

Short-CV Prof. Dr. Antoni Llobet

- Full Professor of Chemistry at the Universitat Autònoma de Barcelona (Spain)
- Group Leader at the Institute for Chemical Research of Catalonia (ICIQ), Tarragona (Spain)

orcid.org/0000-0002-6176-5272

Researcher ID: C-3296-2016

Google Scholar: <https://scholar.google.com/citations?user=HUFs-I8AAAAAJ&hl=ca>

Professional Appointments and Key Dates:

Sept 1977 - June 1982	Bachelors Chemistry Studies, Univ. Autònoma de Barcelona (UAB)
July 1982 - June 1983	Master, UAB (Prof. J. Casabo)
July 1982 – July 1985	PhD, UAB (Prof. F. Teixidor)
Aug. 1985 – Nov. 1987	Postdoc, Univ. of North Carolina, USA (Prof. T. J. Meyer)
Dec. 1987 – 1990 Feb.	Associate Prof. UAB
March 1990 – June 1990	Dow Corning-University of Sussex, Researcher
July 1989 – Dec. 1990	Scientific Officer, Commission of European Communities, Brussels, Belgium
Jan. 1991 – Sept. 1993	Senior Research Associate, Texas A&M University, USA (Prof. Sawyer & Martell)
Feb. 1993 – Nov. 2004	Associate Prof/Full Prof. (since 2000), Univ. de Girona (UG), Spain
Sept. 2011 – July 2013	Guest Professor at, Department of Bioinspired Science, Ewha Womans University, Seoul (Korea)
Dec. 2004 -	Full Prof. UAB
Sept. 2006 -	Group Leader, Institute of Chemical Research of Catalonia (ICIQ)

Awards and Fellowships:

- 1985 (2 years) Fulbright “La Caixa” grant. Post-Doct Uni. of North Carolina, USA (Prof. T. J. Meyer)
- 1988 (3 months) Visiting Professor, University of North Carolina, USA (Prof. T. J. Meyer)
- 1989 (4 months) Visiting Professor, Univ. Joseph Fourier, Grenoble, France (Prof. A. Deronzier)

1993 (4 months) Visiting Professor, Texas A&M University, USA (Prof. A. E. Martell)

1995 (3 months) Visiting Professor, Universität Basel, Switzerland (Prof. A. Zuberbühler)

2000 (1 month) Visiting Professor, Stanford University, USA (Prof. T.D. P. Stack)

2004 (3 month) Visiting Professor, University of Minnesota, USA (Prof. C. J. Cramer)

2015 (1 month) Visiting Professor, Universite Bretagne Occidental, France. (Prof. Y LeMest)

2000 Recipient of the Distinction Award for “Young Scientists” from the Catalan Government

2011 Recipient of the Bruker-Inorganic Chemistry Award, from Spanish Royal Society (RSEQ).

2012 Recipient of the “Hermanos Elhuyar-Hans Goldschmidt” lecture, awarded jointly by the RSEQ and the German Chemical Society (GDCh).

2018 Recipient of the “Animesh Chakravorty” Endowment Lecture by the Chemical Research Society of India (CRSI).

2018 Recipient of the “Alexander von Humboldt Research Award” for a career achievement awarded by the Humboldt Foundation in Germany.

2023 Recipient of the “Sigma-Aldrich Lecture Award” delivered at Stockholm University in honor of Prof. Björn Åkermark.

Referee:

- Member of the Editorial Advisory Board:
 - a) *Catalysis Science and Technology* (*Cat. Sci. Technol.*) from the Royal Society of Chemistry, UK. Since January 2014.
 - b) *Inorganic Chemistry* (*Inorg. Chem.*) from the American Chemical Society, USA. From January 2015 till December 2016.
 - c) *European Journal of Inorganic Chemistry* (*Eur. J. Inorg. Chem.*) from Wiley-VCH., Since January 2017.
 - d) *Artificial Photosynthesis*, from the American Chemical Society, USA. Since January 2024

- Referee of international journals: Science, Nature, Nature Chemistry, Journal of the American Chemical Society, Angewandte Chemie, Chemical Science, Chemistry A European Journal, Inorganic Chemistry, European Journal of Inorganic Chemistry, etc.

