

Emanuele Zanda

WORK EXPERIENCE

from 01/10/2020 to 23/11/2023

PhD RESEARCH PROJECT

IJCLab, CNRS, Université Paris-Saclay, France

- Protocol development for the determination of equilibrium constant and thermodynamic parameters of actinides with organic ligands through Capillary Electrophoresis, Liquid-Liquid Extraction coupled to γ spectroscopy, UV-Vis spectroscopy.
- Determination of the best condition for electrochemical reduction of U(VI) to U(IV) through electrolysis and cyclic voltammetry studies.
- Data treatment by means of instrumental software and spreadsheet programs.

from 03/2021 to 04/2021

INTERNSHIP

Université de Strasbourg, France

- Complexation studies of Zr(IV) with a new tetrahydroxamic acid through potentiometry, UV-Vis spectroscopy, circular dichroism and NMR spectroscopy

from 01/2020 to 04/2020

ERASMUS+ TRAINEESHIP

Univesidad de Burgos, Departamento de Química, Spain.

- Interactions studies and kinetic analysis of organometallic compounds with biosubstrates through gel electrophoresis, circular dichroism, viscometric measurements, differential scanning calorimetry and UV-Vis absorption spectroscopy.
- Data treatment by means of instrumental software and spreadsheet programs.
- Attendance to biological activity studies (MTT assay, cellular uptake studies).

from 06/2019 to 12/2019

MASTERS'S INTERNSHIP

Università di Pisa, Dipartimento di Chimica e Chimica Industriale, Italy.

- Inorganic synthesis and characterization by mean of NMR, IR, UV-Vis absorption spectroscopy, fluorescence spectroscopy, conductivity and pH measurements.
- Speciation studies through spectroscopic techniques (NMR, UV-Vis spectroscopy).
- Determination of thermodynamic parameters through spectrophotometric and spectrofluorimetric micro-titrations.
- Data treatment by means of instrumental software and spreadsheet programs.

from 11/2015 to 04/2016

ERASMUS+ TRAINEESHIP

University of Manchester, School of Chemistry, UK.

- Organic and inorganic synthesis of proligands and rare-earths organometallic complexes and characterization through NMR and IR spectroscopy.
- Work in inert atmosphere conditions by means of Schenk lines and glove boxes.

from 03/2014 to 06/2014

BACHELOR'S INTERNSHIP

Università degli Studi di Cagliari, Dipartimento di Scienze Chimiche e Geologiche, Italy.

- Spectroscopic and electrochemical characterization of organometallic compounds through UV-Vis absorption spectroscopy, fluorescence spectroscopy, cyclic voltammetry.
- Data treatment by means of instrumental software and spreadsheet programs

EDUCATION

23/11/2023

PhD IN RADIOCHEMISTRY

Université Paris-Saclay, France.

THESIS: Complexation of U(IV) and Th(IV) with hydroxamic acid ligands

07/2020

MASTER'S DEGREE IN CHEMICAL SCIENCES

Università di Pisa, Italy.

THESIS: Synthesis, characterization, biological activity and interaction with biosubstrates of new Ru(II)-arene complexes as potential anticancer agents.

07/2014

BACHELOR'S DEGREE IN CHEMISTRY

Università di Cagliari, Italy

THESIS: An experimental investigation on the absorption and emission spectroscopic properties of Au(I) complexes

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	C1	C1	C1	C1	B2
Spanish	B2	B2	B1	B1	B1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

General Skills

- Spoken and written communication
- Organizing and planning
- Teamwork
- Problem solving
- Leadership attitude
- Great adaptability
- Critical sense

Technical Skills

- Inorganic Chemistry
- Analytical Chemistry
- Physical Chemistry
- Synthesis Techniques
- Spectroscopic Techniques
- Electrochemical techniques

- IT Skills
- Microsoft Office (Word, Excel, Power Point)
 - ChemDraw
 - Laboratory instrumental software
 - OriginLab
 - HypSpec
 - MastReNova
 - Mendeley

ADDITIONAL INFORMATION

Publications

L. Knezevic, E. Zanda, E. Bura-Nakic, M. Filella, V. Sladkov, Vanadium(IV) and vanadium(V) complexation by succinic acid studied by affinity capillary electrophoresis. Simultaneous injection of two analytes in equilibrium studies. *J. Chromatogr. A*, **2023**, 1695, 463941.

L. Biancalana, E. Zanda, M. Hadji, S. Zacchini, A. Pratesi, G. Pampaloni, P. J. Dyson, F. Marchetti, Role of the (pseudo)halido ligand in ruthenium(II): *p*-cymene α -amino acid complexes in speciation, protein reactivity and cytotoxicity. *Dalton Trans.* **2021**, 50 (43), 15760–15777.

E. Zanda, N. Busto, L. Biancalana, S. Zacchini, T. Biver, B. Garcia, F. Marchetti, F. Anticancer and antibacterial potential of robust Ruthenium(II) arene complexes regulated by choice of α -diimine and halide ligands. *Chem. Biol. Interact.* **2021**, 344.

L. R. Thomas-Hargreaves, M. J. Giansiracusa, M. Gregson, E. Zanda, F. O'Donnell, A. J. Wooles, N. F. Chilton, S. T. Liddle, S. T. Correlating axial and equatorial ligand field effects to the single-molecule magnet performances of a family of dysprosium bis-methanediide complexes. *Chem. Sci.* **2021**, 12 (11), 3911–3920.

Oral Presentations

Complexation studies of U(IV) with hydroxamic acid ligands, *3rd European NECTAR Conference*, 24th-26th August **2022**, Ljubljana (SLOVENIA)

Complexation of Tetravalent Thorium and Uranium with dihydroxamic acids, *ISMEC 2022*, 5th-8th June **2022**, Valencia (SPAIN)

Complexation of Th(IV) and U(VI) with a new polyhydroxamic acid by affinity capillary electrophoresis, *2nd European NECTAR Conference*, 25th-27th August **2021**, Lisbon (PORTUGAL)

Study of Th(IV) complexation with hydroxamic acids by Affinity Capillary Electrophoresis, *ISMEC 2021*, 16th-18th June **2021**, Białystok (POLAND)

Poster Presentations

Complexation of Thorium and Uranium with Hydroxamic acids, *CHEMISTRY SUMMER SCHOOL ON f-ELEMENTS 2022*, 12th-16th June **2022**, Aussois (FRANCE)

Spectroscopic characterization of $[(\eta^6\text{-}p\text{-cymene})\text{RuCl}(\alpha\text{-diimine})]$ complexes and studies of their interaction with DNA and bovine serum albumin, *IRPES 2019*, 27th Nov **2019**, Pisa (ITALY)

OTHER ACTIVITIES

from 08/2022 to now

CO-LEADER OF THE WORKING GROUP NECTAR FOR THE FUTURE in the European COST-Action NECTAR (Network for Equilibria and Thermodynamic Advanced Research)

- Management of social media, video editing for the dissemination of the activities of the network and their participants.

from 04/2022 to 07/2022

MENTORING OF 2 UNDERGRADUATE STUDENTS.

from 01/2022 to 01/2023

PRESIDENT OF THE ASSOCIATION D2I2 (doctorants et docteurs des deux infinis)

Administrative responsibilities and team leading of PhD students association. Organisation of Workshops, seminars and afterworks