand nonanuclear Ru(II) dendrimer containing a trischelating core. Synthesis and redo properties

81. The diastereoisomeric forms of a mononuclear Ru(II) complex bearing a bis-phenanthroline Tröger's base
C. Bresson, M. Lhumer, M. Demeunymck, A. Kirsch-De Mesmaeker and F. Piérard

82. Photoadducts of metallic compounds with nucleic acids – role played by the photoelectron transfer process and by the TAP and HAT ligands in the Ru^\pi complexes
R. Blasius, C. Moucheron and A. Kirsch-De Mesmaeker

83. Adduct formation by photo-induced electron transfer between photo-oxidising Ru(II) complexes and tryptophan
E. Gicquel, A. Boisdenghien, E. Defrancq, C. Moucheron and A. Kirsch-De Mesmaeker

84. Dendritic tetranuclear Ru(II) complexes based on the nonsymmetrical PHEHAT bridging ligand and their building blocks: synthesis, characterization, and electrochemical and photophysical properties
J. Leveque, B. Elias, C. Moucheron and A. Kirsch-De Mesmaeker

85. Photoreaction of [Ru(hat)_2phen]^2+ with guanosine-5'-monophosphate and DNA: formation of new types of photoadducts
86. Detection of secondary structures in 17-mer Ru(II)-labeled single-stranded oligonucleotides from luminescence lifetime studies.
   D. Garcia-Fresnadillo, O. Lentzen, I. Ortmans, E. Defrancq and
   A. Kirsch-De Mesmaeker

87. [Ru(phen)$_2$(PHEHAT)]$^{2+}$ and [Ru(phen)$_2$(HATPHE)]$^{2+}$: two Ruthenium(II) complexes with the same ligands by different photophysics and spectroelectrochemistry.
   A. Boisdenghien, A. Kirsch-De Mesmaeker and C. Moucheron

88. Bifunctional transition metal complexe as nucleic acid photoprobes and photoreagents.
   F. Pierard and A. Kirsch-De Mesmaeker.

89. [Ru(TAP)$_3$]$^{2+}$-Photosensitized DNA cleavage studied by atomic force microscopy and gel electrophoresis: a comparative study.
   Hiroshi Uji-i, Philippe Foubert, Frans C. De Schryver, Steven De Feyter, Etienne Gicquel,
   Ariane Etoc, Cécile Moucheron and Andrée Kirsch-De Mesmaeker.

90. Photoelectron transfer processes with Ruthenium(II) polypyridyl complexes and Cu/Zn superoxide dismutase.
   Laurent Bijeire, Benjamin Elias, Jean-Pierre Souchard, Etienne Gicquel, Cécile Moucheron,
   Andrée Kirsch-De Mesmaeker and Patricia Vicendo.

91. Photo-reduction of polyazaaromatic Ru(II) complexes by biomolecules and possible applications.
   Benjamin Elias, Andrée Kirsch-De Mesmaeker

   Arnaud Boisdenghien, Julien Leveque, Cécile Moucheron and Andrée Kirsch-De Mesmaeker

93. Optically active Ru(II) complexes with a chiral Tröger’s base ligand and their interactions with DNA.

94. Development of a quantitative LC/MS/MS method for the analysis of common propellant powder stabilizers in gunshot residues.

95. New angular planar ligand. Synthesis, characterization and study of the corresponding Ru(II) complex and DNA interaction.
   Inorganica Chimica Acta (2007)
96. Dinuclear Ru(II) PHEHAT and TPAC complexes: Effects of the second Ru(II) center on their spectroelectrochemical properties.

Chapitres de livres, revues sur invitation :

Metallotherapeutic Drugs & Metal-based Diagnostic Agents. The use of metals in medicine.
Chapitre 19 : Perspectives of Ruthenium complexes in cancer therapy.
O.Lentzen, C. Moucheron, A. Kirsch-De Mesmaeker.