- Referee of projects from: Department of Energy (USA), Petroleum Research Fund (ACS-USA), National research agencies of Holland, Italy, France, Argentina and Mexico and from all levels of Spanish national and local research system.
- Evaluation of prestigious academic institutions: Leiden Institute of Chemistry, Univ. of Leiden the Netherlands; The Institute of Basic Science at the Korean Advanced Institute for Science and Technology, (KAIST), Daejeon, Korea.
- Member of the Eurobic Medal Award Committee funded by the European Biological Inorganic Chemistry Conference.

Other

- Recipient of multiple competitive research projects from the Local Government, Spanish Government, European Government and from the Petroleum Research Fund from the American Chemical Society.
- Directed, as research advisor, 31 successfully defended PhD thesis in the field of inorganic chemistry and water oxidation.
- Have held administrative positions such as: Director of the Chemistry Department (UG), Vice-President for Research (UG), President of the Foundation "University and Future" (UG).
- Chairman of the international congress: "Molecules and Materials for Artificial Photosynthesis" held in Cancun, Mexico on February 2014, 2016 and 2018.
- Chairman of the 4th International Conference on Proton Coupled Electron Transfer (PCET4, [Pcet4](#)) to be held in Tarragona, 2023.

Publications and Invited Lectures:

Number of total publications in journals with referees > 250

H_{index}: 61 Web of Science
67 Google Scholar

Reaching close to 900 citations per year in 2014, 2015 and over 1000 in 2016 and onwards

Invited Lectures at International Conferences and Departments around the world during the last 9 years > 120

Invited lectures.

- 2008** Departement de Chimie Physique, Université de Genève, Switzerland
IU CINQUIMA, Valladolid, Spain
COST Chemistry D40, Tarragona, Spain
ICCC-38, Jerusalem, Israel
REQOMED IV, Girona, Spain
SOLAR-H₂ Summer School, Angstrom Laboratories, Uppsala, Sweden
SOLAR-H₂, Bochum, Germany
- 2009** Johannes Kepler University, Linz, Austria
IBITECS, CEA, Saclay-Orsay, France
Freie Universität Berlin, Germany
Dipartimento di Scienze Chimiche, Università degli Studi di Padova, Italy
IU de Química Organometálica "Enrique Moles", Oviedo, Spain
ACC1Ó, Barcelona, Spain
FIGIPAS -10, Palermo, Italy
Molecular Science for Solar Fuel, Sigtuna, Sweden
CONSOLIDER-INTECAT, Teruel, Spain
- 2010** "Frontiers in Inorganic Chemistry" (FIC-2010), Kolkata, India
ORCAS- 2010, Friday Harbour, WA, USA
ChemComm Symposium, Osaka, Japan
ChemComm Symposium, Seoul, South Korea
NiKas-Symposium (CaSuS Prog.), Göttingen, Germany
EUROBIC, Tessaloniki, Greece
IRMG, Erlagen, Germany
ISHC-17, Poznan, Poland
SOLAR H₂ Berlin, Germany
CONSOLIDER-INTECAT, Tarragona, Spain
- 2011** University College, Dublin, Ireland
ICMAB, Barcelona, Spain
8th International School of Organometallic Chemistry, Camerino, Italy
ZING Conferences, Cancún, Mexico
Gordon Conference on Inorganic Reaction Mechanisms, Galveston, TX, USA
EICC-1, University of Manchester, UK
XXIX Jornadas Chilenas de Química, Quinamávida, Chile
SOLAR H₂, Gottröra, Sweden
Escuela de Verano Fotónica y Fotovoltáica, Tarragona, Spain
UNIST Workshop, Ulsan, South Korea
Gordon Conference on Renewable Energy, Ventura, CA, USA
- 2012** School of Chemical and Bioprocess Engineering, University College Dublin, Ireland
8th ECHEMS Meeting, Bertinoro, Italy
QIES-2012, University of Girona, Catalonia, Spain
International Conf. on Nanostructured Systems for Solar Fuel Production, Mallorca, Spain
Département de Chimie Moléculaire, Université Joseph Fourier, Grenoble,

