

ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO

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Giovanni Salassa CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	SALASSA
NOME	GIOVANNI
DATA DI NASCITA	[01, Novembre, 1984]

Education

Jun. 2009 - Jul. 2013

Institute of Chemical Research of Catalonia (ICIQ): PhD in chemistry (FPU fellowship 2010) in Prof. A. W. Kleij's group; *Supramolecular, Photophysical and Catalytic Properties of Zn(salphen) Based Complexes and Materials.*

Dec. 2006 - Mar. 2009

University of Turin: master degree (Laurea specialistica) in advanced chemical Methodologies with Specialization in Reactivity and Catalysis with 110/110. master thesis in Prof. R. Gobetto's group; *Photoactivation of Cage Ruthenium Metal Complexes for the Release of Bioactive Ligand.*

Oct. 2003 - Mar. 2007

University of Turin: degree (Laurea) in chemistry with 104/110.

Current position

Jul. 2020 - Dec. 2020

University of Geneva/Geneva Hospital (HUG): BNF program in the group of Prof. M. A. Walter.

Previous positions

Jul. 2017 - Jun. 2019

University of Geneva: Marie Skłodowska-Curie Action postdoctoral fellowship (MSCA Grant 747209) in Prof. T. Bürgi's group.

Jen. 2016 - Jun. 2017

University of Geneva: postdoctoral fellowship (SNF Grant 200020_152596) in Prof. T. Bürgi's group.

Dec. 2013 - Dec. 2015

University of Padua: postdoctoral fellowship (ERC Starting Grant 259014, MOSAIC) in Prof. F. Mancin's group.

Apr. 2010 - Jul. 2013

Institute of Chemical Research of Catalonia (ICIQ): FPU doctoral fellowship 2010 in Prof. A. W. Kleij's group.

Jun. 2009 - Apr. 2010

Institute of Chemical Research of Catalonia (ICIQ): ICIQ doctoral fellowship in Prof. A. W. Kleij's group.

Career summary

I obtained my master degree at University of Turin in 2009. My final year project focused on the

photoactivation of ruthenium complexes as photochemotherapeutic agents. In this period, I have acquired valuable skills on spectroscopy and DFT methods for studying the photochemistry of Ru complexes and I co-authored 3 papers. In June 2009, I started my Ph.D. at the Institute of Chemical Research of Catalonia (ICIQ) in the group of Prof. Arjan Kleij. My project focused on the preparation of novel Zn salphen (*N,N'*-bis(salicylidene)-1,2-phenylenediamine) complexes for supramolecular, optical and catalytic applications. During this period, I produced 10 scientific publications and presented my work at 8 European and International conferences.

After completing my Ph.D., I joined the group of Prof. Fabrizio Mancin at University of Padua with a postdoctoral fellow founded by the ERC grant "Mosaic". There, I have investigated the use of NMR techniques to characterize the nature of the thiol protecting monolayer in gold nanoparticles. I have also designed a new type of Au nanoparticles functionalized with a crown ether receptor that have been applied as NMR-sensor for biotic protonated amine. The results of this project were published on *J. Am. Chem. Soc.* and generated a patent.

In January 2016, I began my second postdoc in the group of Prof. Thomas Bürgi, and in July 2017, I was awarded a Marie Skłodowska-Curie Action fellowship to stay in the same group. In three years, I have produced 10 publications (four as corresponding author, 2 in *ACS nano*, 1 *Nanoscale Horiz.* and 1 *Int. J. Mol. Sci.*) and I have participated to 5 scientific expeditions at European synchrotron facilities (ELETTRA, ALBA, PSI). The research that I carried out concerns the metal nanoclusters characterization with NMR techniques and the investigation of their chirality and reactivity at the nanoscale level for the preparation of novel material with potential application in sensing and catalysis.

Currently, funded by the BNF program, I have started a stage at the Geneva University Hospital (HUG) where I am developing and testing novel radiotracer for PET imaging of bacterial infections.

Indicators of scientific production

H-index in Web of Science: 14 (15 in Google Scholar)

Publications in peer-reviewed international journals: 26 (e.g. 3 *JACS*, 2 *ACS Nano*, 1 *Angew. Chem. Int. Ed.*, 1 *Nanoscale Horiz.*, 1 *Chem. Soc. Rev.*) + 1 in submitted

Total citations in Web of Science: 917 (1085 in Google Scholar)

Average impact factor of my articles: 7.74

Publication metrics: 18 in Q1 out of 26, 10 in D1 out of 26.

