

CURRICULUM VITAE ET STUDIORUM: PROF. Gianantonio Battistuzzi



Personal data: Born in Modena (Mo), 25th October 1967

Present Position: Associate Professor of General and Inorganic Chemistry

Address: Via G. Campi 103, 41125, Modena. Phone: +39 0592058639

Email: gianantonio.battistuzzi@unimore.it

Web site: <http://www.researchgroup-chemistry.unimore.it/Sola/solagrouplinks2009.html>

ResearchID: <http://www.researcherid.com/rid/L-7183-2015>

ORCID ID: <https://orcid.org/0000-0003-4716-5745>

EDUCATION

- **December 1991** Degree in Chemistry (summa cum laude) at the University of Modena with a thesis entitled 'Gli α -amminoacidi mostrano attività sinergica per il legame dello ione Fe^{3+} e di altri ioni bi- e tri-positivi alle transferrine. Evidenze spettroscopiche', under the supervision of Prof. Giancarlo Pellacani and Dr. Marco Sola.
- **October 1996** Ph.D. in Chemistry at the Universities of Modena/Parma with a thesis entitled 'Caratterizzazione Spettroscopica ed Elettrochimica di Metallo-Proteine e Sistemi Modello.' under the supervision of Prof. Monica Saladini and Prof. Marco Sola.

VISITS AND STAYS

- **March - August 1996** Visiting scientist at the University of Münster, Germany

PREVIOUS POSITIONS AND FELLOSHIPS

- **From January 1997 to December 1998** Postdoctoral position at the Department of Chemistry of the University of Modena.
- **From January 1999 to October 1999.** Lecturer of Chemistry at the Department of Chemistry of the University of Modena and Reggio Emilia.
- **From November 1999 to September 2001.** Assistant Professor of General and Inorganic Chemistry at the Department of Chemistry of the University of Modena and Reggio Emilia.
- **From October 2001 to present date.** Associate Professor of General and Inorganic Chemistry at the Department of Chemistry and Geology (former Department of Chemistry) of the University of Modena and Reggio Emilia.

MEMBERSHIPS AND APPOINTMENTS

- Chair of the Emilia Romagna Section of the Società Chimica Italiana January 2021-January 2024.
- Member of the Division of Inorganic Chemistry and of the Division of Chemistry of Biological Systems of the Italian Chemical Society.
- Member of the Society of Biological Inorganic Chemistry.
- Member of the Doctorate School in Chemistry of the University of Modena and Reggio Emilia (from the academic year 1999/2000 to 2005/2006)
- Member of the Doctorate School 'M2SCS-Multiscale Modelling, Computational Simulations and Characterization in Material and Life Sciences' of the University of Modena and Reggio Emilia (from the academic year 2006/2007 to 2013/2014)
- Member of the Doctorate School 'M3ES - PhD Course in Models and Methods for Materials and Environmental Sciences of the University of Modena and Reggio Emilia (from the academic year 2014/2015)

ACADEMIC DUTIES

- Head of the Department of Chemical and Geological Sciences, University of Modena and Reggio Emilia, from November 2021
- President of the Degree Course in Chemistry and Chemical Sciences Academic Years 2018/19 – 2020-21.
- Supervisor of the Piano (ex-Progetto) nazionale Lauree Scientifiche – Area Chimica (PLS – National Plan for Scientific Degrees - Chemistry) for the University of Modena and Reggio Emilia Academic Years 2008/09 – 2020/21

ORGANISATION OF SCIENTIFIC MEETINGS AND SCHOOLS

- Member of the Scientific committee of the workshop “International Workshop on Protein Electron Transfer: from Fundamentals to Applications for Health – ET4HEALTH 2013”, Modena, 29-30 October 2013.
- Member of the Organizing Committee of the congress “XXX Congresso di Nazionale Chimica Inorganica”, Modena, 15-19 September 2002
- Supervisor of Professional updating courses for high school chemistry teachers entitled
 1. “Nuovi Argomenti, Esperienze e Metodi Didattici nell’Insegnamento della Chimica (New topics, experiences and teaching methods for high school chemistry teaching)” from the academic year 2006/2007.
 2. “Nuovi approcci all’insegnamento della chimica per la riduzione della dispersione scolastica (New approaches in high school chemistry teaching to reduce school drop out rates)” from the academic year 2016/2017.

FUNDING AND PROJECTS

- Fondo di Ateneo per la Ricerca 2022 (FAR2022 UNIMORE) – Progetto di Ricerca Interdisciplinare Mission Oriented “Cobalt-substituted globins as catalysts for electrochemical hydrogen production – CONCEALED”, Principal Investigator (P.I.).
- PRIN 2020 “SEAfood WASTE Valorization by oxidative metalloEnzymes (SEA-WAVE)”, Research Group Member
- Piano nazionale Lauree Scientifiche - Area Chimica (PLS - National Plan for Scientific Degrees - Chemistry) for the University of Modena and Reggio Emilia, academic year 2020/2021
- Piano nazionale Lauree Scientifiche - Area Chimica (PLS - National Plan for Scientific Degrees - Chemistry) for the University of Modena and Reggio Emilia, academic year 2018/2019
- Piano nazionale Lauree Scientifiche - Area Chimica (PLS - National Plan for Scientific Degrees - Chemistry) for the University of Modena and Reggio Emilia from the academic year 2015/2016 to 2017/2018.
- Piano nazionale Lauree Scientifiche – Area Chimica (PLS – National Plan for Scientific Degrees - Chemistry) for the University of Modena and Reggio Emilia, academic year 2013-2014
- Piano nazionale Lauree Scientifiche – Area Chimica (PLS – National Plan for Scientific Degrees - Chemistry) for the University of Modena and Reggio Emilia, academic year 2012-2013
- Piano nazionale Lauree Scientifiche – Area Chimica (PLS – National Plan for Scientific Degrees - Chemistry) for the University of Modena and Reggio Emilia from the academic year 2010/2011 to 2011-2012
- Progetto Lauree Scientifiche – Area Chimica (PLS – Project for Scientific Degrees - Chemistry) for the University of Modena and Reggio Emilia, academic year 2008/2009
- Finanziamento Fondazione Cassa di Risparmio di Modena (2008) “Superfici nano-strutturate per dispositivi del tipo “Lab-On-a-Chip” (Nano-structured surfaces for “Lab-On-a-Chip” devices)”, Research Group Member

- PRIN 2007 “Sviluppo di biosensori elettrochimici di terza generazione basati su eme-proteine ingegnerizzate e sintetiche (Development of third generation electrochemical sensors based on recombinant and synthetic heme proteins), Research Group Member
- Marie Curie Research Training Networks EdRox: training and research in redox enzymology. Research Group Member
- PRIN 2003 “Termodinamica del processo redox in metalloproteine di trasporto elettronico e metalloenzimi (Redox thermodynamics in ET metalloproteins and metalloenzymes), Research Group Member
- Finanziamento Fondazione Cassa di Risparmio di Modena (2002) “Stress ossidativo e morte cellulare programmata. Studio integrato chimico-biotecnologico-computazionale di proteine antiossidanti e di trasporto elettronico (Oxidative stress and programmed cell death. An integrated chemical-biotechnological-computational study of ET and antioxidant proteins)”, Research Group Member
- European COST Network 2001 “Heterogeneous Electron Transfer”, Research Group Member
- C.N.R. Project 1999 “Termodinamica del processo redox e degli equilibri conformazionali in citocromi c mitocondriali e batterici (Thermodynamics of ET and of conformational equilibria in mitochondrial and bacterial cytochromes c)”, Research Group Member
- C.N.R. Project 1998 “Studi elettrochimici di citocromi c mitocondriali e batterici (Electrochemical study of mitochondrial and bacterial cytochromes c)”, Research Group Member
- Progetto di ricerca orientata 1998 –Università di Modena e Reggio Emilia “Organizzazione molecolare e riconoscimento tra partners in complessi proteici di trasferimento elettronico (Organization and molecular recognition in ET protein complexes”, Research Group Member
- Progetto Giovani Ricercatori 1999 (Young Researchers Project 1999) - Università di Modena e Reggio Emilia “Studio delle proprietà redox e del meccanismo di azione di metallo-enzimi con funzione antiossidante (Redox properties and catalytic mechanisms of antioxidant redox metalloenzymes)” Principal Investigator.
- PRIN 1998 “Proprietà redox e di riconoscimento molecolare in metalloproteine di trasporto elettronico e proteine RNA-binding e sistemi di mobilizzazione di metalli (Redox properties and molecular recognition in ET and RNA-binding metalloproteins and metal mobilization systems)”, Research Group Member

ACTIVITIES IN REFERRED SCIENTIFIC JOURNALS.

