

PERSONAL INFORMATION Dominique Marie Roberto

POSITION Full Professor of General and Inorganic Chemistry

WORK EXPERIENCE

from 2009 Full Professor of General and Inorganic Chemistry, Milan University
2006-2009 Professor of General and Inorganic Chemistry, Milan University
1998-2006 Associate Professor of General and Inorganic Chemistry, Milan University
1995-1998 Researcher of General and Inorganic Chemistry, Milan University
1994 CNR fellow, Milan
1991-1993 Post-doctoral fellow of the Milan University, in the group of Prof. Renato Ugo
1989-1991 Post-doctoral NATO Research Fellow, in the group of Prof. Renato Ugo, Milan University
1986-1987 Research fellowship given by the Italian Embassy in Canada, in the group of Prof. GianPaolo Chiusoli, Parma University
Summer 1981 and 1983 Summer fellowships given by the Natural Sciences and Engineering Research Council of Canada (NSERC), in the group of Prof. Jean M.J. Fréchet, University of Ottawa
October 2018-September 2021 Coordinator of the PhD in Industrial Chemistry, Milan University
from 2017 In charge of controlling the “high quality” of the Laurea in Industrial Chemistry
April 2016-March 2020 Representative of the Milan University in the Governing Council of the National Interuniversity Consortium of Materials Science and Technology (INSTM)
from 2003 Member of the Directive Council of the Center of Excellence CIMAINA (Centro Interdisciplinare Materiali e Interfacce Nanostrutturate)
November 2009-October 2015 Coordinator of the PhD in Industrial Chemistry, Milan University
2014 “External Examiner” of Ph.D. thesis at the Nanyang Technological University
2012 “Rapporteur” of Ph.D. thesis at the University of Rennes
2007 “Rapporteur” of Ph.D. thesis at the University of Rennes
2002 “External Examiner” of Ph.D. thesis at the National University of Singapore.

EDUCATION AND TRAINING

1989 Ph.D. in Chemistry
University of Ottawa (in the group of Prof. Howard Alper, Canada)
1984 Bachelor in Chemistry, summa cum laude
University of Ottawa (in the group of Prof. Howard Alper, Canada)

PERSONAL SKILLS

Mother tongue French

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Italian	C2	C2	C2	C2	C2
English	C1	C2	C1	C1	C1

Organizational / managerial skills

Skills acquired as Coordinator of the PhD, as PI or local coordinator of various research projects, and as Member of the Directive Council of the Center of Excellence CIMAINA and of the National Interuniversity Consortium of Materials Science and Technology.

Awards

K. J. Laidler award and medal of the Chemical Institute of Canada for excellence in University studies (1982).
 Gold medal of the General Governor of Canada, gold medal of the University of Ottawa, award of the University of Ottawa, award of the Society of Chemical Industry, award of Anachemia, award of Merck Frosst, award of the French Embassy in Canada, in recognition of outstanding academic achievement for her studies in chemistry at the University of Ottawa (1984).
 "Flavio Bonati" award of the Interdivisional group of Organometallic Chemistry (Società Chimica Italiana, 1996).
 National award "Federchimica-per un futuro intelligente", 1a Sezione - professori universitari e ricercatori (1998).

Professional skills and Research interests

Aspirant commissioner that could be chosen for the Commission that evaluates candidates scientific qualification to function as professor in Italian universities (Settore 03/B1; 2016).

Research interests:

- (1) Surface organometallic chemistry and synthesis mediated by the silica surface.
- (2) Design, synthesis, characterization and nano-organization of coordination compounds with high and/or switchable non linear optical properties (NLO).
- (3) Design, synthesis, and characterization of coordination compounds with luminescent properties for application in luminescent devices (Organic Light-Emitting Diodes, Organic Light Electrochemical Cells) and in bioimaging and/or with antitumoral properties.
- (4) Design, synthesis, and characterization of coordination compounds for application as photosensitizers or electrolytes in dye-sensitized solar cells (DSSCs).