Publication as corresponding author: 4 (2 *ACS Nano*, 1 *Nanoscale Horiz.* and 1 *Int. J. Mol. Sci.*) + 1 in preparation

Publication as first author: 7 + 1 in submitted

Patents and technology transfer: Italian patent (PD102015000040417) with international extension (WO2017/017245A1)

Presentations at conferences and international institutes: 23 (13 oral presentation and 2 invited oral presentation)

List of Publications

1. G. Salassa*, K. R. Krishnadas, M. Pupier, J. Viger-Gravel T. Bürgi. "Stability of $Ag_{25}(DMTB)_{18}$ nanoclusters: role of inter-cluster dynamics and inter-ligand interactions", *Angew. Chem. Int. Ed.* **2020**, in preparation.
2. B. Zhang, C. García, A. Sels, G. Salassa, C. Rameshan, J. Llorca, K. Hradil, G. Rupprechter, N. Barrabés, T. Bürgi. "Ligand and support effects on the reactivity and stability of $Au_{38}(SR)_{24}$ catalysts in oxidation reactions", *Catal. Commun.* **2019**, *130*, 105768. (Cited: 1)
3. G. Salassa*, A. Terenzi. "Oxadiazoles and their metal complexes: an overview", *Int. J. Mol. Sci.* **2019**, *20* (14), 3483. (cited: 1)
4. M. Diez-Castellnou, G. Salassa, F. Mancin, P. Scrimin. "The $Zn(II)$ -1,4,7-Trimethyl-1,4,7-Triazacyclononane Complex: Monometallic Catalyst Active in Two Protonation States", *Front. Chem.* **2019**, *7*:469. (Cited: 0)
5. L. Riccardi, F. De Biasi, M. De Vivo, T. Bürgi, F. Rastrelli, G. Salassa*. "The origin of chirality transfer between chiral surface and achiral ligand in Au_{38} clusters", *ACS Nano* **2019**, *13*, 7127-7134. (Cited: 0)
6. B. Zhang, A. Sels, G. Salassa, S. Pollitt, V. Truttmann, C. Rameshan, J. Llorca, W. Olszewski, G. Rupprechter, T. Bürgi, N. Barrabés. "Ligand migration from cluster to support: A crucial factor for catalysis by thiolate-protected gold clusters", *ChemCatChem* **2018**, *10*, 5372-5376. (Front Cover Illustration) (Cited: 9)