- Associate Editor of Frontiers in Molecular Biosciences (Protein Biochemistry for Basic and Applied Sciences)
- Member of the Editorial Board of Molecules
- Guest Editor for two Special Issues of Molecules (Electrochemical Biosensors: Design and Applications; Multifaceted Role of Metalloproteins).
- Reviewer for Journal of the American Chemical Society, Journal of Inorganic Biochemistry, Metallomics, Biochimica Biophysica Acta - Proteins and Proteomics, Journal of Biological Inorganic Chemistry, Journal of Molecular Structure, Archives of Biochemistry and Biophysics, Bioelectrochemistry, Computational and Structural Biotechnology Journal, Materials Chemistry and Physics, Biochemistry, Biomacromolecules, Molecules, Antioxidant.

SELECTED INVITED PRESENTATIONS

- “Engineered metalloproteins for electrochemical sensing devices”, Department of Chemistry, Division of Biochemistry, BOKU – University of Natural Resources and Applied Life Sciences, Vienna, Austria, 29 May 2009
- “Elementi inorganici e biologia: un ossimoro vitale”, XIX Giornata della Chimica dell'Emilia Romagna, Department of Chemistry and Geology and Department of Life Sciences, University of Modena and Reggio Emilia, 6 December 2019

AWARDS

- **2013:** National Scientific Enabling (ASN) for the position of full professor in the sector General and Inorganic Chemistry (03/B1)
- **2022:** National Scientific Enabling (ASN) for the position of full professor in the sector General and Inorganic Chemistry (03/B1)

SUPERVISION OF PhD STUDENTS AND POSTDOCTORAL FELLOWS

- **2001-2004.** Supervisor of one Ph.D. Student, Dr. Alan Leonardi working on a thesis entitled ‘Studio del rapporto struttura-funzione in metallo-proteine native e ricombinanti (Investigation of the structure-function relationship in native and recombinant metalloproteins)’.
- **2011-2014.** Supervisor of one Ph.D. Student, Dr. Licia Paltrinieri working on a thesis entitled ‘Investigation of the effects of the environment on the dynamics/function relationship in metallo-proteins’.
- **2011-2014.** Co-supervisor of one Ph.D. Student of the Doctorate School “BioToP Biomolecular Technology of Proteins” at the University of Natural Resources and Applied Life Sciences (BOKU) of Vienna, Dr. Stefan Hofbauer working on a thesis entitled ‘Investigation of the effects of the environment on the dynamics/function relationship in metallo-proteins’.

TEACHING ACTIVITIES

- Teacher of the course: Laboratory of Inorganic Chemistry at the master of science in Chemistry, University of Modena and Reggio Emilia (from the academic years 1999-2000 to 2001-2002)
- Teacher of the course: Chemistry Chemistry at the Post-graduate School of Teacher Training, University of Modena and Reggio Emilia (from the academic years 2001-2002 to 2006-2007)
- Teacher of the course: Chemistry of Inorganic Materials at the master of science in Chemistry, University of Modena and Reggio Emilia (from the academic years 2002-2003 to 2009-2010 and 2012-2013 to 2014-2015)
- Teacher of the course: Inorganic Chemistry II at the master of science in Chemistry, University of Modena and Reggio Emilia (from the academic years 2010-2011 to 2011-2012)
- Teacher of the course: General and Inorganic Chemistry at the master of science in Chemistry, University of Modena and Reggio Emilia (from the academic years 2002-2003 to 2018-2019)
- Teacher of the course: Laboratory of Inorganic Synthesis at the master of science in Chemical Science, University of Modena and Reggio Emilia (from the academic years 2003-2004 to 2004-2005)
- Teacher of the course: Laboratory of Advanced Inorganic Chemistry at the master of science in Chemical Science, University of Modena and Reggio Emilia (from the academic years 2005-2006 to 2006-2007)
- Teacher of the course: Bioinorganic Chemistry at the master of science in Chemical Science, University of Modena and Reggio Emilia (from the academic years 2004-2005 to 2018-2019).
- Teacher of the course: Structural Biology at the master of science in Biotechnology, University of Modena and Reggio Emilia (from the academic years 2002-2003 to 2005-2006)

MAJOR COLLABORATIONS

- Prof. Marco Sola, University of Modena and Reggio Emilia, Italy
- Prof. Marco Borsari, University of Modena and Reggio Emilia, Italy
- Prof. Christian Obinger, BOKU – University of Natural Resources and Applied Life Sciences, Vienna, Austria
- Prof. Gerard Canters, Leiden University, The Netherlands

- Prof. Christopher Dennison, University of Newcastle, UK
- Prof. Claudio Luchinat, Università di Firenze, Italy
- Prof. James Cowan, Ohio State University, Columbus, USA
- Prof. Luigi Casella, Università di Pavia, Italy

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITY

Gianantonio Battistuzzi works in the field of Bioinorganic Chemistry and is mainly interested in understanding the molecular determinants of the structural and functional properties of electron transfer (ET) metalloproteins (cytochromes *c*, blue-copper proteins and FeS proteins) and of redox metalloenzymes (heme peroxidases and copper oxidases). More recently, he started to study the behavior of native and mutated mitochondrial cytochromes *c* immobilized on inorganic surfaces, to explore the possibility of using them as constituents of protein-based nano-bio-sensors. The research activity of Gianantonio Battistuzzi is based on spectroscopic (UV-vis, NMR, CD, MCD and fluorescence), voltammetric and spectroelectrochemical techniques, supported by a computational calculations, applied to native and mutated ET proteins and redox enzymes. The research group to which Gianantonio Battistuzzi belongs significantly contributed to the application of voltammetric techniques to the characterization of the redox properties of ET metalloproteins and introduced spectroelectrochemical techniques to analyze the reduction thermodynamics of redox metalloenzymes. Gianantonio Battistuzzi is co-author of 115 scientific papers published on peer-reviewed high-impact factors scientific journals and of more than 65 communications (presented either orally or as posters) in national and international scientific meetings.

OTHER INFORMATION

BIBLIOMETRIC INDICATORS AND SCIENTIFIC PRODUCTION

Total number of publications in scientific journals: 132

Total number of book chapters: 1

Total number of other publications: 16

Total number of citations: 3338 (Scopus) and 3205 (WOS)

h-index: 32 (Scopus) and 32 (WOS)

PUBLIC ENGAGEMENT

Gianantonio Battistuzzi is heavily involved in public engagement activities, organizing and conducting scientific seminars for high school students and teachers and public exhibitions in the framework of the “European Researchers’ Night” and the “Festival della Filosofia (Philosophy Festival)”

LIST OF SCIENTIFIC PUBLICATIONS ON INTERNATIONAL JOURNALS WITH IF.

