

## PRINCIPALI PUBBLICAZIONI

- M. Benedetti, P. Biscarini, Foresti E., Sabatino P., and R. Kuroda “Induced CD on the d-d Transitions of Square Planar  $MS_4$  Chromophoric Groups of Ni(II) Complexes with Enantiomeric Dithiophosphate Ligands: (+)<sub>589</sub> (-)<sub>CD662</sub> Ni[(*R,R*)bdtp]<sub>2</sub> and (-)<sub>589</sub> (+)<sub>CD662</sub> Ni[(*S,S*)bdtp]<sub>2</sub>” *Enantiomer* **1999**, 4, 57-61.
- M. Benedetti, P. Biscarini, A. Brillante, and E. Castiglioni “Configurational Equilibrium and CD Spectra Under Pressure of Chiral Octahedral Complexes:  $\Lambda$ - and  $\Delta$ -Cr[(-)(*R,R*)bdtp]<sub>3</sub>” *Enantiomer* **1999**, 4, 63-66.
- M. Benedetti, P. Biscarini, and A. Brillante “The Effect of Pressure on Circular Dichroism Spectra of a Chiral Helicoidal Chromium Complex” *Physica B* **1999**, 265, 203-207.
- M. Benedetti, P. Biscarini, and A. Brillante “The Effect of Pressure on CD Spectra of the Chiral Octahedral Transition Metal Complexes  $\Lambda$ -,  $\Delta$ - and ( $\Lambda,\Delta$ ){Cr[(+)(*S*)(*S*)Mebdtp]<sub>3</sub>” *High Pressure Res.* **2000**, 18, 285-289.
- M. Benedetti, J. Malina, J. Kasparova, V. Brabec, G. Natile “Chiral Discrimination in Platinum Anticancer Drugs” *Environ. Health Persp.* **2002**, 110, 779-782.
- M. Benedetti, J. S. Saad, L. G. Marzilli, and G. Natile “Chiral Discrimination in the Formation Reaction and at Equilibrium for *N,N,N',N'*-tetramethyl-1,2-diaminocyclohexane-PtG<sub>2</sub> Complexes” *Dalton Transactions* **2003**, 5, 872-879.
- M. Benedetti, R. Cini, G. Tamasi, and G. Natile “Crystal and Molecular Structure and Circular Dichroism of [bis-(guanosine-5'-monophosphate (-1))(*N,N,N',N'*-tetramethylcyclohexyl-1,2-diamine)platinum(II)] complexes with *R,R* and *S,S* configurations of the asymmetric diamine” *Chem. Eur. J.* **2003**, 9, 6122-6132.
- P. Biscarini, M. Benedetti, F. Ferranti, R. Kuroda, E. Foresti, P. Sabatino “Transfer of Chirality by Dithiophosphate Ligands and Chiral Discrimination in the Stereoselective Formation of Square-Planar Ni(II) Complexes” *Chirality* **2004**, 16, 251-262.
- Milan Balaz, Andrea E. Holmes, Michele Benedetti, Pamela C. Rodriguez, Nina Berova, Koji Nakanishi, Gloria Proni “Synthesis and Circular Dichroism of Tetraarylporphyrin-Oligonucleotide Conjugates” *J. Am. Chem. Soc.* **2005**, 127, 4172-4173.
- Milan Balaz, Andrea E. Holmes, Michele Benedetti, Gloria Proni, Nina Berova “Porphyrin substituted phosphoramidites: new building blocks for porphyrin-oligonucleotide syntheses” *Bioorg. Med. Chem.* **2005**, 13, 2413-2421.
- Michele Benedetti, Luigi G. Marzilli, Giovanni Natile “Rotamer Stability in *cis*-[Pt(diA)G<sub>2</sub>] Complexes (diA = Diamine Derivative and G = Guanine Derivative) Mediated by Carrier-