7. G. Salassa*, T. Bürgi. "NMR spectroscopy: A potent tool for studying monolayer-protected metal nanoclusters", *Nanoscale Horiz.* **2018**, 3, 457-463. (Inside Cover Illustration) (Cited: 7)
8. A. Sels, G. Salassa, F. Cousin, L. Lay-Theng, T. Bürgi. "Covalently bonded multimers of $Au_{25}(SBut)_{18}$ as a conjugated system", *Nanoscale* **2018**, 10, 12754-12762. (Cited: 6)
9. B. Zhang, O. V. Safonova, S. Pollitt, G. Salassa, A. Sels, R. Kazan, Y. Wang, G. Rupprechter, N. Barrabés, T. Bürgi. "On the mechanism of rapid metal exchange between thiolate-protected gold and gold/silver clusters: a time-resolved in situ XAFS study", *Phys. Chem. Chem. Phys.* **2018**, 20, 5312-5318. (Cited: 10)
10. G. Salassa*, A. Sels, F. Mancin, T. Bürgi. "Dynamic Nature of Thiolate Monolayer in $Au_{25}(SR)_{18}$ Nanoclusters", *ACS Nano* **2017**, 11, 12609-12614. (Cited: 18)
11. A. Sels, G. Salassa, S. Pollitt, C. Guglieri, G. Rupprechter, N. Barrabés, T. Bürgi. "Structural investigation of ligand exchange reaction with rigid dithiol on doped (Pt, Pd) Au_{25} clusters", *J Phys. Chem. C* **2017**, 121, 10919-10926. (Cited: 11)
12. B. Zhang, G. Salassa, T. Bürgi. "Silver migration between $Au_{38}(SC_2H_4Ph)_{24}$ and doped $Ag_xAu_{38-x}(SC_2H_4Ph)_{24}$ nanoclusters", *Chem. Commun.* **2016**, 52, 9205-9207. (Front Cover Illustration) (Cited: 29)
13. M.-V. Salvia,† G. Salassa, ‡ F. Rastrelli, F. Mancin. "Turning supramolecular receptors into chemosensors by nanoparticle-assisted -NMR chemosensing-", *J. Am. Chem. Soc.* **2015**, 137 (35), 11399-11406. (‡co-first author) (Cited: 15)
14. A. Piserchia, M. Zerbetto, M.-V. Salvia, G. Salassa, L. Gabrielli, F. Mancin, F. Rastrelli, D. Frezzato. "Conformational mobility in monolayer-protected nanoparticles: from torsional free energy profiles to NMR relaxation", *J. Phys. Chem. C* **2015**, 119 (34), 20100-20110. (Cited: 10)
15. G. Salassa, J. W. Ryan, E. C. Escudero-Adán, A. W. Kleij. "Spectroscopic Properties of Zn(Salphenazine) Complexes and their Application in Small Molecule Organic Solar Cells", *Dalton Trans.* **2014**, 43, 210-221. (Cited: 16)
16. D. Anselmo, G. Salassa, E. C. Escudero-Adán, E. Martin, A. W. Kleij. "Merging Catalysis and Supramolecular Aggregation Features of Triptycene based Zn(salphen)s", *Dalton Trans.* **2013**, 42, 7962-7970. (Cited: 15)
17. D. Anselmo, R. Gramage-Doria, T. Besset, M. V. Escárcega-Bobadilla, G. Salassa, E. C. Escudero-Adán, M. M. Belmonte, E. Martin, J. N. H. Reek, A. W. Kleij. "Supramolecular Bulky Phosphines Comprising of 1,3,5-triaza-7-phosphaadamantane and Zn(salphen)s: Structural Features and Application in Hydrosilylation Catalysis", *Dalton Trans.* **2013**, 42, 7595-7603. (Cited: 8)
18. F. Castro-Gómez, G. Salassa, A. W. Kleij, C. Bo. "A DFT Study on the Mechanism for the Cycloaddition Reaction of CO_2 to Epoxides Catalyzed by Zn(salphen) Complexes", *Chem. Eur. J.* **2013**, 19, 6289-6298. (Cited: 168)
19. M. V. Escárcega-Bobadilla, G. Salassa, M. Martinez Belmonte, E. C. Escudero-Adan, A. W. Kleij. "Versatile Switching in Substrate Topicity: Supramolecular Chirality Induction in Di- and Trinuclear Host Complexes", *Chem. Eur. J.* **2012**, 18 (22), 6805-6810. (Cited: 21)
20. G. Salassa, M. J. J. Coenen, S. J. Wezenberg, B. L. M. Hendriksen, S. Speller, J. A. A. W. Elemans, A. W. Kleij. "Extremely Strong Self-Assembly of a Bimetallic Salen Complex Visualized at the Single-Molecule Level", *J. Am. Chem. Soc.* **2012**, 134 (16), 7186-7192. (Cited: 65)
21. C. J. Whiteoak, G. Salassa, A. W. Kleij. "Recent advances with π -conjugated salen systems", *Chem. Soc. Rev.* **2012**, 41 (2), 622-631. (Cited: 150)
22. E. C. Escudero-Adan, M. Martinez Belmonte, E. Martin, G. Salassa, J. Benet-Buchholz, A. W. Kleij. "A Short Desymmetrization Protocol for the Coordination Environment in Bis-Salphen Scaffolds", *J. Org. Chem.* **2011**, 76 (13), 5404-5412. (Cited: 12)
23. G. Salassa, A. M. Castilla, A. W. Kleij. "Cooperative Self-Assembly of a Macrocyclic Schiff Base Complex", *Dalton Trans.* **2011**, 40, 5236-5243. (Cited: 28)
24. S. J. Wezenberg, G. Salassa, E. C. Escudero-Adán, J. Benet-Buchholz, A. W. Kleij. "Effective Chirogenesis in a Bis(metallosalphen) Complex through Host-Guest Binding with Carboxylic Acids", *Angew. Chem. Int. Ed.* **2011**, 50, 713-716. (Back Cover Illustration) (Cited: 91)
25. L. Salassa, D. Gianolio, C. Garino, G. Salassa, E. Borfecchia, T. Ruiu, C. Nervi, R. Gobetto, R. Bizzarri, P. J. Sadler, C. Lamberti. "Structure of $[Ru(bpy)_n(AP)(6-2n)]^{2+}$ homogeneous complexes: DFT calculation vs. EXAFS", *J. Phys. Conf. Proc.* **2009**, 190, 012141. (Cited: 12)
26. L. Salassa, C. Garino, G. Salassa, C. Nervi, R. Gobetto, C. Lamberti, D. Gianolio, R. Bizzarri, P. J. Sadler. "Ligand-Selective Photodissociation from $[Ru(bpy)(4AP)_4]^{2+}$: a Spectroscopic and Computational Study", *Inorg. Chem.* **2009**, 48 (4), 1469-1481. (Cited: 54)