1. G. Battistuzzi and M. Sola “Fe³⁺ binding to ovotransferrin in the presence of α -aminoacids” *Biochim. Biophys Acta* 1992, 1118, 313-317. DOI: 10.1016/0167-4838(92)90290-T
2. M. Borsari, R. Battistuzzi and G. Battistuzzi “Preparation spectroscopic, magnetic, conductometric and polarographic characterization of cobalt(II)-1-phenyl-4,6-dimethylpyrimidine-2-thione complexes” *Collect. Czech. Chem. Commun.* 1993, 58, 1569-1590. DOI: 10.1135/cccc19931569.
3. G. Battistuzzi, G. Gavioli, M. Borsari, L. Menabue, M. Saladini and M. Sola “Pd²⁺ complexes of N-sulfonyl amino acids. Part 2. Coordination behavior in strongly acidic conditions.” *J.C.S. Dalton Transactions* 1994, 279-283. DOI: 10.1039/dt9940000279
4. G. Battistuzzi, E. Gozzoli, M. Borsari, L. Menabue, M. Saladini and M. Sola “Pd²⁺ complexes of N-sulphonyl amino acids. Part 3. Ternary adducts with 2,2'-bipyridine” *J.C.S. Dalton Transactions* 1994, 285-287. DOI: 10.1039/dt9940000285

5. G. Battistuzzi, M. Borsari, F. Capozzi, C. Luchinat and M. Sola "Influence of Surface Charges on Redox Properties in High Potential Iron-Sulfur Proteins" *Biochem. Biophys. Res. Comm.* 1994, 203, 436-442. DOI: 10.1006/bbrc.1994.2201
6. G. Battistuzzi, M. Borsari, D. Dallari and R. Battistuzzi "Synthesis, Spectroscopic, Magnetic, Conductometric and Electrochemical Investigation of Nickel (II)-1-phenyl-4,6-dimethylpyrimidine-2-thione Complexes" *Trans. Met. Chem.* 1995, 20, 212-219.
7. G. Battistuzzi, L. Calzolari, L. Messori and M. Sola "Metal Induced Conformational Heterogeneity of Transferrins: a Spectroscopic Study of Indium (III) and Other Metal (III) Substituted Transferrins" *Biochem. Biophys. Res. Comm.* 1995, 206, 161-170. DOI: 10.1006/bbrc.1995.1023
8. G. Battistuzzi, S. Ferretti, C. Luchinat and M. Sola "Polymetallic Hydrolytic Zinc Enzymes. Probing the Site of Nuclease P1 through Cobalt(II) Substitution" *Inorg. Chim. Acta* 1995, 234, 9-11. DOI: 10.1016/0020-1693(95)04619-K
9. G. Battistuzzi, M. Borsari, S. Ferretti, C. Luchinat and M. Sola "Magnetic Resonance of Fe-S Clusters: Isolation and Characterization of a 7-Fe Ferredoxin from *Rhodospseudomonas palustris*" *Arch. Biochem. Biophys.* 1995, 320, 149-154. DOI: 10.1006/abbi.1995.1353
10. G. Battistuzzi, M. Borsari, S. Ferretti, M. Sola and E. Soliani "Cyclic voltammetry and ¹H NMR of *Rhodospseudomonas palustris* Cytochrome c₂. pH dependent conformational states" *Eur. J. Biochem.* 1995, 232, 206-213. DOI: 10.1111/j.1432-1033.1995.tb20800.x
11. G. Battistuzzi, M. Borsari, D. Dallari, S. Ferretti, and M. Sola "Cyclic voltammetry and ¹H NMR of *Rhodospseudomonas palustris* Cytochrome c₂. Probing the chemistry of surface charges through anion binding studies" *Eur. J. Biochem.* 1995, 233, 335-339. DOI: 10.1111/j.1432-1033.1995.335_1.x
12. G. Battistuzzi, M. Borsari, L. Menabue, M. Saladini and M. Sola "Amide group coordination to the Pb²⁺ ion" *Inorg. Chem.* 1996, 35, 4239-4247. DOI: 10.1021/ic950599h
13. G. Battistuzzi, M. Borsari and M. Sola "Effects of pH, ionic composition of the medium and temperature on the redox properties of electron carrier metalloproteins studied through voltammetric techniques. Cytochromes c as an example" *Trends Inorg. Chem.*, 1996, 4, 1-8.
14. G. Battistuzzi, M. Borsari, D. Dallari, I. Lancellotti and M. Sola "Anion binding to mitochondrial cytochromes c studied through electrochemistry. Effects of the neutralization of surface charges on the redox potential." *Eur. J. Biochem.*, 1996, 241, 208-214. DOI: 10.1111/j.1432-1033.1996.0208t.x
15. G. Battistuzzi, M. Borsari and R. Battistuzzi "Redox Interconversion of [ReVO]³⁺ ⇌ [Re(III)]³⁺ Centers in Octahedral 4,6-Dimethyl-Pyrimidine-2-Thiolate/Triphenylphosphine Rhenium(V) and Rhenium(III) Mixed Complexes" *Polyhedron*, 1997, 16, 2093-2104. DOI: 10.1016/S0277-5387(96)00505-0
16. G. Battistuzzi, M. Borsari and M. Sola "Anion Binding to cytochrome c₂. Implications on Protein-Ion in Class I Cytochromes c" *Arch. Biochem. Biophys.*, 1997, 339, 283-290. DOI: 10.1006/abbi.1996.9862
17. G. Battistuzzi, M. Dietrich, R. Löcke and H. Witzel "Evidence for a Conserved Binding Motif of the Dinuclear Metal Site in Mammalian and Plant Purple Acid Phosphatases. ¹H NMR Studies of the DiironDerivative of the Fe(III)Zn(II)-Enzyme from Kidney Bean." *Biochemical J.*, 1997, 323, 593-596. DOI: 10.1042/bj3230593
18. G. Battistuzzi, M. Borsari, L. Loschi and M. Sola "Redox thermodynamics, acid base equilibria and salt-induced effects for the cucumber basic protein. General implications on blue-copper proteins" *J. Biol. Inorg. Chem.*, 1997, 2, 350-359. DOI: 10.1007/s007750050142
19. G. Battistuzzi, M. Borsari, M. Sola and F. Francia "Redox Thermodynamics of the Native and Alkaline Forms of Eukariotic and Bacterial Class I Cytochromes c" *Biochemistry*, 1997, 36, 16247-16258. DOI: 10.1021/bi971535g
20. A. Bavoso, A. Ostuni, G. Battistuzzi, L. Menabue, M. Saladini, and M. Sola "Metal ion binding to a zinc finger peptide containing the Cys-X₂-Cys-X₄-His-X₄-Cys domain of a nucleic acid