Solar to Fuels: Towards an Artificial Leaf, Imperial College, London
AsBIC-2012, The 6th Asian Biological Inorganic Chemistry Conference, Hong Kong, China
Institut für Anorganische Chemie-University of Stuttgart, Stuttgart, Germany
Trinity College Dublin, Dublin, Ireland
Van 't Hoff Institute for Molecular Sciences, University of Amsterdam, Holland
3rd International Symposium on Solar Cells and Solar Fuels, Dalian, China.
Intl. Symp. on Activation of O₂ & Homogeneous Cat. Ox. (ADHOC 2012), Jerusalem, Israel
PERSPECT H₂O COST MEETING. EU-Cost Action CM1202, Brussels, Belgique

2013 Fakultät für Chemie, Georg-August-Universität, Göttingen, Germany
Institut für Chemie, Humboldt-Universität zu Berlin, Berlin, Germany
Solar Fuels Meeting, Univ. Jaume I, Castello, Spain
Solar Fuels Summer School (Technische Universität Darmstadt), Ellwangen, Germany
COST MEETING EU-Cost Action CM1205, Utrecht, Holland
School of Chemistry & Chemical Biology -University College Dublin, Dublin, Ireland
Department of chemistry, Stockholm University, Sweden
Simposium Química Organometálica y Catálisis Homogénea,RSQE, Santander, Spain
Wissenschaftsforum Chemie 2013, Darmstadt, Germany
MRS Spring Meeting. Materials Research Society, San Francisco, USA
PERSPECT H₂O COST MEETING. EU-Cost Action CM1202, Prague, Czech Republic
Symposium: "Impact of the Coordination Chemistry in 100 Years", UNAM, Mexico D.F.
Department of Chemistry- University of Zürich, Zürich, Switzerland

2014 ICFO, Castelldefels, Barcelona, Spain
Université Aix Marseille, Marseille, France
University of Leiden, Leiden, Holland
EUROBIC-12, University of Zürich, Switzerland
ACS, Renewable Energy Generation at Interface Theory-Experiment, San Francisco, USA
Sustainable Hydrogen and Fuels-Status and Perspectives, Rostock, Germany
Challenges and Opportunities Solar Driven Fuels Synthesis, Imperial College, London, UK
KAUST Catalysis Center, University of KAUST, Saudi Arabia

2015 Residència d'Investigadors CSIC, Barcelona, Spain
Departement de Chimie, Université, Bretagne de Occidentale, Brest, France
Laboratoire d'électrochimie moléculaire, Université Paris Diderot, Paris, France
Ecole Doctorale de Chimie Moléculaire, Université Pierre et Marie Curie, Paris, France
Laboratoire de Chimie et Biochimie, Université Paris Descartes, Paris, France
Departement de Chimie, Université de Nantes, France
School of Chemistry, Newcastle University, Newcastle, UK
ICIQ-Unicat Summer School, Technische Universität Berlin, Berlin, Germany
Georg-August-Universität Göttingen, Göttingen, Germany
Nanostructured materials for light harvesting technologies, IMDEA Mat., Madrid, Spain
International Conference on Photochemistry, Jeju Island, Korea
ACS Fall Meeting "Innovation: From Discovery to Application", Boston, USA
PERSPECT-H₂O COST Action CM1202, Gdansk, Poland
6th EuCheMS Conference on Nitrogen Ligands, Beaune, France
Pacifichem 2015 Homogeneous Water Splitting Reactions, Hawaii, USA