27. L. Salassa, C. Garino, **G. Salassa**, R. Gobetto, C. Nervi. "Mechanism of Ligand Photodissociation in Photoactivable $[Ru(bpy)_2L_2]^{2+}$ Complexes: A Density Functional Theory Study", *J. Am. Chem. Soc.* **2008**, 130 (29), 9590-9597. (Cited: 124)

Citations are reported accordingly Web of Science date 22/04/2020

* Corresponding author.

Granted Patent

- M. V. Salvia, **G. Salassa**, L. Gabrielli, S. Springhetti, D. Rosa Gastaldo, L. Trevisan, F. Rastrelli, F. Mancin, "Metodo per il rilevamento di molecole organiche mediante spettroscopia di risonanza magnetica nucleare assistita da nanoparticelle di oro", Brevetto n° PD102015000040417; 30/7/2015. "Organic molecules detecting method based on NMR spectroscopy assisted with gold nanoparticles." Italian Patent n° PD102015000040417; 30/1/2017
- M. V. Salvia, **G. Salassa**, L. Gabrielli, S. Springhetti, D. Rosa Gastaldo, L. Trevisan, F. Rastrelli, F. Mancin, "Organic molecules detecting method based on NMR spectroscopy assisted with gold nanoparticles." International Patent WO2017/017245A1; 2/2/2017

Funding

- FPU doctoral fellowship (4 years, 56,500 €), "Supramolecularly Associated Macrocycles based on Zn(salen) Scaffolds: New sensing and Catalytic Materials". April 2010.
- Marie Skłodowska-Curie Action individual fellowship (2 years, 175,419.60 €), "Intrinsically chiral gold nanoclusters as enantiodiscriminating sensors for methamphetamines" (GoldEnSens, Grant N°747209). February 2017.