Editorial activity

Guest Editor of 2 volumes on *Journal of Molecular Catalysis A: Chemical* (2003).
 Co-editor of a book on Surface organometallic chemistry (2009, Wiley-VCH).
 Guest Editor for *Inorganics* for the Special Issue "Metal Complexes as Non Linear Optical Molecular Materials" (MDPI, 2018).

National and international grants awarded

Centri di Eccellenza 2001; CLAB014F3S: Proponent for the creation of the Center of Excellence CIMAINA (Coordinator Paolo Milani), co-funded by MIUR; Responsible of the Project "Nanomanipulation and nanofunctionalization of surfaces and interfaces".
 PRISMA 2005: Local Coordinator (Milan) of a project funded by INSTM-Italian University Consortium on Materials Science and Technology "Multiphoton absorption of metallorganic and coordination compounds". National coordinator: Camilla Ferrante.
 PROMO 2006: Local Coordinator (Milan) of a project funded by CNR with a CNR-INSTM convention: "Sistemi molecolari e nanodimensionali con proprietà funzionali".

Nanostrutture organiche, organometalliche, polimeriche ed ibride: ingegnerizzazione supramolecolare delle proprietà fotoniche e dispositivi innovativa per optoelettronica”.

COST D35 2006-2011: Local Coordinator (Milan) of COST D35 which linked researchers from UK, France, Italy, Germany and Czech Republic on the project “Multifunctional organometallic chromophores for light-emitting devices and luminescent sensors”.

CARIPO 2007: Local Coordinator, Milan University. Project funded by Fondazione Cariplo: “White organic light emitting devices for solid state lighting”. National Coordinator: Franco Meinardi.

PRIN 2008: Responsible of Research Unit, Milan University. Project 2008FZK5AC_002: “New organometallic and coordination structures and related nanocomposite materials with luminescent properties and polymeric or sol-gel films or composites with stable SHG based on oriented NLO active nanocrystals or macrochromophores.” National Coordinator: Dante Gatteschi.

CARIPO 2010: National Coordinator. Project funded by Fondazione Cariplo: “Highly efficient organic solar cells based on surface nanostructuring of innovative hybrid materials for light-trapping”.

Three years research contract with Eni S.p.A. (2010). Project: “Composti organometallici e di coordinazione con potenziale applicazione in celle solari fotovoltaiche”.

GALILEO 2015-2016: Italian Coordinator. Project G15-50: “Light modulation: Luminescent and second-order nonlinear optical (NLO) switches based on photochromic cyclometalated platinum(II) complexes” in collaboration with University of Rennes.

PICS-CNRS 2016-2018 Italian Coordinator. PICS-CNRS International program in collaboration with University of Rennes. “Tuning and switching the nonlinear optical properties of Pt(II) complexes.”

MAECI Italy-India 2018: Participant: “Ferrocene conjugated Y-shaped chromophores as potential sensitizers in dye sensitized solar cells with innovative redox mediators.” National Coordinator: Claudia Dragonetti.

ADDITIONAL INFORMATION

Collaborations	Collaborations with many research groups in Italy (Bari, Bologna, Cagliari, Catania, Ferrara, Firenze, Lecce, Milano, Padova, Parma, Perugia, Roma), France (Rennes, Cachan, Angers, Nantes), UK (Durham), Romania (Bucarest), Canada (Montréal), USA (Boston), Japan (Osaka) and India (Vellore).
Publications	Author of 3 patents, 4 chapters of books and 144 publications on international refereed journals. (h index = 36; Scopus January 6th 2019).

List of recent publications (2010-2019)

1. Coordination and Organometallic Complexes as Second-Order Nonlinear Optical Molecular Materials.

Di Bella, S.; Dragonetti, C.; Pizzotti, M.; Roberto, D.; Tessore, F.; Ugo, R. in *Topics in Organometallic Chemistry 28. Molecular Organometallic Materials for Optics*, 2010, 28, 1-55 (eds. H. Le Bozec, V. Guerschais), Springer Verlag Berlin Heidelberg.