- 2016** KAUST Artificial Photosynthesis Meeting, Thuwal, Saudi Arabia
 2nd Molecules and Materials For Artificial Photosynthesis Conference, Cancun, Mexico
 Dalton 2016 Joint Interests Group Meeting, University of Warwick, Coventry, UK
 Laboratoire de Chimie de Coordination, Toulouse, France
 Tsinghua University, Beijing, China
 Beijing University, Beijing, China
 Chinese Academy of Sciences, Beijing, China
 42nd International Conference on Coordination Chemistry, Brest, France
 KAIST (Korea Advanced Institute of Science and Technology) Daejeon, Korea
 Ewha Womans University, Seoul, Korea
 Brookhaven National Laboratory, Long Island, New York, USA
 252 ACS Meeting, Philadelphia, Manipulating Energy and ET in Molec. and Devices, USA.
 Perspect-H2O Final Cost Meeting, Milazzo, Italy.
 Solar Fuels i-Core meeting, Kibbutz Nahsholim Hotel, Israel.
 Cecam, Interface processes in photochemical water splitting: Theory&Exp, Lausanne, CH.
 Department of Chemistry, University of Fribourg, CH.
 SERC-Conf-2016, Energy Storage: Funda. to App., Univ. of North Carolina, Chapel Hill, USA
 Department of Chemistry, Charles University, Prague, Czech Republic.
 Department of Chemistry, Technical University of Vienna, Austria
 Department of Chemistry, Stockholm University, Sweden
- 2017** Umeå Renewable Energy Meeting 2017, Umea, Sweden
 Carisma COST meeting, Lisbon, Portugal
 EuChems Inorganic Chemistry Conference, EICC-4, Copenhagen, Denmark
 XXXVI Reunión bienal de la Real Sociedad Española de Química, Sitges, Spain
 6th SolTech Conference, 2017, Solar GoHybrid, Munich, Germany
 1st Ulm Symposium on Solar-Driven Chemistry, Ulm, Germany
 Department of Chemistry, Ben Gurion University, Beer Sheva, Israel
 Department of Chemistry, Weizmann Institute of Science, Revohov, Israel
- 2018** 5th Int. Workshop on Solar Energy for Sustain., Nanyang Technological Uni. Singapore
 Hybrid and Organic Photovoltaics (HOPV2018) (28-31/05/2018), Benidorm, Spain
 Department Chemie und Pharmazie, Universität Erlangen, Erlangen, Germany
 3rd Int. Conf. on Proton-Coupled Electron Transfer (PCET2018), Blowing Rock, NC USA
 European Colloquium on Inorganic Reaction Mechanisms (ECIRM2018), Barcelona, Spain
 Animesh Chakravorty Endowment Lect., 23rd CRSI Nat. Symp. Chem., IISER Bhopal, India
 Annual Nanotechnology Conference NANOMAT, Wien, Austria
 Nuevas formas de almacenamiento energía, Univ. Buenos Aires, Argentina.
 Inst. for New Energy Materials and Low Carbon Tech., Tianjin Univ. of Technology, China.
 Int. Research Center for Renewable Energy, Xi'an Jiaotong University, Xi'an, China
 8ª Jornada de Jóvenes Investigadores (Química y Física) de Aragón. Zaragoza, Spain.
 Department of Chemistry, University of Cambridge, Cambridge, UK.
- 2019** Otago Future Fuels, Dunedin, New Zealand. 7-8/2/2019
 Adv. Materials & Nanotechnology 2019, (AMN9) Wellington, New Zealand. 10-14/2/2019
 European Materials Research Society, EMRS, Spring Meeting, Nice, France. 27-31/5/2019.
 Department of Chemistry, University of Wurzburg, Germany. 13/06/2019
 Center for Nanosystems Chemistry, Univ. of Wurzburg, Germany. 26/06/2019.

Photochemistry Gordon Res. Conf., Stonehill College, Boston MA, USA. 14-19/7/2019.
Int. Congress Photobiology, 2019 ESP-UPB, Light and Life, Barcelona, Spain. 25-30/8/2019.
ICASEC Summer School 2019. Univ. of Göttingen, Germany. 6-9/10/2019.
Ernst Haage Symposium 2019, Max Planck Institute in Mülheim, Germany. 11-13/11/2019
Southern University of Science and Technology, Shenzhen, China. 6/12/2019.
Dept of Chemistry, Tongji University., Shanghai, China. 9/12/2019.