- Ligand Amine Stereochemistry as Revealed by Circular Dichroism Spectroscopy” *Chem. Eur. J.* **2005**, *11*, 5302-5310.
- M. Benedetti, F. P. Fanizzi, L. Maresca, G. Natile “The Unexpected Reactivity of Zeise’s Anion in Strong Basic Medium Discloses New Substitution Patterns at the Platinum Center” *Chem. Commun.* **2006**, 1118-1120.
  - Paolo Biscarini, Michele Benedetti, Reiko Kuroda, Francesco Ferranti “Transfer of Chirality in Complexes with  $D_3$  Symmetry: Kinetics of the Formation Reaction of Chiral Tris[*O,O'*-bis(2-methylbutyl)-dithiophosphato]chromium(III) Complexes  $(\Lambda, \Delta)$ -[Cr{ $(\pm)$ -Mebdtp} $_3$ ],  $\Delta$ - $(+)$  $_{589}$ - and  $\Lambda$ - $(-)$  $_{589}$ -[Cr{ $(+)$ -*(S)*(*S*)-Mebdtp} $_3$ ]” *Eur. J. Inorg. Chem.* **2006**, *16*, 3167-3176.
  - Michele Benedetti, Gabriella Tamasi, Renzo Cini, Luigi G. Marzilli, and Giovanni Natile “The First Pure  $\Lambda$ HT Rotamer of a Complex with a *cis*-[Metal(nucleotide) $_2$ ] Unit: A *cis*-[Pt(amine) $_2$ (nucleotide) $_2$ ]  $\Lambda$ HT Rotamer with Unique Molecular Structural Features” *Chem. Eur. J.* **2007**, *13*, 3131-3142.
  - Vita Mariagrazia Vecchio, Michele Benedetti, Danilo Migoni, Sandra Angelica De Pascali, Antonella Ciccarese, Santo Marsigliante, Francesco Capitelli, Francesco Paolo Fanizzi “Highly selective metal mediated *ortho*-alkylation of phenol. First platinum containing organometallic chromane analogues” *Dalton Trans.* **2007**, 5720-5725.
  - Michele Benedetti, Cosimo Ducani, Danilo Migoni, Daniela Antonucci, Vita M. Vecchio, Antonella Ciccarese, Alessandro Romano, Tiziano Verri, Giuseppe Ciccarella, and Francesco P. Fanizzi “Experimental Evidence That a DNA Polymerase Can Incorporate *N7*-Platinated Guanines To Give Platinated DNA” *Angew. Chem. Int. Ed.* **2008**, *47*, 507-510.
  - Carmen R. Barone, Michele Benedetti, Vita M. Vecchio, Francesco P. Fanizzi, Luciana Maresca and Giovanni Natile “New chemistry of olefin complexes of platinum(II) unravelled by basic conditions: synthesis and properties of elusive cationic species” *Dalton Trans.* **2008**, 5313-5322.
  - Michele Benedetti, Cosimo Ducani, Danilo Migoni, Daniela Antonucci, Vita M. Vecchio, Alessandro Romano, Tiziano Verri, Francesco P. Fanizzi, “Platinum and other heavy metal compounds in cancer chemotherapy”, in: A. Bonetti, R. Leone, F. M. Muggia, S. B. Howell (Eds.), “Possible Incorporation of Free *N7*-Platinated Guanines in DNA by DNA Polymerases: Relevance for the *Cisplatin* Mechanism of Action”, Humana Press, New York, 2009, pp. 125-132.
  - Michele Benedetti, Daniela Antonucci, Danilo Migoni, Vita M. Vecchio, Cosimo Ducani, Francesco P. Fanizzi “Water-soluble Organometallic Analogues of Oxaliplatin with Cytotoxic and Anticlonogenic Activity” *ChemMedChem* **2010**, *5*, 46-51.