2. Stable SHG from *in situ* grown oriented nanocrystals of [(E)-N,N-dimethylamino-N'-methylstilbazolium][p-toluenesulfonate] in a PMMA film.

Macchi, R.; Cariati, E.; Marinotto, D.; Roberto, D.; Tordin, E.; Ugo, R.; Bozio, R.; Cozzuol, M.; Pedron, D.; Mattei, G. *J. Mater. Chem.* 2010, 20, 1885-1890.

3. The role of ion pairs in the second-order NLO response of 4-X-1-methylpyridinium salts.

Tessore, F.; Cariati, E.; Cariati, F.; Roberto, D.; Ugo, R.; Mussini, P.; Zuccaccia, C.; Macchioni, A. *ChemPhysChem* 2010, 11, 495-507.

4. Fluorinated β -Diketonates Diglyme Lanthanide Complexes as New Second Order NLO

Chromophores: the Role of f Electrons on the Dipolar and Octupolar Contribution to the Quadratic Hyperpolarizability.

Valore, A.; Cariati, E.; Righetto, S.; Roberto, D.; Tessore, F.; Ugo, R.; Fragalà, I. L.; Fragalà, M. E.; Malandrino, G.; De Angelis, F.; Belpassi, L.; Ledoux-Rak, I.; Thi, K. H.; Zyss, J. *J. Am. Chem. Soc.* **2010**, *132*, 4966-4970.

5. Cyclometalated Ir(III) Complexes with Substituted 1,10-Phenanthrolines: A New Class of Efficient Cationic Organometallic Second-Order NLO Chromophores.

Valore, A.; Cariati, E.; Dragonetti, C.; Righetto, S.; Roberto, D.; Ugo, R.; De Angelis, F.; Fantacci, S.; Sgamellotti, A.; Macchioni, A.; Zuccaccia, D. *Chem. Eur. J.*, **2010**, *16*, 4814-4825.

6. Luminescent cyclometalated Ir(III) and Pt(II) complexes with β -diketonate ligands as highly active second-order NLO chromophores.

Valore, A.; Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D.; Ugo, R.; De Angelis, F.; Fantacci, S. *Chem. Commun.* **2010**, *46*, 2414-2416.

7. Novel ruthenium(II) complexes with substituted 1,10-phenanthroline or 4,5-diazafluorene linked to a fullerene as highly active second order NLO chromophores.

Valore, A.; Balordi, M.; Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D.; Ugo, R.; Benincori, T.; Rampinini, G.; Sannicolò, F. *Dalton Trans.*, **2010**, *39*, 10314-10318.

8. Highly stable 7-N,N-dibutylamino-2-azaphenanthrene and 8-N,N-dibutylamino-2-azachrysene as a new class of second order NLO-active chromophores.

Calabrese, V.; Quici, S.; Rossi, E.; Cariati, E.; Dragonetti, C.; Roberto, D.; Tordin, E.; De Angelis, F.; Fantacci, S. *Chem. Commun.*, **2010**, *46*, 8374-8376.

9. UV absorbing zwitterionic pyridinium-tetrazolate: exceptional transparency/optical nonlinearity trade-off.

Beverina, L.; Sanguineti, S.; Battagliarin, G.; Ruffo, R.; Roberto, D.; Righetto, S.; Soave, R.; Lo Presti, L.; Ugo, R.; Pagani, G.A. *Chem. Commun.*, **2011**, *47*, 292-294.

10. A Novel Diruthenium Acetylide Donor Complex as an Unusual Active Material for Bulk-Heterojunction Solar Cells.

Colombo, A.; Dragonetti, C.; Roberto, D.; Ugo, R.; Falciola, L.; Luzzati, S.; Kotowski, D. *Organometallics*, **2011**, *30*, 1279-1282.

11. Dimers of polar chromophores in solution: role of excitonic interactions in one- and two-photon absorption properties.

Todescato, F.; Fortunati, I.; Carlotto, S.; Ferrante, C.; Grisanti, L.; Sissa, C.; Painelli, A.; Colombo, A.; Dragonetti, C.; Roberto, D. *Phys. Chem. Chem. Phys.*, **2011**, *13*, 11099-11109.