Contributions to Meetings and Conferences

1. **Oral** presentation entitled "Atomically Precise Metal Nanoclusters, Frontiers in chirality and Reactivity" webinar for the Universidad del Atlántico, Barranquilla (Colombia), 26th August 2020 - Invited speaker.
2. **Oral** presentation entitled "The dynamic origin of chirality transfer between chiral surface and achiral ligand in Au₃₈ clusters" at CECAM workshop "Challenges in modelling and simulations of nanoparticles in complex environments", IIT Genoa (Italy), 29th- 31st May 2019 - Invited speaker.
3. **Oral** presentation entitled "Mechanism of chirality transfer from the gold surface to the thiolate monolayer in Au₃₈(SR)₂₄ cluster" at 19th the International Symposium on Small Particles and Inorganic Clusters (ISSPICXIX), Hangzhou (China), 12th- 17th August 2018.
4. **Oral** presentation entitled "Mechanism of chirality transfer from the gold surface to the thiolate monolayer in Au₃₈(SR)₂₄ cluster" at 43rd International Conference on Coordination Chemistry ICC43, Sendai (Japan), 30th July -4th August 2018.
5. **Oral** presentation entitled "Dynamic nature of thiolate monolayer in Au₂₅(SR)₁₈ nanoclusters" at 255th ACS National Meeting & Exposition, New Orleans (United States), 18th- 22th March 2018.
6. **Poster** presentation entitled "¹H-NMR and MALDI investigation of thiol-exchange reaction in Au₂₅(SR)₁₈ cluster" at the Swiss Chemical Society fall meeting (SCS17), Bern (Switzerland), 21th- 22th August 2017.
7. **Oral** presentation entitled "Understanding of self-organization process in monolayer protected gold nanocluster" for the "future leader on stage" section at the Swiss Chemical Society fall meeting (SCS17), Bern (Switzerland), 21th- 22th August 2017.
8. **Oral** presentation entitled "¹H-NMR and MALDI investigation on the affinity of different thiols for the monolayer of Au₂₅(SR)₁₈ clusters" at the International Symposium on Monolayer-Protected Clusters (ISMP17), Monte Verità (Switzerland), 13th- 16th August 2017 - Awarded best oral presentation.
9. **Poster** presentation entitled "Ag doped Au₃₈(SC₂H₄Ph)₂₄ nanocluster: silver migration and chiroptical properties" at the International Conference on Self-Assembly in Confined Spaces (SACS16), San Sebastián (Spain), 25th- 27th October 2016 - Awarded poster prize.
10. **Poster** presentation entitled "¹H- and ¹⁹F-NMR investigation of thiol-exchange reaction in Au₂₅(SC₂H₄Ph)₁₈ cluster" at the International Symposium on Small Particles and Inorganic Clusters (ISSPICXVIII), Jyväskylä (Finland), 14th- 19th August 2016.
11. **Poster** presentation entitled "Turning Supramolecular Receptors into Chemosensors by Nanoparticle-Assisted NMR Chemosensing" at XII Congresso Nazionale di Chimica Supramolecolare (Supramol 2015), Giardini Naxos (Italy), 27th- 30th September 2015.

12. Poster presentation entitled "Influence of H-Bonds on the Stability of the Thiol Monolayers in Gold Nanoparticles" at The European-Winter School on Physical Organic Chemistry (E-WiSPOC), Bressanone (Italy), 1st- 6th February 2015.
13. Oral and Poster presentation entitled "Turning supramolecular receptors into NMR chemosensors" at XXV Congresso Nazionale della Società Chimica Italiana (SCI 2014), Rende (Italy), 7th- 12th September 2014.
14. Poster presentation entitled "Turning supramolecular receptors into NMR chemosensors" at the 2014 Gordon Conference on "Noble Metal Nanoparticles", South Hadley (United States), 15th- 20th June 2014.
15. Oral and Poster presentation entitled "Towards Self-Assembled Functional Materials based on Metallosalens" at The European-Winter School on Physical Organic Chemistry (E-WiSPOC), Bressanone (Italy), 2nd- 7th February 2014.
16. Oral presentation entitled "Towards Self-Assembled Functional Materials based on Metallosalens" at ICIQ seminar program 2012, Tarragona (Spain), 20th December 2012.
17. Oral presentation entitled "Extremely Strong Self-Assembly of a Bimetallic Salen Complex Visualized at the Single-Molecule Level" at 40 International Conference on Coordination Chemistry (ICCC40), Valencia (Spain), 9th- 13th September 2012.
18. Oral presentation entitled "Extremely Strong Self-Assembly of a Bimetallic Salen Complex Visualized at the Single-Molecule Level" at 244th ACS National Meeting & Exposition, Philadelphia (United States), 19th- 23th August 2012.
19. Oral and Poster presentation entitled "Extremely Strong Self-Assembly of a Bimetallic Salen Complex Visualized at the Single-Molecule Level" at CEICS Nobel Campus "Chemistry for Life"; Vilaseca (Spain), 1st- 4th July 2012.
20. Poster presentation entitled "Extremely Strong Self-Assembly of a Bimetallic Salen Complex Visualized at the Single-Molecule Level" at Zing Coordination Chemistry Conference; Xcaret (Mexico), 9th- 13th December 2011 - Awarded poster prize.
21. Poster presentation entitled "Self-Assembly of a Macrocyclic Schiff Base Complex" at 1st EuCheMS Inorganic Chemistry Conference (EICC), Manchester (UK), 11th- 14th April 2011.
22. Poster presentation entitled "Supramolecular Aggregation of Macrocyclic Metallosalens" at XIth Netherlands Catalysis and Chemistry Conference (NCCC), Noordwijkerhout (Holland), 1st- 3rd March 2010.
23. Participation at ICIQ Summer school 2009, Institute of Chemical Research of Catalonia (ICIQ), 20th- 24th July 2009.