- binding protein encoded by the *Drosophila* Fw-element” *Biochem. Biophys. Res. Comm.*, 1998, 242, 385-389. DOI: 10.1006/bbrc.1997.7974
21. G. Battistuzzi, M. Borsari, G. Rossi and M. Sola “Solvent effects on the redox properties of cytochrome c. Cyclic voltammetry and ¹H NMR experiments in mixed water/dimethylsulphoxide solutions” *Inorg. Chim. Acta*, 1998, 272, 168-175. DOI: 10.1016/S0020-1693(97)05937-9
 22. G. Battistuzzi, M. Borsari, L. Menabue, M. Saladini and M. Sola “Palladium(II) complexes of N-sulfonyl-asparagine and glutamine. Evidence for the metal coordination of deprotonated amide nitrogen of the side-chain” *Inorg. Chim. Acta*, 1998, 273, 397-402. DOI: 10.1016/S0020-1693(97)06026-X
 23. G. Battistuzzi, M. Borsari, L. Loschi and M. Sola “Redox properties of the Basic Blue Protein (Plantacyanin) from Spinach” *J. Inorg. Biochem.*, 1998, 69, 97-100. DOI: 10.1016/S0162-0134(97)10026-5
 24. G. Battistuzzi, A. Bonamartini Corradi, D. Dallari, M. Saladini and R. Battistuzzi “Synthesis, Crystal and Molecular Structure, Spectroscopic and Electrochemical Studies of $\square$ -oxo-bis{oxo-bis(4,6-dimethylpyrimidine-2-thiolate)rhenium(V)} Complex” *Polyhedron*, 1998, 18, 57-63. DOI: 10.1016/S0277-5387(98)00267-8
 25. G. Battistuzzi, M. Borsari, L. Loschi, F. Righi and M. Sola “Redox Thermodynamics of Blue Copper Proteins.” *J. Am. Chem. Soc.*, 1999, 121, 501-506. DOI: 10.1021/ja982126q
 26. G. Battistuzzi, M. Borsari, J. A. Cowan, C. Eicken, L. Loschi and M. Sola “Redox Chemistry and Acid-Base Equilibria of Mitochondrial Plant Cytochromes c” *Biochemistry*, 1999, 38, 5553-5562. DOI: 10.1021/bi982429x
 27. G. Battistuzzi, M. Borsari, L. Loschi, A. Martinelli and M. Sola “Thermodynamics of the Alkaline Transition of Cytochrome c” *Biochemistry*, 1999, 38, 7900-7907. DOI: 10.1021/bi983060e
 28. G. Battistuzzi, L. Loschi and M. Sola “¹H NMR of Oxidized Blue Copper Proteins” *J. Inorg. Biochem.*, 1999, 75, 153-157. DOI: 10.1016/S0162-0134(99)00053-7
 29. G. Battistuzzi, M. Borsari, L. Loschi and M. Sola “Effects of nonspecific ion-protein interactions on the redox chemistry of cytochrome c” *JBIC J. Biol. Inorg. Chem.*, 1999, 4, 601-607. DOI: 10.1007/s007750050383
 30. G. Battistuzzi, M. D'Onofrio, M. Borsari, M. Sola, A. L. Macedo, J. J. G. Moura and P. Rodrigues “Redox Thermodynamics of Low-Potential Iron-Sulfur Proteins” *JBIC J. Biol. Inorg. Chem.*, 2000, 5, 748-760. DOI: 10.1007/s007750000164
 31. G. Battistuzzi, M. Cannio and R. Battistuzzi “Synthesis, Magnetic, Spectroscopic and Electrochemical Studies of Mixed Pyrimidine-2-thiolate/triphenylphosphine Rhenium(V) and Rhenium (III) Complexes” *Polyhedron*, 2000, 19, 2163-2170. DOI: 10.1016/S0277-5387(00)00517-9
 32. G. Battistuzzi, M. Borsari, L. Loschi, A. Ranieri, M. Sola, B. Mondovì and A. Marchesini “Redox Properties and Acid-Base Equilibria of Zucchini Mavicyanin.” *J. Inorg. Biochem.*, 2001, 83, 223-227. DOI: 10.1016/S0162-0134(00)00193-8
 33. G. Battistuzzi, M. Borsari, A. Ranieri and M. Sola “Effects of Specific Anion-Protein Binding on the Alkaline Transition of Cytochrome c”, *Arch. Biochem. Biophys.*, 2001, 386, 117-122. DOI: 10.1006/abbi.2000.2183
 34. G. Battistuzzi, M. D'Onofrio, L. Loschi and M. Sola “Isolation and Characterization of two Peroxidases from *Cucumis sativus*”, *Arch. Biochem. Biophys.*, 2001, 388, 100-112. DOI: 10.1006/abbi.2001.2281
 35. G. Battistuzzi, M. Borsari and M. Sola “Redox Properties of Cytochrome c”, *ARS, Antioxidant and Redox Signaling*, 2001, 3, 279-291. DOI: 10.1089/152308601300185232
 36. G. Battistuzzi, M. Borsari, L. Loschi, M. C. Menziani, F. De Rienzo and M. Sola “Control of Metalloprotein Reduction Potential: the Role of Electrostatic and Solvation Effects Probed on Plastocyanin Mutants.” *Biochemistry*, 2001, 40, 6422-6430. DOI: 10.1021/bi002565d

37. G. Battistuzzi, M. Borsari, G. W. Canters, E. de Waal, L. Loschi, G. Warmerdam and M. Sola "Enthalpic and Entropic Contributions to the Mutational Changes in the Reduction Potential of Azurin." *Biochemistry*, 2001, 40, 6707-6712. DOI: 10.1021/bi010333o
38. G. Battistuzzi, M. Cannio, M. Saladini and R. Battistuzzi "Synthesis, crystal and molecular structure, spectroscopic and electrochemical studies of trichloro-oxo(4,6-dimethylpyrimidine-2(1H)-thione)(triphenylphosphine oxide) rhenium(V) complex." *Inorg. Chim. Acta*, 2001, 320, 178-183. DOI: 10.1016/S0020-1693(01)00478-9
39. G. Battistuzzi, M. Borsari and M. Sola "Medium and Temperature Effects on the Redox Chemistry of Cytochrome c." *Eur. J. Inorg. Chem.*, 2001, 2989-3004.
40. R. Battistuzzi, G. Battistuzzi, M. Borsari, and M. Cannio "Coordination chemistry of thio- and oxo-pyrimidine derivatives " *Trends Inorg. Chem.*, 2001, 7, 151-166.
41. G. Battistuzzi, M. Borsari, A. Ranieri and M. Sola "Redox thermodynamics of the $\text{Fe}^{3+}/\text{Fe}^{2+}$ couple in horseradish peroxidase and its cyanide complex" *J. Am. Chem. Soc.*, 2002, 124, 26-27. DOI: 10.1021/ja017188m
42. G. Battistuzzi, M. Borsari, J. A. Cowan, A. Ranieri and M. Sola "Control of Cytochrome c Redox Potential: Axial Ligation and Protein Environment Effects" *J. Am. Chem. Soc.*, 2002, 124, 5315-5324. DOI: 10.1021/ja017479v
43. G. Battistuzzi, M. Borsari, A. Ranieri and M. Sola "Conservation of the free energy change of the alkaline isomerization in mitochondrial and bacterial cytochromes c.", *Arch. Biochem. Biophys.*, 2002, 404, 227-233. DOI: 10.1016/S0003-9861(02)00283-7
44. G. Battistuzzi and M. Sola "A Comparison of the Inner-Sphere Reorganization Energies of Cytochromes, Iron-Sulfur Clusters and Blue Copper Proteins" *Chemtracts-Inorganic Chemistry* 2002, 15, 424-429.
45. G. Battistuzzi, M. Borsari, G. W. Canters, E. de Waal., A. Leonardi, A. Ranieri and M. Sola "Thermodynamics of the Acid Transition in Blue Copper Proteins" *Biochemistry*, 2002, 41, 14293-14298. DOI: 10.1021/bi026564s
46. G. Battistuzzi, M. Bellei, M. Borsari, G. W. Canters, E. de Waal., Lars J. C. Jeuken, A. Ranieri and M. Sola "Control of Metalloprotein Reduction Potential: Compensation Phenomena in the Reduction Thermodynamics of Blue Copper Proteins" *Biochemistry*, 2003, 42, 9214-9220. DOI: 10.1021/bi034585w
47. G. Battistuzzi, G. Di Rocco, A. Leonardi, and M. Sola " ^1H NMR of native and azide-inhibited laccase from *Rhus vernicifera*" *J. Inorg. Biochem.*, 2003, 96, 503-506. DOI: 10.1016/S0162-0134(03)00277-0
48. G. Battistuzzi and M. Sola "Metal-Ligand Interplay in Blue Copper Proteins Studied by ^1H NMR Spectroscopy: Cu(II)-Pseudoazurin and Cu(II)-Rusticyanin", *Chemtracts-Inorganic Chemistry*, 2003, 16, 461-467.
49. G. Battistuzzi, M. Borsari, G. Di Rocco, A. Ranieri and M. Sola "Enthalpy-Entropy Compensation Phenomena in the Reduction Thermodynamics of Electron Transfer Metalloproteins." *JBIC J. Biol. Inorg. Chem.*, 2004, 9, 23-26. DOI: 10.1007/s00775-003-0490-3.
50. G. Battistuzzi, M. Bellei, C. A. Bortolotti, G. Di Rocco, A. Leonardi and M. Sola "Characterization of the Solution Reactivity of a Basic Heme Peroxidase from *Cucumis sativus*." *Arch. Biochem. Biophys.*, 2004, 423, 317-331. DOI: 10.1016/j.abb.2003.12.036
51. G. Battistuzzi, M. Borsari, A. Ranieri and M. Sola "Solvent-based deuterium isotope effects on the redox thermodynamics of cytochrome c", *JBIC J. Biol. Inorg. Chem.*, 2004, 9, 781-787. DOI: 10.1007/s00775-004-0580-x
52. M. Gerunda, C. A. Bortolotti, A. Alessandrini, M. Sola, G. Battistuzzi and P. Facci "Grabbing yeast iso-1-cytochrome c by Cys 102: an effective approach to the assembling of functionally active metalloprotein carpets." *Langmuir*, 2004, 20, 8812-8816. DOI: 10.1021/la049004y
53. G. Battistuzzi, M. Borsari, G. Di Rocco, A. Leonardi, A. Ranieri, and M. Sola "Electrostatic effects on the thermodynamics of protonation of reduced plastocyanin" *ChemBioChem*, 2005, 6, 692-696. DOI: 10.1002/cbic.200400310