12. Cyclometalated platinum(II) complexes of 1,3-di(2-pyridyl)benzenes for solution processable WOLEDs exploiting monomer and excimer phosphorescence.

Mroz, W.; Botta, C.; Giovanella, U.; Rossi, E.; Colombo, A.; Dragonetti, C.; Roberto, D.; Ugo, R.; Valore, A.; Williams, J.A.G. *J. Mater. Chem.*, **2011**, *21*, 8653-8661.

13. Cyclometalated platinum(II) complexes of 1,3-di(2-pyridyl)benzenes: tuning excimer emission from red to near-infrared for NIR-OLEDs.

Rossi, E.; Murphy, L.; Brothwood, P.L.; Colombo, A.; Dragonetti, C.; Roberto, D.; Ugo, R.; Cocchi, M.; Williams, J.A.G. *J. Mater. Chem.*, **2011**, *21*, 15501-15510.

14. Linear and Nonlinear Optical Properties of Cationic Bipyridyl Iridium (III) Complexes: Tunable and Photoswitchable?

Aubert, V.; Ordroneau, L.; Escadeillas, M.; Williams, J. A. G.; Boucekine, A.; Coulaud, E.; Dragonetti, C.; Righetto, S.; Roberto, D.; Ugo, R.; Valore, A.; Singh, A.; Zyss, J.; Ledoux-Rak, I.; Le Bozec, H.; Guerchais, V. *Inorg. Chem.* **2011**, *50*, 5027-5038.

15. Photophysical and Electrochemical Properties of Thiophene-Based 2-Arylpyridines

Coluccini, C.; Manfredi, N.; Herrera Calderon, E.; Salamone, M.M.; Ruffo, R.; Roberto, D.; Lobello, M.G.; De Angelis, F.; Abbotto, A. *Eur. J. Org. Chem.*, **2011**, *28*, 5587-5598.

16. Optoelectronic properties of OLEC devices based on Phenylquinoline and Phenylpyridine ionic iridium complexes.

Margapoti, E.; Muccini, M.; Sharma, A.; Colombo, A.; Dragonetti, C.; Roberto, D.; Valore, A. *Dalton*

Trans. **2012**, *31*, 9227-9231.

17. New [(D-Terpyridine)-Ru-(D or A-Terpyridine)][4-EtPhCO₂]₂ complexes (D = electron donor group; A = electron acceptor group) as active second-order non linear optical chromophores.
Roberto, D.; Colombo, A.; Locatelli, D.; Tessore, F.; Ugo, R.; Cavazzini, M.; Quici, S.; De Angelis, F.; Fantacci, S.; Ledoux-Rak, I.; Tancrez, N.; Zyss, J. *Dalton Trans.*, **2012**, *41*, 6707-6714.

18. An unprecedented switching of the second-order nonlinear optical response in aggregate bis(salicylaldehyde) Zinc(II) Schiff-base complexes.
Di Bella, S.; Oliveri, I. P.; Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D.; *Dalton Trans.*, **2012**, *41*, 7013-7016.

19. Novel N^CN-cyclometallated platinum complexes with acetylide coligands as efficient phosphors for OLEDs.
Rossi, E.; Colombo, A.; Dragonetti, C.; Roberto, D.; Ugo, R.; Valore, A.; Falciola, L.; Brulatti, P.; Cocchi, M.; Williams, J.A.G. *J. Mater. Chem.*, **2012**, *22*, 10650-10655.