Selected publications

1. "Complete σ^* Intramolecular Aromatic Hydroxylation Mechanism through O₂ Activation by a Macrocyclic Dinuclear Copper(I) Complex"
J. Am. Chem. Soc. **2008**, *130*, 17710-17711.
Poater, A.; Ribas, X.; Cavallo, L.; Llobet, A.; Sola, M.
2. "Oxygen-oxygen bond formation by the Ru-Hbpp water oxidation catalyst occurs solely via an intramolecular reaction pathway"
J. Am. Chem. Soc. **2009**, *131*, 2768-2769.
Romain, S.; Bozoglian, F.; Sala, X.; Llobet, A.
3. "Water oxidation catalysts based on transition metal complexes"
Angew. Chem. Int. Ed. **2009**, *48*, 2842-2852.
Sala, X.; Romero, I.; Rodríguez, R.; Escriche, L.; Llobet, A.
4. "The Ru-Hbpp Water Oxidation Catalyst"
J. Am. Chem. Soc. **2009**, *131*, 15176-15187.
Bozoglian, F.; Romain, S.; Ertem, M. Z.; Todorova, T. K.; Sens, C.; Mola, J.; Rodríguez, M.; Cramer, C. J.; Gagliardi, L.; Llobet, A. et al.
5. "Water Oxidation at a Tetraruthenate Core stabilized by Polyoxometalate Ligands: Experimental and Computational Evidence to trace the Competent Intermediates"
J. Am. Chem. Soc. **2009**, *131*, 16051-16053.
Sartorel, A.; Miro, P.; Salvadori, E.; Romain, S.; Carraro, M.; Scorrano, G.; Di Valentin, M.; Llobet, A.; Bo, C.; Bonchio, M.
6. "Oxygen-Oxygen Bond Formation Pathways Promoted by Ru Complexes"
Acc. Chem. Res. **2009**, *42*, 1944-1953.
Romain, S.; Vigara, L.; Llobet, A.
7. "Facile C-H bond cleavage via a proton coupled electron transfer involving a C-H \cdots CuII interaction".
J. Am. Chem. Soc. **2010**, *132*, 12299-12306.
Ribas, X.; Calle, C.; Poater, A.; Casitas, A.; Gomez, L.; Xifra, R.; Parella, T.; Benet-Buchholz, J.; Schweiger, A.; Mitrikas, G.; Sola, M.; Llobet, A.; Stack, T. D. P.
8. "The cis-[Ru^{II}(bpy)₂(H₂O)₂]²⁺ Water-Oxidation Catalyst Revisited"
Angew. Chem. Int. Ed. **2010**, *49*, 7745-7747.
Sala, X.; Ertem, M. Z.; Vigara, L.; Todorova, T. K.; Chen, W.; Rocha, R. C.; Cramer, C. J.; Gagliardi, L.; Llobet, A.
9. "Water Oxidation in the Context of the Energy Challenge: Tailored Transition-Metal Catalysts for Oxygen-Oxygen Bond Formation".
Angew. Chem. Int. Ed. **2011**, *50*, A30-A33.
Llobet, A.; Meyer, F.