54. G. Battistuzzi, M. Borsari, G. W. Canters, G. di Rocco, E. de Waal, Y. Arendsen, A. Leonardi, A. Ranieri, M. Sola "Ligand-Loop Effects on the Free Energy Change of Redox and pH-Dependent Equilibria in Cupredoxins Probed on Amicyanin Variants" *Biochemistry*, 2005, 44, 9944-9949. DOI: 10.1021/bi050261r
55. G. Battistuzzi, M. Bellei, M. Borsari, G. Di Rocco, A. Ranieri, M. Sola "Axial ligation and polypeptide matrix effects on the reduction potential of heme proteins probed on their cyanide adducts" *JBIC J. Biol. Inorg. Chem.*, 2005, 10, 643-651. DOI: 10.1007/s00775-005-0014-4
56. G. Battistuzzi, M. Bellei, A. Leonardi, R. Pierattelli, A. J. Vila, A. De Candia, M. Sola "Reduction Thermodynamics of the T1 Cu-site in plant and fungal laccases." *JBIC J. Biol. Inorg. Chem.*, 2005, 10, 867-873. DOI: 10.1007/s00775-005-0035-z
57. M. Sola, G. Battistuzzi, M. Borsari "Modulation of the Free Energy of Reduction in Metalloproteins" *Chemtracts-Inorganic Chemistry*, 2005, 18, 73-86.
58. M. Bellei, C. Jakopitsch, G. Battistuzzi, M. Sola, C. Obinger "Redox thermodynamics of the ferric-ferrous couple of wild-type *Synechocystis* KatG and KatG(Y249F)" *Biochemistry*, 2006, 45, 4768-4774. DOI: 10.1021/bi0517943
59. C. A. Bortolotti, G. Battistuzzi, M. Borsari, P. Facci, A. Ranieri, M. Sola "The Redox Chemistry of the Covalently Immobilized Native and Low-pH Forms of Yeast Iso-1-cytochrome c" *J. Am. Chem. Soc.*, 2006, 128, 5444-5451. DOI: 10.1021/ja0573662
60. P. Amodeo, M. A. Castiglione Morelli, A. Ostuni, G. Battistuzzi, A. Bavoso "Structural features in EIAV NCp11: a lentivirus nucleocapsid protein with a short linker" *Biochemistry*, 2006, 45, 5517-5526. DOI: 10.1021/bi0524924
61. G. Battistuzzi, M. Bellei, F. De Rienzo, M. Sola "Redox properties of the $\text{Fe}^{3+}/\text{Fe}^{2+}$ couple in *Arthromyces ramosus* Class II peroxidase and its cyanide adduct" *JBIC J. Biol. Inorg. Chem.*, 2006, 11, 586-592. DOI: 10.1007/s00775-006-0108-7
62. G. Battistuzzi, M. Bellei, M. Zederbauer, P. G. Furtmüller, M. Sola, C. Obinger "Redox thermodynamics of the Fe(III)/Fe(II) couple of human myeloperoxidase in its high-spin and low-spin forms" *Biochemistry*, 2006, 45, 12750-12755. DOI: 10.1021/bi061647k
63. G. Battistuzzi, M. Borsari, F. De Rienzo, G. Di Rocco, A. Ranieri, M. Sola "Free energy of transition for the individual alkaline conformers of yeast iso-1-cytochrome c" *Biochemistry*, 2007, 46, 1694-1702. DOI: 10.1021/bi061961e
64. M. Zederbauer, P. G. Furtmüller, M. Bellei, J. Stampler, C. Jakopitsch, G. Battistuzzi, N. Moguilevsky, C. Obinger "Disruption of the aspartate to heme ester linkage in human myeloperoxidase: Impact on ligand binding, redox chemistry and interconversion of redox intermediates" *J. Biol. Chem.*, 2007, 282, 17041-17052. DOI: 10.1074/jbc.M610685200
65. G. Battistuzzi, M. Bellei, C. Dennison, G. Di Rocco, K. Sato, M. Sola, S. Yanagisawa "Thermodynamics of the alkaline transition in phytocyanins" *J. Biol. Inorg. Chem.*, 2007, 12, 895-900. DOI: 10.1007/s00775-007-0245-7
66. G. Battistuzzi, M. Borsari, C. A. Bortolotti, G. Di Rocco, A. Ranieri, M. Sola "Effects of Mutational (Lys to Ala) Surface Charge Changes on the Redox Properties of Electrode-Immobilized Cytochrome c" *J. Phys. Chem. B*, 2007, 34, 10281-10287. DOI: 10.1021/jp0730343
67. G. Battistuzzi, M. Bellei, L. Casella, C. A. Bortolotti, R. Roncone, E. Monzani, M. Sola "Redox reactivity of the heme $\text{Fe}^{3+}/\text{Fe}^{2+}$ couple in native myoglobins and mutants with peroxidase-like activity" *J. Biol. Inorg. Chem.*, 2007, 12, 951-958. DOI: 10.1007/s00775-007-0267-1
68. S. Casalini, G. Battistuzzi, M. Borsari, C. A. Bortolotti, A. Ranieri, M. Sola "Electron Transfer and Electrocatalytic Properties of the Immobilized Methionine80Alanine Cytochrome c Variant" *J. Phys. Chem. B*, 2008, 112, 1555-1563. DOI: 10.1021/jp0765953
69. S. Monari, G. Battistuzzi, M. Borsari, D. Millo, G. van der Zwan, A. Ranieri, M. Sola "Thermodynamic and Kinetic Aspects of the Electron Transfer Reaction of Bovine Cytochrome c Immobilized on 4-Mercaptopyridine and 11-Mercapto-1-Undecanoic Acid Film" *J. Appl. Electrochem.*, 2008, 38, 885-891. DOI: 10.1007/s10800-008-9493-7