20. A new thiocyanate-free cyclometallated ruthenium complex for dye-sensitized solar cells: beneficial effects of substitution on the cyclometallated ligand.
Dragonetti, C.; Valore, A.; Colombo, A.; Roberto, D.; Trifiletti, V.; Manfredi, N.; Salamone, M.; Ruffo, R.; Abbotto, A. *J. Organomet. Chem.*, **2012**, *714*, 88-93

21. From red to near infra-red OLEDs: the remarkable effect of changing from X= -Cl to -NCS in a cyclometallated [Pt(N^CN)X] complex {N^CN = 5-mesityl-1,3-di-(2-pyridyl)benzene}.
Rossi, E.; Colombo, A.; Dragonetti, C.; Roberto, D.; Demartin, F.; Cocchi, M.; Brulatti, P.; Fattori, V.; Williams, J. A. G. *Chem. Commun.*, **2012**, *48*, 3182-3184

22. Thiocyanate-free cyclometallated ruthenium sensitizers for solar cells based on heteroaromatic-substituted 2-arylpyridines.
Abbotto, A.; Coluccini, C.; Dell'Orto, E.; Manfredi, N.; Trifiletti, V.; Salamone, M.; Ruffo, R.; Acciarri, M.; Colombo, A.; Dragonetti, C.; Ordanini, S.; Roberto, D.; Valore, A. *Dalton Trans.*, **2012**, *41*, 11731-11738.

23. Novel highly conjugated push-pull 4,5-diazafluoren-9-ylidene based efficient NLO chromophores as a springboard for coordination complexes with large second-order NLO properties.
Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D.; Valore, A.; Benincori, T.; Colombo, F.; Sannicolò, F. *J. Mater. Chem.*, **2012**, *22*, 19761-19766.

24. The relevance of the octupolar contribution to the quadratic hyperpolarizability of dipolar neutral Ir(III), Pt(II) and Ru(II) complexes.
Dragonetti, C.; Righetto, S.; Roberto, D.; Ugo, R.; Valore, A.; Ledoux-Rak, I. *Nonlinear Optics, Quantum Optics*, **2012**, *43*, 197-204.

25. An investigation on the second order nonlinear optical response of tris-cyclometallated Ir(III) complexes with variously substituted 2-phenylpyridines.
Zaarour, M.; Guerchais, V.; Le Bozec, H.; Dragonetti, C.; Righetto, S.; Roberto, D.; De Angelis, F.; Fantacci, S.; Lobello, M.G. *Dalton Trans.* **2013**, *42*, 155-159.

26. Tuning the dipolar second-order non-linear optical properties of cyclometallated platinum(II) complexes with tridentate N^CN-binding ligands.
Rossi, E.; Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D.; Ugo, R.; Valore, A.; Williams, J.A.G.; Lobello, M. G.; De Angelis, F.; Fantacci, S.; Ledoux-Rak, I.; Singh, A.; Zyss, J. *Chem. Europ. J.* **2013**, *19*, 9875-9883.

27. Fascinating Role of the Number of f Electrons in Dipolar and Octupolar Contributions to Quadratic Hyperpolarizability of trinuclear lanthanides-biscopper Schiff base complexes.
Gulino, A.; Fragalà, I.; Lupo, F.; Malandrino, G.; Motta, A.; Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D.; Ugo, R.; Demartin, F.; Ledoux-Rak, I.; Singh, A. *Inorg. Chem.* **2013**, *52*, 7550-7556.

28. Ruthenium Oxyquinolate Complexes for Dye-Sensitized Solar Cell.
Dragonetti, C.; Valore, A.; Colombo, A.; Magni, M.; Mussini, P.; Roberto, D.; Ugo, R.; Valsecchi, A.; Trifiletti, V.; Manfredi, N.; Abbotto, A. *Inorg. Chim. Acta*, **2013**, *405*, 98-104.

29. Linear and Nonlinear Optical Properties of Tris-cyclometallated Phenylpyridine Ir(III)

Complexes Incorporating π -Conjugated Substituents.

M. Zaarour, A. Singh, C. Latouche, J.A.G. Williams, I. Ledoux-Rak, J. Zyss, A. Boucekkine, Le Bozec, H.; Guerchais, V.; Dragonetti, C.; Colombo, A.; Roberto, D.; Valore, A. *Inorg. Chem.* **2013**, *52*, 7987-7994.

30. Cyclometallated 4-styryl-2-phenylpyridine Pt(II) acetylacetonate complexes as second-order NLO building blocks for SHG active polymeric films.