10. "A Molecular Ruthenium Catalyst with the Water-Oxidation Activity Comparable to that of Photosystem II"
Nat. Chem. **2012**, *4*, 418-423.
Duan, L.; Bozoglian, F.; Mandal, S.; Stewart, B.; Privalov, T.; Llobet, A. Sun, L.
11. "Ligand Geometry Directs O-O Bond Formation Pathway in New trans-RuHbpp Based Water Oxidation Catalyst"
Angew. Chem. Int. Ed. **2012**, *51*, 5967-5970.
Maji, S.; Vigarà, L.; Cottone, F.; Bozoglian, F.; Benet-Buchholz, J.; Llobet, A.
12. "Catalytic Four-Electron Reduction of Dioxygen via Rate-Determining Proton-Coupled Electron Transfer to a Dinuclear Cobalt- μ -1,2-Peroxo Complex"
J. Am. Chem. Soc. **2012**, *134*, 9906-9909.
Fukuzumi, S.; Mandal, S.; Mase, K.; Ohkubo, K.; Park, H.; Benet-Buchholz, J.; Nam, W.; Llobet, A.
13. "Synthesis, Electronic Structure and Magnetism of $[\text{Ni}(\text{6-Mes})_2]^+$: A Two-Coordinate Nickel(I) Complex Stabilized by Bulky N-Heterocyclic Carbenes"
J. Am. Chem. Soc. **2013**, *135*, 13640-13643.
Poulten, R. C.; Page, M. J.; Algarra, A. G.; Le Roy, J. J.; Lopez, I.; Carter, E.; Llobet, A.; Macgregor, S. A.; Mahon, M. F.; Murphy, D. M.; Murugesu, M.; Whittlesey, M. K.
14. "Protonation Equilibrium and Hydrogen Production by a Dinuclear Cobalt- μ -Hydride Complex Reduced by Cobaltocene with Trifluoroacetic Acid"
J. Am. Chem. Soc. **2013**, *135*, 15294-15297.
Mandal, S.; Shikano, S.; Yamada, Y.; Lee, Y.-M.; Nam, W.; Llobet, A.; Fukuzumi, S.
15. "A Self-improved Water Oxidation Catalyst; Is One Site Really Enough?"
Angew. Chem. Int. Ed. **2014**, *53*, 205-210.
López, I.; Ertem, M. Z.; Maji, S.; Benet-Buchholz, J.; Keidel, A.; Kuhlmann, U.; Hildebrandt, P.; Cramer, C. J.; Batista, V. S.; Llobet, A.
16. "Molecular Water Oxidation Mechanisms Followed by Transition Metals: State of the Art"
Acc. Chem. Res., **2014**, *47*, 504-516.
Sala, X.; Maji, S.; Bofill, R.; García-Antón, J.; Escriche, L.; Llobet, A.
17. "New Powerful and Oxidatively Rugged Dinuclear Ru WOCs: Control of Mechanistic Pathways by Tailored Ligand Design"
J. Am. Chem. Soc. **2014**, *136*, 24-27.
Neudeck, S.; Maji, S.; López, I.; Meyer, S.; Meyer, F.; Llobet, A.
18. "Molecular Artificial Photosynthesis"
Chem. Soc. Rev., **2014**, *43*, 7501-7519.
Berardi, S.; Drouet, S.; Francàs, L.; Gimbert-Suriñach, C.; Guttentag, M.; Richmond, C.; Stoll, T.; Llobet, A.
19. "Efficient and Limiting Reactions in Aqueous Light-Induced Hydrogen Evolution Systems Using Molecular Catalysts and Quantum Dots"
J. Am. Chem. Soc. **2014**, *136*, 7655-7661.
Gimbert-Suriñach, C.; Albero, J.; Stoll, T.; Fortage, J.; Collomb, M.-N.; Deronzier, A.; Palomares, E.; Llobet, A.
20. "Redox Non-Innocent Ligand Controls Water Oxidation Overpotential in a New Family of Mononuclear Cu-Based Efficient Catalysts"
J. Am. Chem. Soc. **2015**, *137*, 6758-6761.
Garrido-Barros, P.; Funes-Ardoiz, I.; Drouet, S.; Benet-Buchholz, J.; Maseras, F.; Llobet, A.