70. G. Di Rocco, G. Battistuzzi, M. Borsari, F. De Rienzo, A. Ranieri M. L. Tutino, M. Sola "Cloning, expression and physico-chemical characterization of a di-heme cytochrome c₄ from the psychrophilic bacterium *Pseudoalteromonas haloplanktis* TAC 125" *JBIC J. Biol. Inorg. Chem.*, 2008, 13, 789-799. DOI: 10.1007/s00775-008-0366-7
71. S. Casalini, G. Battistuzzi, M. Borsari, A. Ranieri, M. Sola "Catalytic reduction of dioxygen and nitrite ion at a Met80Ala Cytochrome c - functionalized electrode" *J. Am. Chem. Soc.*, 2008, 130, 15099-15104. DOI: 10.1021/ja8040724
72. A. Ranieri, G. Battistuzzi, M. Borsari, S. Casalini, C. Fontanesi, S. Monari, M. J. Siwek, M. Sola "Thermodynamics and Kinetics of the Electron Transfer Process of Spinach Plastocyanin Adsorbed on a modified gold electrode" *J. Electroanal. Chem.*, 2009, 626, 123-129. DOI: 10.1016/j.jelechem.2008.12.001
73. M. Zamocky, P. G. Furtmuller, M. Bellei, G. Battistuzzi, J. Stadlmann, J. Vlasits, C. Obinger "Intracellular catalase/oxidase from the phytopathogenic rice blast fungus *Magnaporthe grisea*: expression analysis and biochemical characterization of the recombinant protein" *Biochem. J.*, 2009, 418, 443-451. DOI: 10.1042/BJ20081478
74. G. Battistuzzi, M. Borsari, C. Dennison, C. Li, A. Ranieri, M. Sola, S. Yanagisawa "Active site loop dictates the thermodynamics of reduction and ligand protonation in cupredoxins" *Biochim. Biophys. Acta - Proteins and Proteomics*, 2009, 1794, 995-1000. DOI: 10.1016/j.bbapap.2009.02.001
75. M. Sola, S. Monari, G. Battistuzzi, M. Borsari, G. Di Rocco, L. Martini, A. Ranieri "Heterogeneous Electron Transfer of a Two-Centered Heme Protein: Redox and Electrocatalytic Properties of Surface-Immobilized Cytochrome c₄" *J. Phys. Chem. B*, 2009, 113, 13645-13653. DOI: 10.1021/jp906339u
76. G. Battistuzzi, M. Bellei, J. Vlasits, S. Banerjee, P.G. Furtmüller, M. Sola, C. Obinger "Redox thermodynamics of lactoperoxidase and eosinophil peroxidase" *Arch. Biochem. Biophys.*, 2010, 494, 72-77. DOI: 10.1016/j.abb.2009.11.021
77. S. Casalini, G. Battistuzzi, M. Borsari, C. Bortolotti, G. Di Rocco, A. Ranieri, M. Sola "Electron Transfer Properties and Hydrogen Peroxide, Electrocatalysis of Cytochrome c Variants at Positions 67 and 80" *J. Phys. Chem. B*, 2010, 114, 1698-1706. DOI: 10.1021/jp9090365
78. J. Vlasits, M. Bellei, C. Jakopitsch, F. De Rienzo, P. G. Furtmüller, M. Zamocky, M. Sola, G. Battistuzzi, C. Obinger "Disrupting the H-bond network in the main access channel of catalase-oxidase: effect on the redox thermodynamics of the Fe(III)-Fe(II) couple" *J. Inorg. Biochem.*, 2010, 104, 648-656. DOI: 10.1016/j.jinorgbio.2010.02.006
79. M. Bellei, G. Battistuzzi, S.-P. Wu, S. S. Mansy, J. A. Cowan, M. Sola, "Control of Reduction Thermodynamics in [2Fe-2S] Ferredoxins. Entropy-Enthalpy Compensation and the Influence of Surface Mutations" *J. Inorg. Biochem.*, 2010, 104, 691-696. DOI: 10.1016/j.jinorgbio.2010.03.001
80. G. Battistuzzi, M. Bellei, C. A. Bortolotti, M. Sola "Redox properties of heme peroxidases" *Arch. Biochem. Biophys.*, 2010, 500, 21-36. DOI: 10.1016/j.abb.2010.03.002
81. A. Ranieri, S. Monari, M. Sola, M. Borsari, G. Battistuzzi, P. Ringhieri, F. Nistri, V. Pavone, A. Lombardi "Redox and Electrocatalytic Properties of Mimochrome VI, a Synthetic Heme-Peptide Adsorbed on Gold" *Langmuir*, 2010, 26, 17831-17835. DOI: 10.1021/la103744x
82. S. Monari G. Battistuzzi, C. Dennison, M. Borsari, A. Ranieri, M. J. Siwek, M. Sola "Factors Affecting the Electron Transfer Properties of an Immobilized Cupredoxin" *J. Phys. Chem. C*, 2010, 114, 22322-22329. DOI: 10.1021/jp110096a
83. G. Di Rocco, G. Battistuzzi, C. A. Bortolotti, M. Borsari, E. Ferrari, S. Monari, M. Sola "Cloning, Expression and Physico-Chemical Characterization of a new di-heme Cytochrome c from *Shewanella baltica* OS155" *JBIC J. Biol. Inorg. Chem.*, 2011, 16, 461-471. DOI: 10.1007/s00775-010-0742-y

84. S.-P. Wu, M. Bellei, S. S. Mansy, G. Battistuzzi, M. Sola, J. A. Cowan "Redox Chemistry of the *Schizosaccharomyces pombe* Ferredoxin Electron-Transfer Domain and Influence of Cys to Ser Substitutions" *J. Inorg. Biochem.*, 2011, 105, 806-811. DOI: 10.1016/j.jinorgbio.2011.03.004
85. G. Battistuzzi, J. Stamper, M. Bellei, J. Vlasits, M. Soudi, P. G. Furtmüller, C. Obinger "Influence of the Covalent Heme to Protein Bonds on the Redox Thermodynamics of Human Myeloperoxidase" *Biochemistry*, 2011, 50, 7987-7994. DOI: 10.1021/bi20084321
86. J. Stamper, M. Bellei, M. Soudi, C. Gruber, G. Battistuzzi, P.G. Furtmüller, C. Obinger "Manipulating the proximal triad His-Asn-Arg in human myeloperoxidase" *Arch. Biochem. Biophys.*, 2011, 516, 21-28. DOI: 10.1016/j.abb.2011.09.007
87. A. Ranieri, G. Battistuzzi, M. Borsari, C. A. Bortolotti, G. Di Rocco, S. Monari, M. Sola "A Bis-Histidine-Ligated Unfolded Cytochrome c Immobilized on Anionic SAM Shows Pseudo-Peroxidase Activity" *Electrochem. Comm.*, 2012, 14, 29-31. DOI: 10.1016/j.elecom.2011.10.021
88. M. Zámocký, E. Droghetti, M. Bellei, B. Gasselhuber, M. Pabst, P. G. Furtmüller, G. Battistuzzi, G. Smulevich, C. Obinger "Eukaryotic Extracellular Catalase-Peroxidase from *Magnaporthe grisea* - Biophysical/Chemical Characterization of the First Representative from a Novel Phytopathogenic KatG Group" *Biochimie*, 2012, 94, 673-683. DOI: 10.1016/j.biochi.2011.09.020
89. C. A. Bortolotti, L. Paltrinieri, S. Monari, A. Ranieri, G. Battistuzzi, M. Borsari, M. Sola "A surface-immobilized cytochrome c variant provides a pH-controlled molecular switch" *Chem. Sci.*, 2012, 3, 807-810. DOI: 10.1039/c1sc00821h
90. G. Battistuzzi, C. A. Bortolotti, M. Bellei, G. Di Rocco, J. Salewski, P. Hildebrandt, M. Sola "The role of Met80 and Tyr67 in the low-pH conformational equilibria of cytochrome c." *Biochemistry*, 2012, 51, 5967-5978. DOI: 10.1021/bi3007302
91. S. Monari, G. Battistuzzi, C. A. Bortolotti, S. Yanagisawa, K. Sato, C. Li, I. Salard, D. Kostrz, M. Borsari, A. Ranieri, C. Dennison, M. Sola "Understanding the Mechanism of Short-range Electron Transfer using an Immobilized Cupredoxin" *J. Am. Chem. Soc.*, 2012, 134, 11848-11851. DOI: 10.1021/ja303425b
92. M. Sola, A. Ranieri, C.A. Bortolotti, G. Di Rocco, G. Battistuzzi, M. Borsari "pH and Solvent H/D Isotope Effects on the Thermodynamics and Kinetics of Electron Transfer for Electrode-Immobilized Native and Urea-Unfolded Stellacyanin" *Langmuir*, 2012, 28, 15087-15094. DOI: 10.1021/la303363h
93. S. Hofbauer, M. Bellei, A. Sündermann, K. F. Pirker, A. Hagmüller, G. Mlynek, J. Kostan, H. Daims, P. G. Furtmüller, K. Djinovich-Carugo, C. Oostenbrink, G. Battistuzzi, C. Obinger "Redox thermodynamics of high-spin and low-spin forms of chlorite dismutases of diverse subunit and oligomeric structure" *Biochemistry*, 2012, 51, 9501-9512. DOI: 10.1021/bi3013033
94. L. Paltrinieri, M. Borsari, A. Ranieri, G. Battistuzzi, S. Corni, C.A. Bortolotti "The Active Site Loop Modulates the Reorganization Energy of Blue Copper Proteins by Controlling the Dynamic Interplay with Solvent" *J. Phys. Chem. Lett.*, 2013, 4, 710-715. DOI: 10.1021/jz302125k
95. G. Di Rocco, A. Ranieri, C. A. Bortolotti, G. Battistuzzi, A. Bonifacio, V. Sergo, M. Borsari, M. Sola "Axial iron coordination and spin state change in a heme c upon electrostatic protein-SAM interaction" *Phys. Chem. Chem. Phys.* 2013, 15, 13499-13505. DOI: 10.1039/c3cp50222h
96. M. Auer, C. Gruber, M. Bellei, K. F. Pirker, M. Zamocky, D. Kroiß, S. A. Teufer, S. Hofbauer, M. Soudi, G. Battistuzzi, P. G. Furtmüller, C. Obinger "A stable bacterial peroxidase with novel halogenating activity and an autocatalytically linked heme prosthetic group" *J. Biol. Chem.*, 2013, 288, 27181-27199. DOI: 10.1074/jbc.M113.477067
97. L. Paltrinieri, M. Borsari, G. Battistuzzi, M. Sola, C. Dennison, B. L. de Groot, S. Corni, C. A. Bortolotti "How the Dynamics of the Metal-Binding Loop Region Controls the Acid Transition in Cupredoxins" *Biochemistry*, 2013, 52, 7397-7404. DOI: 10.1021/bi400860n
98. S. Hofbauer, K. Gysel, M. Bellei, A. Hagmüller, I. Schaffner, G. Mlynek, J. Kostan, K. F. Pirker, H. Daims, P. G. Furtmüller, G. Battistuzzi, K. Djinovich-Carugo, C. Obinger "Manipulating Conserved Heme Cavity Residues of Chlorite Dismutase: Effect on Structure, Redox Chemistry and Reactivity" *Biochemistry*, 2014, 53, 77-89. DOI: 10.1021/bi401042z