Colombo, A.; Dragonetti, C.; Marinotto, D.; Righetto, S.; Roberto, D.; Tavazzi, S.; Escadeillas, M.; Guerchais, V.; Le Bozec, H.; Boucekkine, A.; Latouche, C. *Organometallics* **2013**, *32*, 3890-3894.

31. A simple copper(I) complex and its application in efficient dye sensitized solar cells.

Colombo, A.; Dragonetti, C.; Roberto, D.; Valore, A.; Biagini, P.; Melchiorre, F. *Inorg. Chim. Acta*, **2013**, *407*, 204-209.

32. Thiocyanate-Free Ru(II) Sensitizer with a pyrid-2-yl tetrazolate ligand for Dye-Sensitized Solar Cells.

Dragonetti, C.; Colombo, A.; Magni, M.; Mussini, P.; Nisic, F.; Roberto, D.; Ugo, R.; Valore, A.; Valsecchi, A.; Salvatori, P.; Lobello, M. G.; De Angelis F. *Inorg. Chem.* **2013**, *52*, 10723-10725.

33. Functionalized styryl Iridium(III) complexes as active second-order NLO chromophores and building blocks for SHG polymeric films.

Dragonetti, C.; Colombo, A.; Marinotto, D.; Righetto, S.; Roberto, D.; Valore, A.; Escadeillas, M.; Guerchais, V.; Le Bozec, H.; Boucekkine, A.; Latouche, C. *J. Organomet. Chem.* **2014**, *751*, 568-572.

34. An acido-triggered reversible luminescent and nonlinear optical switch based on a substituted styrylpyridine: EFISH measurements as an unusual method to reveal a protonation-deprotonation NLO contrast.

Cariati, E.; Dragonetti, C.; Lucenti, E.; Nisic, F.; Righetto, S.; Roberto, D.; Tordin, E. *Chem. Commun.* **2014**, *50*, 1608-1610.

35. Platinum(II) complexes with cyclometallated 5- π -delocalized-donor-1,3-di(2-pyridyl)benzene ligands as efficient phosphors for NIR-OLEDs.

Nisic, F.; Colombo, A.; Dragonetti, C.; Roberto, D.; Valore, A.; Malicka, J.M.; Cocchi, M.; Freeman, G.R.; Williams, J.A.G. *J. Mat. Chem. C*, **2014**, *2*, 1791-1800.

36. Second-order NLO switches from molecules to polymer films based on photochromic cyclometallated platinum(II) complexes.

Boixel, J.; Guerchais, V.; Le Bozec, H.; Jacquemin, D.; Amar, A.; Boucekkine, A.; Colombo, A.; Dragonetti, C.; Marinotto, D.; Roberto, D.; Righetto, S.; De Angelis, R. *J. Am. Chem. Soc.* **2014**, *136*, 5367-5375.

37. Efficient Copper Mediators Based on Bulky Asymmetric Phenanthrolines for DSSCs.

Colombo, A.; Dragonetti, C.; Magni, M.; Roberto, D.; Demartin, F.; Caramori, S.; Bignozzi, C.A. *ACS Appl. Mater. Interfaces*, **2014**, *6*, 13945-13955.

38. Multifunctional Luminescent Down-Shifting Fluoropolymer Coatings: A Straightforward Strategy to Improve the UV-Light Harvesting Ability and Long-Term Outdoor Stability of Organic Dye-Sensitized Solar Cells.

Griffini, G.; Bella, F.; Nisic, F.; Dragonetti, C.; Roberto, D.; Levi, M.; Bongiovanni, R.; Turri, S. *Adv. Energ. Mat.*, **2015**, *5*, 1401312.

39. Degradation of toxic halogenated organic Compounds by iron-containing mono, bi- and tri-metallic particles in water.

Colombo, A.; Dragonetti, C.; Magni, M.; Roberto, D. *Inorg. Chim. Acta*, **2015**, *431*, 48-60.

40. Neutral N³C³N terdentate luminescent Pt(II) complexes: their synthesis, photophysical properties and bio-imaging application.