- Jamil S. Saad, Michele Benedetti, Giovanni Natile, Luigi G. Marzilli, “Basic Coordination Chemistry Relevant to DNA Adducts Formed by the Cisplatin Anticancer Drug. NMR Studies on Compounds with Sterically Crowded Chiral Ligands” *Inorg. Chem.* **2010**, *49*, 5573-5583
- Jamil S. Saad, Michele Benedetti, Giovanni Natile, Luigi G. Marzilli “NMR Studies of Models Having the Pt(d(GpG)) 17-Membered Macrocyclic Ring Formed in DNA by Platinum Anticancer Drugs: Pt Complexes with Bulky Chiral Diamine Ligands” *Inorg. Chem.* **2011**, *50*, 4559-4571.
- Michele Benedetti, Carmen R. Barone, Daniela Antonucci, Vita M. Vecchio, Andrea Ienco, Luciana Maresca, Giovanni Natile, Francesco P. Fanizzi “Modulation of properties in analogues of Zeise’s anion on changing the ligand trans to ethene. X-Ray crystal structures of *trans*-[PtCl<sub>2</sub>(OH)(η<sup>2</sup>-C<sub>2</sub>H<sub>4</sub>)]<sup>-</sup> and *trans*-[PtCl<sub>2</sub>(η<sup>1</sup>-CH<sub>2</sub>NO<sub>2</sub>)(η<sup>2</sup>-C<sub>2</sub>H<sub>4</sub>)]<sup>-</sup>” *Dalton Trans.*, **2012**, *41*, 3014-3021.
- Michele Benedetti, Daniela Antonucci, Sandra A. De Pascali, Chiara R. Girelli, Francesco P. Fanizzi “Pentacoordinate [PtCl<sub>2</sub>(η<sup>2</sup>-C<sub>2</sub>H<sub>4</sub>)(*N-N'*)] complexes with asymmetrically hindered nitrogen donor chelates. Stereospecific synthesis of *syn*- and *anti*-[PtCl(η<sup>1</sup>-CH<sub>2</sub>CH<sub>2</sub>OMe)(Mebpy)]” *J. Organomet. Chem.*, **2012**, *714*, 60-66.
- Michele Benedetti, Daniela Antonucci, Sandra A. De Pascali, Giuseppe Ciccarella, Francesco P. Fanizzi “Alkyl-vinyl-ethers from alcoholic substrates and the Zeise’s salt, via square planar [PtCl(*N-N*)(η<sup>1</sup>-CH<sub>2</sub>CH<sub>2</sub>OR)] complexes” *J. Organomet. Chem.*, **2012**, *714*, 104-108.
- Chiara Carrisi, Daniela Antonucci, Paola Lunetti, Danilo Migoni, Chiara R. Girelli, Vincenza Dolce, Francesco P. Fanizzi, Michele Benedetti, Loredana Capobianco “Transport of platinum bonded nucleotides into proteoliposomes, mediated by *Drosophila melanogaster* thiamine pyrophosphate carrier protein (*DmTpc1*)” *J. Inorg. Biochem.* **2014**, *130*, 28-31.
- Michele Benedetti, Daniela Antonucci, Chiara R. Girelli, Francesco Capitelli, Francesco P. Fanizzi “Reactivity of [PtCl(η<sup>2</sup>-C<sub>2</sub>H<sub>4</sub>)(*N-N*)]<sup>+</sup>, *N-N* = diimine ligand, with phenol derivatives and first comparison between single crystal X-ray structures of *syn*- and *anti*-[Pt(*N-N*)(phenolate)<sub>2</sub>] rotamers in the solid state” *Inorg. Chim. Acta* **2014**, *409*, 427-432.
- Michele Benedetti, Carmen R. Barone, Chiara R. Girelli, Francesco P. Fanizzi, Giovanni Natile, Luciana Maresca “H/D exchange at sp<sup>3</sup> carbons in the coordination sphere of platinum(II)” *Dalton Trans.*, **2014**, *43*, 3669-3675.