99. A. Ranieri, C. A. Bortolotti, G. Battistuzzi, M. Borsari, G. Di Rocco, L. Paltrinieri, M. Sola "Effect of motional restriction on the unfolding properties of a cytochrome c featuring a His/Met-His/His ligation switch" *Metallomics*, 2014, 6, 874-884. DOI: 10.1039/c3mt00311f
100. I. Daidone, L. Paltrinieri, A. Amadei, G. Battistuzzi, M. Sola, M. Borsari, C. A. Bortolotti "Unambiguous Assignment of Reduction Potentials in Diheme Cytochromes" *J. Phys. Chem. B*, 2014, 118, 7554-7560. DOI: 10.1021/jp506017a
101. A. Ranieri, D. Millo, G. Di Rocco, G. Battistuzzi, C. A. Bortolotti, M. Borsari, M. Sola "Immobilized Cytochrome c Bound to Cardiolipin Exhibits Peculiar Oxidation State-Dependent Axial Heme Ligation and Catalytically Reduces Dioxygen" *JBIC J. Biol. Inorg. Chem.*, 2015, 20, 531-540. DOI: 10.1007/s00775-015-1238-6
102. M. Soudi, C. Delporte, M. Paumann, K. F. Pirker, M. Bellei, E. Edenhofer, G. Stadlmayr, G. Battistuzzi, P. G. Furtmüller, P. van Antwerpen, C. Obinger "Multidomain human peroxidase 1 is a highly glycosylated and stable homotrimeric high-spin ferric peroxidase" *J. Biol. Chem.*, 2015, 290, 10876-10890. DOI: 10.1074/jbc.M114.632273
103. I. Schaffner, S. Hofbauer, M. Krutzler, K. F. Pirker, M. Bellei, G. Stadlmayr, G. Mlynek, K. Djinojic-Carugo, G. Battistuzzi, P. G. Furtmüller, H. Daims, C. Obinger "Dimeric chlorite dismutase from the nitrogen-1 fixing cyanobacterium *Cyanothece* sp. PCC7425" *Mol. Microbiol.*, 2015, 96, 1053-1068. DOI: 10.1111/mmi.12989
104. A. Ranieri, G. Di Rocco, D. Millo, G. Battistuzzi, C. A. Bortolotti, M. Borsari, M. Sola "Thermodynamics and kinetics of reduction and species conversion at an hydrophobic surface for mitochondrial cytochromes c and their cardiolipin adducts" *Electrochim. Acta*, 2015, 176, 1019-1028. DOI: 10.1016/j.electacta.2015.07.065
105. S. Hofbauer, M. Dalla Sega, S. Scheiblbrandner, Z. Jandova, I. Schaffner, G. Mlynek, K. Djinojic-Carugo, G. Battistuzzi, P. Furtmüller, C. Oostenbrink, C. Obinger "Chemistry and molecular dynamics simulations of heme b-HemQ and coproheme-HemQ" *Biochemistry*, 2016, 55, 5398-5412. DOI: 10.1021/acs.biochem.6b00701
106. G. Di Rocco, F. Bernini, M. Borsari, I. Martinelli, C.A. Bortolotti, G. Battistuzzi, A. Ranieri, M. Caselli, M. Sola, G. Ponterini "Excitation-Energy Transfer Paths from Tryptophans to Coordinated Copper Ions in Engineered Azurins: a Source of Observables for Monitoring Protein Structural Changes" *Z. Phys. Chem.*, 2016, 230, 1329-1349. DOI: 10.1515/zpch-2015-0749
107. M. Paumann-Page, R.-S. Katz., M. Bellei, I. Schwartz, E. Edenhofer, B. Sevcnikar, M. Soudi, S. Hofbauer, G. Battistuzzi, P. G. Furtmüller, C. Obinger "Kinetics of interconversion of redox intermediates of truncated human peroxidase 1 mediated by hydrogen peroxide, bromide, iodide and thiocyanate" *J. Biol. Chem.*, 2017, 292, 4583-4592. DOI: 10.1074/jbc.M117.775213
108. L. Paltrinieri, G. Di Rocco, G. Battistuzzi, M. Borsari, A. Ranieri, L. Zanetti-Polzi, M. Sola, I. Daidone, C. A. Bortolotti "Computational evidences support the hypothesis of neuroglobin also acting as an electron transfer species" *JBIC J. Biol. Inorg. Chem.*, 2017, 22, 615-623. DOI: 10.1007/s00775-017-1455-2
109. A. Nicolussi, M. Auer, J. Weissensteiner, G. Schuetz, S. Katz, D. Maresch, S. Hofbauer, M. Bellei, G. Battistuzzi, P. G. Furtmüller, C. Obinger "Posttranslational Modification of Heme b in a Bacterial Peroxidase: The Role of Heme to Protein Ester Bonds in Ligand Binding and Catalysis" *Biochemistry*, 2017, 56, 4525-4538. DOI: 10.1021/acs.biochem.7b00632
110. L. Zanetti-Polzi, G. Battistuzzi, M. Borsari, M. Pignataro, L. Paltrinieri, I. Daidone, C. A. Bortolotti "Computational investigation of the electron transfer complex between neuroglobin and cytochrome c" *Supramol. Chem.*, 2017, 29, 846-852. DOI: 10.1080/10610278.2017.1377342
111. I. Schaffner, G. Mlynek, F. Nicola, D. Puehringer, J. Libiseller-Egger, L. Coates, S. Hofbauer, M. Bellei, P. Furtmüller, G. Battistuzzi, G. Smulevich, K. Djinojic-Carugo, C. Obinger "Molecular mechanism of enzymatic chlorite detoxification: insights from structural and kinetic studies" *ACS Catalysis*, 2017, 7, 7962-7976. DOI: 10.1021/acscatal.7b01749
112. M. Bellei, C. A. Bortolotti, G. Di Rocco, M. Borsari, L. Lancellotti, A. Ranieri, M. Sola, G. Battistuzzi "The influence of the Cys46/Cys55 disulfide bond on the redox and spectroscopic