Colombo, A.; Fiorini, F.; Septiadi, D.; Dragonetti, C.; Nisic, F.; Valore, A.; Roberto, D.; Mauro, M.; De Cola, L. *Dalton Trans.*, **2015**, *44*, 8478 - 8487.

41. Sequential double second-order nonlinear optical switch by an acido-triggered photochromic cyclometallated platinum(II) complex.

Boixel, J.; Guerchais, V.; Le Bozec, H.; Chantzis, A.; Jacquemin, D.; Colombo, A.; Dragonetti, C.; Marinotto, D.; Roberto, D. *Chem. Comm.*, **2015**, *51*, 7805-7808.

42. **Highly efficient acido-triggered reversible luminescent and nonlinear optical switch based on 5- π -delocalized-donor-1,3-di(2-pyridyl)benzenes.**
Nisic, F.; Colombo, A.; Dragonetti, C.; Fontani, M.; Marinotto, D.; Righetto, S.; Roberto, D.; Williams, J.A.G. *J. Mater. Chem. C*, **2015**, *3*, 7421-7427.
43. **Two-photon absorption properties and $^1\text{O}_2$ generation ability of Ir complexes: unexpected large cross section of $[\text{Ir}(\text{CO})_2\text{Cl}(4\text{-}(para\text{-}di\text{-}n\text{-}butylaminostyryl)pyridine)]$.**
Colombo, A.; Dragonetti, C.; Roberto, D.; Valore, A.; Ferrante, C.; Fortunati, I.; Picone, A.L.; Todescato, F.; Williams, J.A.G. *Dalton Trans*, **2015**, *44*, 15712-15720.
44. **Novel Fullerene Platinum Alkynyl Complexes with High Second Order Nonlinear Optical Properties as a Springboard for NLO-Active Polymer Films.**
Dragonetti, C.; Colombo, A.; Fontani, M.; Marinotto, D.; Nisic, F.; Righetto, S.; Roberto, D.; Tintori, F.; Fantacci, S. *Organometallics*, **2016**, *35*, 1015-1021.
45. **Tetracoordinated Bis-phenanthroline Copper-Complex Couple as Efficient Redox Mediators for Dye Solar Cells.**
Magni, M.; Giannuzzi, R.; Colombo, A.; Cipolla, M. P.; Dragonetti, C.; Caramori, S.; Carli, S.; Grisorio, R.; Suranna, G. P.; Bignozzi, C. A.; Roberto, D.; Manca, M. *Inorg. Chem.* **2016**, *55*, 5245-5253.
46. **Versatile copper complexes as a convenient springboard for both dyes and redox mediators in dye sensitized solar cells.**
Magni, M.; Biagini, P.; Colombo, A.; Dragonetti, C.; Roberto, D.; Valore, A. *Coord. Chem. Rev.* **2016**, *322*, 69-93.
47. **Contrasted Photochromic and Luminescent Properties in Dinuclear Pt(II) Complexes Linked Through a Central Dithienylethene Unit.**
Boixel, J.; Zhu, Y.; Le Bozec, H.; Benmensour, M.A.; Boucekkine, A.; Wong, K. M.-C.; Colombo, A.; Roberto, D.; Guerchais, V.; Jacquemin, D. *Chem. Commun.* **2016**, *52*, 9833-9836.
48. **Tuning the dipolar second-order nonlinear optical properties of 5- π -delocalized-donor-1,3-di(2-pyridyl) benzenes, related cyclometallated platinum(II) complexes and methylated salts.**
Nisic, F.; Cariati, E.; Colombo, A.; Dragonetti, C.; Fantacci, S.; Garoni, E.; Lucenti, E.; Righetto, S.; Roberto, D.; Williams, J. A. G. *Dalton Trans.* **2017**, *46*, 1179-1185.
49. **Coupling of Zinc Porphyrin Dyes and Copper Electrolytes: A Springboard for Novel Sustainable Dye-Sensitized Solar Cells.**
Colombo, A.; Di Carlo, G.; Dragonetti, C.; Magni, M.; Orbelli Biroli, A.; Pizzotti, M.; Roberto, D.; Tessore, F.; Benazzi, E.; Bignozzi, C. A.; Casarin, L.; Caramori, S. *Inorg. Chem.* **2017**, *56*, 14189-14197.
50. **Design of cyclometallated 5- π -delocalized donor-1,3-di(2-pyridyl)benzene platinum(II) complexes with second-order nonlinear optical properties.**
Baggi, N.; Garoni, E.; Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D.; Boixel, J.; Guerchais, V.; Fantacci, S. *Polyhedron*, **2018**, *140*, 74-77.
51. **A novel multifunctional cyclometallated iridium(III) complex with interesting second-order nonlinear optical properties and two-photon absorption activity.**
Colombo, A.; Garoni, E.; Dragonetti, C.; Righetto, S.; Roberto, D.; Baggi, N.; Escadeillas, M.; Guerchais, V.; Kamada, K. *Polyhedron*, **2018**, *140*, 116-121.
52. **Intriguing C-H \cdots Cu interactions in bis-(phenanthroline)Cu(I) redox mediators for dye-sensitized solar cells.**
Colombo, A.; Ossola, R.; Magni, M.; Roberto, D.; Jacquemin, D.; Castellano, C.; Demartin, F.; Dragonetti, C. *Dalton Trans.* **2018**, *47*, 1018-1022.
53. **Coupling of a Copper Dye with a Copper Electrolyte: a Fascinating Springboard for Sustainable Dye-Sensitized Solar Cells.**
Dragonetti, C.; Magni, M.; Colombo, A.; Melchiorre, F.; Biagini, P.; Roberto, D. *ACS Appl. Energy Mater.*, **2018**, *1*, 751-756.
54. **Bis(1,10-phenanthroline) copper complexes with tailored molecular architecture: from electrochemical features to application as redox mediators in dye-sensitized solar cells.**