Languages

English (fluent), **Spanish** (fluent), **French** (intermediate) and **Italian** (native).

Computer expertise

Frequent user of Windows (from 95 to 10 versions) and Linux (Ubuntu, Suse), Microsoft Office, online bibliographic searching and reference manager software (Scifinder Scholar, ISI Web of Knowledge, End Note and Mendely), ChemOffice, Origin, 3D molecular graphic softwares (Chimera, Gaussview, Mercury and Jmol).

Supervising and teaching activities

- Lecture for the spectroscopy course, first year master in chemistry of University of Geneva. **03/05/2019.**
- Demonstrator in teaching laboratory (Travaux Pratiques) of physical chemistry (vibrational circular dichroism), third year of Chemistry course in University of Geneva. **May-June 2019.**
- Supervision of Ph.D. student thesis of Annelies Sels on "Atomically Precise Metal Cluster Building Blocks" which led to two publications. **2016-2018.**
- Supervision of the undergraduate thesis of Lucia Trevisan entitled "Synthesis and characterisation of crown-ether functionalised gold nanoparticles and their application in NMR-sensing." **January-June 2015.**
- Demonstrator in teaching laboratory of organic chemistry, first year of Chemistry course in University of Padua. **May 2014.**
- Participation at the 7th NEMEC "Non é magia, è chimica/ It's not magic, it's chemistry" organized

by the University of Padua. 13/10/2014 (Scientific divulgation for young kids)

Experimental skills gained during the research experience

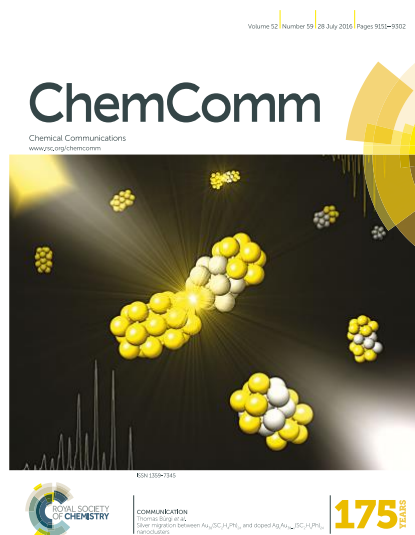
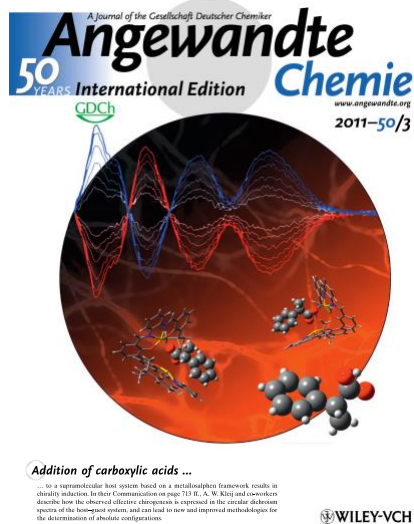
- Small gold nanoparticles/cluster synthesis and standard characterization.
- Purification techniques for nanosystems (e.g. size exclusion chromatography, HPLC etc.).
- Synthesis of thiol-containing molecules for the functionalization of gold nanoparticles (intermediate knowledge of organic synthesis).
- NMR-based techniques for the characterisation gold nanosystems, the investigation of their structural properties and the investigation of interaction/reactivity of their protecting monolayer.
- Chiral optical spectroscopy (circular dichroism electronic and vibrational).
- DFT methods (Gaussian 03/09 and ADF) and his applications in computational photochemistry, structural optimization, and reaction mechanism.
- Determination of binding constants through spectroscopy method.
- Structural analysis by X-ray absorption techniques (EXAFS, XANES).
- Synthesis of transition metal complexes, metallo-supramolecular architectures (e.g. macrocycles, supramolecular metallo-complex polymers and monolayer-protected gold nanoparticles).
- Preparation of novel Zn(salphen) complexes and investigation of their self-assembly, photophysical and catalytic properties.
- Synthesis and characterization of photoactivable Ru complexes.
- Mass spectrometry: MALDI-TOF and ESI-MS.
- Microscopy techniques: STM, TEM.
- Dynamic Light Scattering.
- UV-Vis, Fluorescence and Infrared.