- properties of human neuroglobin” *J. Inorg. Biochem.*, 2018, 178, 70-86. DOI: 10.1016/j.jinorgbio.2017.10.005
113. A. Nicolussi, J. D. Dunn, G. Mlynek, M. Bellei, M. Zamocky, G. Battistuzzi, K. DjinoVIC-Carugo, P. G. Furtmüller, T. Soldati, C. Obinger “Secreted Heme Peroxidase from *Dictyostelium discoideum*: Insights into Catalysis, Structure and Biological Role” *J. Biol. Chem.*, 2018, 293, 1330-1345. DOI: 10.1074/jbc.RA117.000463
 114. V. PfanZagl, K. Nys, M. Bellei, H. Michlits, G. Mlynek, G. Battistuzzi, K. DjinoVIC-Carugo, S. Van Doorslaer, P. G. Furtmüller, S. Hofbauer, C. Obinger “Roles of distal aspartate and arginine of B-class dyedecolorizing peroxidase in heterolytic hydrogen peroxide cleavage”, *J. Biol. Chem.*, 2018, 293, 14823-14838. DOI: 10.1074/jbc.RA118.004773
 115. M. Olivé, M. Engvall, G. Ravenscroft, M. Cabrera-Serrano, H. Jiao, C. A. Bortolotti, M. Pignataro, M. Lambrugh, H. Jiang, A. R. R. Forrest, N. Benseny-Cases, S. Hofbauer, C. Obinger, G. Battistuzzi, M. Bellei, M. Borsari, G. Di Rocco, H. M. Viola, L. C. Hool, J. Cladera, K. Lagerstedt-Robinson, F. Xiang, A. Wredenberg, F. Miralles, J. J. Baiges, E. Malfatti, N. B. Romero, N. Streichenberger, C. Vial, K. G. Claeys, C. S. M. Straathof, A. Goris, C. Freyer, M. Lammens, G. Bassez, J. Kere, P. Clemente, T. Sejersen, B. Udd, N. Vidal, I. Ferrer, L. Edström, A. Wedell, N. G. Laing “MB mutation impairs oxygen binding and causes myoglobinopathy, an adult-onset autosomal dominant myopathy with characteristic sarcoplasmic inclusions” *Nat. Comm.*, 2019, 10(1), 1396. DOI: 10.1038/s41467-019-09111-2
 116. V. PfanZagl, M. Bellei, S. Hofbauer, C. Laurent, P. G. Furtmüller, C. Oostenbrink, G. Battistuzzi, C. Obinger “Redox thermodynamics of B-class dye-decolorizing peroxidases” *J. Inorg. Biochem.*, 2019, 199, 110761. DOI: 10.1016/j.jinorgbio.2019.110761
 117. A. Ranieri, C. A. Bortolotti, G. Di Rocco, G. Battistuzzi, M. Sola, M. Borsari “Electrocatalytic Properties of Immobilized Heme Proteins: Basic Principles and Applications” *ChemElectroChem*, 2019, 6, 5172-5185. DOI: 10.1002/celec.201901178
 118. A. Paradisi, M. Bellei, L. Paltrinieri, C. A. Bortolotti, G. Di Rocco, A. Ranieri, M. Borsari, M. Sola, G. Battistuzzi “Binding of *S. cerevisiae* iso-1 cytochrome c and its surface lysine-to-alanine variants to cardiolipin: charge effects and the role of the lipid to protein ratio” *JBIC J. Biol. Inorg. Chem.*, 2020, 25, 467-487. DOI: 10.1007/s00775-020-01776-1
 119. L. Lancellotti, M. Borsari, A. Bonifacio, C. A. Bortolotti, G. Di Rocco, S. Casalini, A. Ranieri, G. Battistuzzi, M. Sola “Adsorbing surface strongly influences the pseudoperoxidase and nitrite reductase activity of electrode-bound yeast cytochrome c. The effect of hydrophobic immobilization” *Bioelectrochemistry*, 2020, 136, 107628. DOI: 10.1016/j.bioelechem.2020.107628
 120. A. Paradisi, L. Lancellotti, M. Borsari, M. Bellei, C. A. Bortolotti, G. Di Rocco, A. Ranieri, M. Sola, G. Battistuzzi “Met80 and Tyr67 affect the chemical unfolding of yeast cytochrome c: comparing solution vs. immobilized state” *RSC Chem. Biol.*, 2020, 1, 421-435. DOI: 10.1039/d0cb00115e
 121. L. Lancellotti, M. Borsari, M. Bellei, A. Bonifacio, C. A. Bortolotti, G. Di Rocco, A. Ranieri, M. Sola, G. Battistuzzi “Urea-induced denaturation of immobilized yeast iso-1 cytochrome c: role of Met80 and Tyr67 in the thermodynamics of unfolding and promotion of pseudoperoxidase and nitrite reductase activities” *Electrochim. Acta*, 2020, 363, 137237. DOI: 10.1016/j.electacta.2020.137237
 122. G. Di Rocco, B. Bigli, M. Borsari, C. A. Bortolotti, A. Ranieri, M. Sola, G. Battistuzzi “Electron Transfer and Electrocatalytic Properties of the Immobilized Met80Ala Cytochrome c Variant in DMSO” *ChemElectroChem*, 2021, 8, 2115-2123, DOI: 10.1002/celec.202100499
 123. G. Di Rocco, G. Battistuzzi, M. Borsari, C. A. Bortolotti, A. Ranieri, M. Sola “The Enthalpic and Entropic Terms of the Reduction Potential of Metalloproteins: Determinants and Interplay” *Coord. Chem. Rev.*, 2021, 445, 214071. DOI: 10.1016/j.ccr.2021.214071

124. A. Ranieri, M. Borsari, S. Casalini, G. Di Rocco, M. Sola, C. A. Bortolotti, G. Battistuzzi "How to Turn an Electron Transfer Protein into a Redox Enzyme for Biosensing" *Molecules*, 2021, 26, 4950. DOI: 10.3390/molecules26164950.
125. S. Hofbauer, M. Pignataro, M. Borsari, C. A. Bortolotti, G. Di Rocco, G. Ravenscroft, P.G. Furtmüller, C. Obinger, M. Sola, G. Battistuzzi "Pseudoperoxidase activity, conformational stability and aggregation propensity of the His98Tyr myoglobin variant. Implications for the onset of myoglobinopathy" *FEBS J.*, 2022, 289, 1105-1117. DOI: 10.1111/febs.16235.
126. I. Serra, D. Piccinini, A. Paradisi, L. Ciano, M. Bellei, C. A. Bortolotti, G. Battistuzzi, M. Sola, P. H. Walton, G. Di Rocco "Activity and substrate specificity of lytic polysaccharide monooxygenases: An ATR FTIR-based sensitive assay tested on a novel species from *Pseudomonas putida*" *Prot. Sci.*, 2022, 31, 591-601. DOI: 10.1002/pro.4255.
127. G. Di Rocco, A. Ranieri, M. Borsari, M. Sola, C. A. Bortolotti, G. Battistuzzi "Assessing the functional and structural stability of the Met80Ala mutant of cytochrome *c* in dimethylsulfoxide" *Molecules*, 2022, 27, 5630. DOI:10.3390/molecules27175630.
128. G. Di Rocco, A. Ranieri, M. Borsari, M. Sola, C. A. Bortolotti, G. Battistuzzi "Thermodynamics and Kinetics of Electron Transfer of Electrode-Immobilized Small Laccase from *Streptomyces coelicolor*" *Molecules*, 2022, 27, 8079. DOI: 10.3390/molecules27228079.
129. G. Di Rocco, F. Bernini, G. Battistuzzi, A. Ranieri, C. A. Bortolotti, M. Borsari, M. Sola "Hydrogen Peroxide Induces Heme Degradation and Protein Aggregation in Human Neuroglobin: Roles of the Disulfide Bridge and the H-bonding in the Distal Heme Cavity" *FEBS J.*, 2023, 290, 148–161. DOI:10.1111/febs.16581.
130. D. Schmidt, N. Falb, I. Serra, M. Bellei, V. Pfanzagl, S. Hofbauer, S. Van Doorslaer, G. Battistuzzi, P. G. Furtmüller, C. Obinger "Compound I Formation and Reactivity in Dimeric Chlorite Dismutase: Impact of pH and the Dynamics of the Catalytic Arginine", *Biochemistry*, 2023, 62, 835–850. <https://doi.org/10.1021/acs.biochem.2c00696>.
131. A. Paradisi, M. Bellei, C. A. Bortolotti, G. Di Rocco, A. Ranieri, M. Borsari, M. Sola, G. Battistuzzi "Effects of removal of the axial methionine heme ligand on the binding of *S. cerevisiae* iso-1 cytochrome *c* to cardiolipin", *J. Inorg. Biochem.*, 2024, 252, 112455, <https://doi.org/10.1016/j.jinorgbio.2023.112455>.
132. T. Gabler, A. Dali, M. Bellei, F. Sebastiani, M. Becucci, G. Battistuzzi, P. G. Furtmüller, G. Smulevich, S. Hofbauer "Revisiting catalytic His and Glu residues in coproporphyrin ferrochelatase - unexpected activities of active site variants", *FEBS J.*, 2024, in press.

BOOK CHAPTERS AND MANUSCRIPTS IN JOURNALS WITHOUT IF.

1. L. Menabue, M. Saladini, M. Borsari, R. Battistuzzi, M. Sola and G. Battistuzzi, "Redox equilibria in metalloproteins and characterization of model complexes", In "Advances in Free Radicals in Disease", A. Tomasi, F. Ursini and V. Vannini Ed. Vol. 4, 1999, 243-261.

Updated on 7/02/2024