

Dr. Fabrizia Fabrizi de Biani

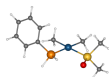
Researcher 03/B1 at Dipartimento di Biotecnologie Chimica e Farmacia dell'Università degli Studi di Siena

Date of birth: 8 January 1969

Address: Dipartimento di Biotecnologie Chimica e Farmacia dell'Università degli Studi di Siena, Via Aldo Moro, 2, 53100, Siena, Italy

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**ACADEMIC EDUCATION**

-Honours Degree in Chemistry, Università di Firenze, Italy. July, 1994. *"Electronic structure characterization of cobalt-chalcogenide clusters with DFT methods"*.

-Ph.D., Inorganic Chemistry, Università di Siena, Italy (Advisor: Prof. Piero Zanello). 14 May 1998. *"Redox and Magnetic Properties of Transition Metal Compounds"*.

Part of the PhD work has been done at the Lund University (Sweden) working under the supervision of Prof. Lars Kloo. (1996, November-1997, February).

**SCIENTIFIC POSITIONS**

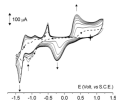
-Private collaboration with the group of Prof. D. Gatteschi (University of Florence) 1994, September-1995, January

-Postdoc at the Laboratoire de Chimie Inorganique et Matériaux Moléculaires, Université Pierre et Marie Curie de Paris, France. Postdoc funded by the TMR program in the frame of the network: *"Molecular magnetism: from molecules to devices"*. 1998, June – 1999, June

-Private collaboration with the group of Prof. P. Zanello, University of Siena, Italy. 1999-2000

-Research associate in Inorganic Chemistry at the University of Siena, Italy. 2000-2001

-Permanent position as researcher and lecturer at the University of Siena, Italy. 2002, January-present

**EXPERIENCE AND RESEARCH ABROAD**

-June 25 July 15 (2000); 12 - 22 December (2000): Visit to the Johann Wolfgang-Goethe Universität of Frankfurt to the group of Prof. M. Wagner for the training of an electrochemistry technician.

-December 5-20 (2001): Visit to the Instituto de Tecnologia Química e Biológica (ITQB) of Lisbon hosted by Prof. M.J. Calhorda in the frame of the joint project CNR-ICCTI on *"Theoretical and electrochemical studies on polynuclear complexes"*.

- March-May (1998); September-October (1999); 1-30 November (2000); 8 September-14 October (2002); 25 April-2 June (2005): Visit to the University of Barcelona with a grant funded by the IHP program and by the Centre de Supercomputació de Catalunya (CESCA), hosted by Prof Santiago Alvarez and Dr. E. Ruiz (2005).

"Density functional analysis of the magneto-structural relationships in end-to-end azido bridged Cu(II) complexes" (1998).

"The DFT theoretical study of the photomagnetic prussian blue analogues". (1999);

"The DFT study of the electronic communication in polynuclear ferrocaboranes" (2000);

"TDDFT study of discrete dinuclear cyano-bridged complexes" (2002);

"DFT Modeling of photomagnetic Prussian blue analogues" (2005).

-June 15-25 (2009): Visit to the University of Barcelona hosted by Dr. M S. El Fallah and Prof. A. Escuer in the frame of the joint project Programma Azioni Integrate Italia-Spagna 2007 on: *"Redox Activity and Magnetic and Spectroscopic Behavior of Single Molecule Magnets"*.

**ACADEMIC HONORS**

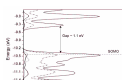
2000, April: Invited to the CERC3 Young Chemist's Workshop on Magnetochemistry/Molecular Magnets as one of five Italian representatives

**INVITED LECTURES AT INTERNATIONAL CONFERENCES**

"Pt_n Clusters as Synthons for Extended Conducting Systems: an Electrochemical, Spectroelectrochemical and Theoretical Study" - **40th Heyrovský Discussion on Electrochemistry of Molecules with Multiple Redox Centers**, Castle Třešť, Czech Republic, June 10-14, 2007

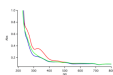
"Spectroelectrochemical and Theoretical Studies of Electron Transfer in Donor-Acceptor Polynuclear Platinum Derivatives. Outstanding and Unexpected Effect of Peripheral Substituents on the TDDF results"-Key note lecture at **XXXVI Congresso Nazionale della Divisione di Chimica Inorganica della Società Chimica Italiana**, Lecce, September 1-5, 2008

"Molecular Metal Clusters for Molecular Electronics: Redox Properties of the Building Blocks"-Key note lecture at the **XXV ICOMC (International Conference on Organometallic Chemistry- Silver Edition)**, Lisbon, Portugal, September 2-7, 2012

**INVITED SEMINARS**

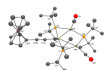
- *"On the basic importance of the solvent effect in TDDFT calculations on the electron transfer in the ionic system [Pt^{II}(NH₃)₄]²⁺ [W^{VI}(CN)₈]³⁻"* - **Università di Napoli**- 2001

- "Electrochemical methods: principles and applications"-**Lomonosov Moskow State University**- 2002
- "UV-Vis-NIR Spectroelectrochemistry: a few experimental hints"-**Università di Salerno**- 2004
- "UV-Vis-NIR Spectroelectrochemistry: a few experimental hints"-**IPCF-CNR Pisa**- 2004
- "Spectroelectrochemistry: strength and weakness"-**ISMN-CNR Bologna**- 2010



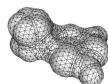
PUBLICATION RECORD

Coauthor of ~100 research papers published or in press. Coauthor of one book and three book chapters.
More than 50 National and International Meeting Contributions (Oral Communications or Posters)



KNOWN LANGUAGES

English, Spanish, French



OTHER SCIENTIFIC ACTIVITIES

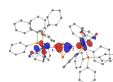
Since 2001 she acts as a referee for many important scientific journals.

Since 2002 is the Scientific Secretary of the "Chianti Meeting on Inorganic Electrochemistry" a biennial international appointment for electrochemists and inorganic chemists (four editions).

Since 2009 she is the reference person of the University of Siena-Chemistry Department as HPC-Europa2 Scientific Host (HPC-Europa2: Pan-European Research Infrastructure for High Performance Computing), linked to CINECA.

She has been member of the Organizing Committee of the ECHEMS 8th: Electrochemistry in Molecular Surface Science and Catalysis (Bertinoro, Italy, June 28-July 1, 2012).

Qualified to the free profession of chemist in the year 1994



FUNDED RESEARCH

PRIN 2008: "Molecular clusters in nanoscience" Unit leader

Bando Galileo 2008/09: "Synthesis and characterization of transition metal complexes with redox active ligands" Unit leader. Partner Dr. N. Avarvari (CNRS, Université Angers- France)

Programma Azioni Integrate Italia-Spagna 2007 "Redox activity and magnetic and spectroscopic behavior of single molecule magnets". Partecipant

PRIN 2005: "Molecular targeting and development of a new approach to the radio-receptorial therapy of thyroid carcinoma" Partecipant. Partners Dr. M S. El Fallah and Prof. A. Escuer (University of Barcelona)

PRIN 2003: "Metalla-carbonyl clusters for nanomaterials" Partecipant

Progetto Giovani Ricercatori 2000: "Theoretical (DFT) and experimental Study on mixed-valent poly-porphyrin complexes with photoelectrochemical properties"

PRIN 1996: "Structure, activity and application of metals in biological systems" Partecipant

PRIN 1998: "Pharmacological and diagnostic aspects of metal complexes" Partecipant