Benazzi, E.; Magni, M.; Colombo, A.; Dragonetti, C.; Caramori, S.; Bignozzi, C. A.; Grisorio, R.; Suranna, G. P.; Cipolla, M. P.; Manca, M.; Roberto, D. *Electrochimica Acta*, **2018**, *271*, 180-189.

55. Photochromic DTE-Substituted-1,3-di(2-pyridyl)benzene Platinum(II) Complexes: Photo-modulation of Luminescence and Second-order Nonlinear Optical Properties.

Zhao, H.; Garoni, E.; Roisnel, T.; Colombo, A.; Dragonetti, C.; Marinotto, D.; Righetto, S.; Roberto, D.; Jacquemin, D.; Boixel, J.; Guerchais, V. *Inorg. Chem.* **2018**, *57*, 7051-7063.

56. Controlling the emission in flexibly-linked (N⁺C⁻N)platinum dyads.

Garoni, E.; Boixel, J.; Doucet, V.; Roisnel, T.; Roberto, D.; Jacquemin, D.; Guerchais, V. *Dalton Trans.*, **2018**, *47*, 224-232

57. An investigation on the second-order nonlinear optical response of cationic bipyridine or phenanthroline iridium(III) complexes bearing cyclometallated 2-phenylpyridines with a triphenylamine substituent.

Hierlinger, C.; Bradford Cordes, D.; Slawin, A.; Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D.; Jacquemin, D.; Zysman-Colman, E.; Guerchais, V. *Dalton Trans.* **2018**, *47*, 8292-8300.

58. Zinc(II) as a versatile template for efficient dipolar and octupolar second-order nonlinear optical molecular materials.

Di Bella, S.; Colombo, A.; Dragonetti, C.; Righetto, S.; Roberto, D. *Inorganics* **2018**, *6*, Article number 133.

59. Novel cyclometallated 5- π -delocalized donor-1,3-di(2-pyridyl)benzene platinum(II) complexes with good second-order nonlinear optical properties.

Fontani, M.; Garoni, E.; Colombo, A.; Dragonetti, C.; Fantacci, S.; Doucet, H.; Soulé, J.-F.; Boixel, J.; Guerchais, V.; Roberto, D. *Dalton Trans.* **2019**, *48*, 202-208.

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