- Michele Benedetti, Chiara R. Girelli, Daniela Antonucci, Sandra A. De Pascali, Francesco P. Fanizzi “New method for the synthesis of  $[\text{PtCl}\{\eta^1\text{-CH}_2\text{C(O)R}\}(N\text{-}N)]$  ketonyl derivatives starting from the Zeise’s salt” *Inorg. Chim. Acta* **2014**, *413*, 109-114.
- Michele Benedetti, Vincenza Lamacchia, Daniela Antonucci, Paride Papadia, Concetta Pacifico, Giovanni Natile, Francesco P. Fanizzi “Insertion of alkynes into Pt-X bonds of square planar  $[\text{PtX}_2(N\text{-}N)]$  (X = Cl, Br, I) complexes” *Dalton Trans.*, **2014**, *43*, 8826-8834.
- Michele Benedetti, Chiara R. Girelli, Daniela Antonucci, Francesco P. Fanizzi. “[ $\text{PtCl}(\eta^1\text{-CH}_2\text{-CH}_2\text{OR})(N\text{-}N)]$  and  $[\text{PtCl}(\eta^2\text{-CH}_2\text{=CH}_2)(N\text{-}N)]^+$ ,  $N\text{-}N$  = dinitrogen ligand, complexes. Sterical and electronic effects evidenced by NMR analysis” *J. Organomet. Chem.*, **2014**, *771*, 40-46.
- Michele Benedetti, Paride Papadia, Chiara R. Girelli, Federica De Castro, Francesco Capitelli, Francesco P. Fanizzi. “X-ray structures versus NMR signals in pentacoordinate  $[\text{PtX}_2(\eta^2\text{-CH}_2\text{=CH}_2)(\text{Me}_2\text{phen})]$  (X = Cl, Br, I), complexes” *Inorg. Chim. Acta*, **2015**, *428*, 8-13.
- Michele Benedetti, Daniela Antonucci, Chiara R. Girelli, Francesco P. Fanizzi " Hindrance, Donor Ability of  $\text{Me}_n\text{NN}$  Chelates and Overall Stability of Pentacoordinate  $[\text{PtCl}_2(\eta^2\text{-CH}_2\text{=CH}_2)(\text{Me}_n\text{NN})]$  Complexes as Observed by  $\eta^2\text{-Olefin } ^1J_{\text{Pt-C}}$  Modulation: An NMR Study” *Eur. J. Inorg. Chem.*, **2015**, 2308-2316.
- Michele Benedetti, Daniela Antonucci, Federica De Castro, Chiara R. Girelli, Marco Lelli, Norberto Roveri, Francesco P. Fanizzi " Metalated nucleotides chemisorption on hydroxyapatite” *J. Inorg. Biochem.*, **2015**, *153*, 279-283.
- Michele Benedetti, Federica De Castro, Daniela Antonucci, Paride Papadia, Francesco Paolo Fanizzi “General cooperative effects of single atom ligands on a metal: a  $^{195}\text{Pt}$  NMR chemical shift as a function of coordinated halido ligands’ ionic radii overall sum” *Dalton Trans.*, **2015**, *44*, 15377-15381.
- Michele Benedetti, Federica De Castro, Alessandro Romano, Danilo Migoni, Barbara Piccinni, Tiziano Verri, Marco Lelli, Norberto Roveri, Francesco P. Fanizzi “Adsorption of the  $\text{cis-}[\text{Pt}(\text{NH}_3)_2(\text{P}_2\text{O}_7)]^{2-}$  (phosphaplatin) on hydroxyapatite nanocrystals as a smart way to selectively release activated  $\text{cis-}[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$  (cisplatin) in tumor tissues” *J. Inorg. Biochem.*, **2016**, *157*, 73-79.
- Michele Benedetti, Alessandro Romano, Federica De Castro, Chiara R. Girelli, Daniela Antonucci, Danilo Migoni, Tiziano Verri, Francesco P. Fanizzi “ $N7$ -platinated ribonucleotides are not incorporated by RNA polymerases. New perspectives for a rational

design of platinum antitumor drugs” *J. Inorg. Biochem.*, **2016**, doi:  
10.1016/j.jinorgbio.2016.07.004.

- Michele Benedetti, Federica De Castro, Francesco P. Fanizzi “Square-Planar Pt<sup>II</sup> versus Octahedral Pt<sup>IV</sup> Halido Complexes: <sup>195</sup>Pt NMR Explained by a Simple Empirical Approach” *Eur. J. Inorg. Chem.* **2016**, 3957-3962.
- Paola Lunetti, Alessandro Romano, Chiara Carrisi, Daniela Antonucci, Tiziano Verri, Giuseppe E. De Benedetto, Vincenza Dolce, Francesco P. Fanizzi, Michele Benedetti “Platinated Nucleotides are Substrates for the Human Mitochondrial Deoxynucleotide Carrier (DNC) and DNA Polymerase  $\gamma$ : Relevance for the Development of New Platinum-Based Drugs” *ChemistrySelect* **2016**, 1, 4633-4637.