Research expeditions

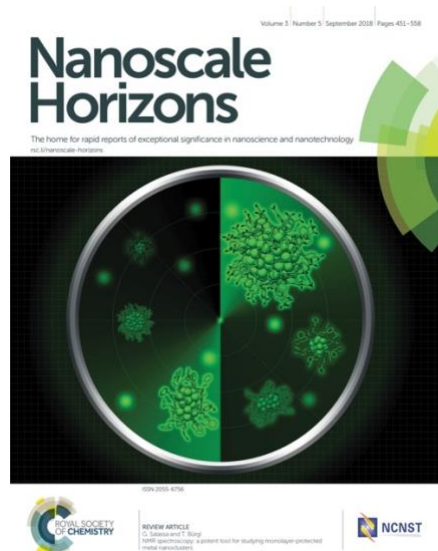
- 1) Synchrotron experiments (EXAFS) at ESRF (Grenoble, France), BM29, 3-4 Mar. 2008. Proposal number CH-2604 entitled "*Excited state investigation of photoactivable Ru anticancer complexes*".
- 2) Synchrotron experiments (EXAFS & XAS) at ELETTRA (Trieste, Italy), BM29, 11-17 Feb. 2016. Proposal number 20155134 entitled "*Structural determination of thiolate-protected gold nanoclusters with mixed thiolate shells*".
- 3) Synchrotron experiments (EXAFS & XAS) at ALBA (Barcelona, Spain), BL22 - CLAEISS, 1-4 Jun. 2016. Proposal number 2015091489 entitled "*Catalytic activity of metal oxides supported Aun(SR)m nanoclusters in oxidation reaction*".
- 4) Synchrotron experiments (EXAFS & XAS) at ALBA (Barcelona, Spain), BL22 - CLAEISS, 16-18 Feb. 2017. Proposal number 2016091918 entitled "*Oxidation treatment and reaction effect on supported Aun(SR)m nanoclusters: S-Kedge operando study*".
- 5) Synchrotron experiments (EXAFS & XAS) at PSI-SLS (Villigen, Switzerland), Super-XAS, 6-10 Apr. 2017. Proposal number 20161366 entitled "*Structure-activity study of supported CoAu₂₄(SC₂H₄Ph)₁₈ and Co_x(SC₂H₄Ph)_m clusters on CeO₂ under CO oxidation by in situ EXAFS studies*".
- 6) Synchrotron experiments (EXAFS & XAS) at PSI-SLS (Villigen, Switzerland), Super-XAS, 11-15 May 2017. Proposal number 20161450 entitled "*Mechanism study of Ag migration between Au₃₈ and Ag_xAu_{38-x} nanoclusters by in situ QEXAFS*".
- 7) NMR experiments at CERM (Florence, Italy), 4-6 December 2017. Proposal entitled: "*NMR investigation of the chirality in Au₃₈(SBut)₂₄ clusters*".

Journal covers

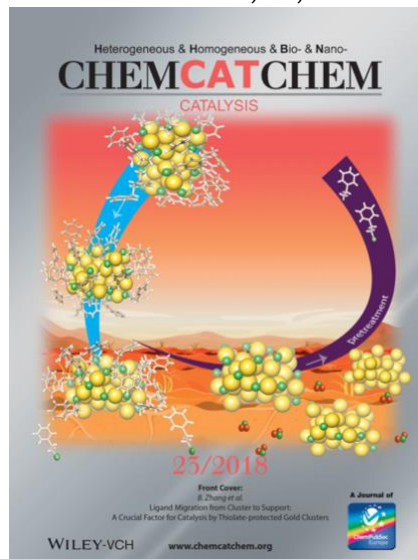
Angew. Chem. Int. Ed. 2011, 50, 713-716 Chem. Commun. 2016, 52, 9205-9207



Nanoscale Horiz. 2018, 3, 457-463



ChemCatChem 2018, 10, 5372-5376



Data

15/09/2020

Luogo

Ginevra