21. "Intramolecular proton transfer boosts water oxidation catalyzed by a Ru complex"
J. Am. Chem. Soc. **2015**, *137*, 10786-10795.
Matheu, R.; Ertem, M.Z.; Benet-Buchholz, J.; Coronado, E.; Batista, V. S.; Sala, X.; Llobet, A.
22. "Tracking the Structural and Electronic Configurations of a Cobalt Proton Reduction Catalyst in Water".
J. Am. Chem. Soc. **2016**, *138*, 10586-10596.
Moonshiram, D.; Gimbert-Suriñach, C.; Guda, A.; Picon, A.; Lehmann, C. S.; Zhang, X.; Doumy, G.; March, A. M.; Benet-Buchholz, J.; Soldatov, A.; Llobet, A.; Southworth, S. H.
23. "A Million Turnover Molecular Anode for Catalytic Water Oxidation."
Angew. Chem. Int. Ed. **2016**, *55*, 15382-15386.
Creus, J.; Matheu, R.; Peñafiel, I.; Moonshiram, D.; Blondeau, P.; Benet-Buchholz, J.; García-Antón, J.; Sala, X.; Godard, C.; Llobet, A.
24. "Structural and Spectroscopic Characterization of Reaction Intermediates Involved in a Dinuclear Co-Hbpp Water Oxidation Catalyst."
J. Am. Chem. Soc. **2016**, *138*, 15291-15294.
Gimbert-Suriñach, C.; Moonshiram, D.; Francas, L.; Planas, N.; Bernales, V.; Bozoglian, F.; Guda, A.; Mognon, L.; López, I.; Hoque, Md A.; Gagliardi, L.; Cramer, C. J.; Llobet, A.
25. "Photoelectrochemical Behavior of Molecular Ru-Based Water-Oxidation Catalysts Bound to TiO₂-Protected Si Photoanodes".
J. Am. Chem. Soc. **2017**, *139*, 11345-11348.
Matheu, R.; Moreno-Hernandez, I. A.; Sala, X.; Gray, H. B.; Brunschwig, B. S.; Llobet, A.; Lewis, N. S.
26. "Electronic π -delocalization Boosts Catalytic Water Oxidation by Cu(II) Molecular Catalysts Heterogenized on Graphene Sheets."
J. Am. Chem. Soc. **2017**, *139*, 12907-12910.
Garrido-Barros, P.; Gimbert-Suriñach, C.; Moonshiram, D.; Picon, A.; Monge, P.; Batista, V. S.; Llobet, A.
27. "The development of molecular water oxidation catalysts"
Nat. Rev. Chem. **2019**, *3*, 331-341.
Matheu, R.; Garrido-Barros, P.; Gil-Sepulcre, M.; Ertem, M. Z.; Sala, X.; Gimbert-Suriñach, C.; Llobet, A.
28. "Seven Coordinated Molecular Ruthenium–Water Oxidation Catalysts: A Coordination Chemistry Journey"
Chem. Rev. **2019**, *119*, 3453-3471.
Matheu, R.; Ertem, M. Z.; Gimbert-Suriñach, C.; Sala, X.; Llobet, A.
29. "Second Coordination Sphere Effects in an Evolved Ru Complex Based on a Highly Adaptable Ligand Results in Rapid Water Oxidation Catalysis"
J. Am. Chem. Soc. **2020**, *142*, 5068-5077.
Vereshchuk, N.; Matheu, R.; Benet-Buchholz, J.; Pipelier, M.; Lebreton, J.; Dubreuil, D.; Tessier, A.; Gimbert-Suriñach, C.; Ertem, M. Z.; Llobet, A.
30. "Efficient Electrochemical Water Oxidation by a Trinuclear Ru(bda) Macrocycle Immobilized on Multi-Walled Carbon Nanotube Electrodes"
Adv. Energy Mat. **2020**, 2002329, DOI: 10.1002/aenm.202002329.
Schindler, D.; Gil-Sepulcre, M.; Lindner, J. O.; Stepanenko, V.; Moonshiram, D.; Llobet, A.; Würthner, F.
31. "Water oxidation electrocatalysis using ruthenium coordination oligomers adsorbed on multiwalled carbon nanotubes"

Nat. Chem. **2020**, *12*, 1060-1066. DOI: 10.1038/s41557-020-0548-7

Hoque, Md A.; Gil-Sepulcre, M.; de Aguirre, A.; Elemans, J. A. A. W.; Moonshiram, D.; Matheu, R.; Shi, Y.; Benet-Buchholz, J.; Sala, X.; Malfois, M.; Solano, E.; Lim, J.; Garzón-Manjón, A.; Scheu, C.; Lanza, M.; Maseras, F.; Gimbert-Suriñach, C.; Llobet, A.

32. "Redox Metal-Ligand Cooperativity Enables Robust and Efficient Water Oxidation Catalysis at Neutral pH with Macrocyclic Copper Complexes"

J. Am. Chem. Soc. **2020**, *142*, 17434–17446. DOI: 10.1021/jacs.0c06515

Garrido-Barros, P.; Moonshiram, D.; Gil-Sepulcre, M.; Pelosin, P.; Gimbert-Suriñach, C.; Benet-Buchholz, J.; Llobet, A.

33. "Surface-Promoted Evolution of Ru-bda Coordination Oligomers Boosts the Efficiency of Water Oxidation Molecular Anodes"

J. Am. Chem. Soc. **2021**, *143*, 11651–11661, DOI: 10.1021/jacs.1c04738.

Gil-Sepulcre, M.; Lindner, J. O.; Schindler, D.; Velasco, L.; Moonshiram, D.; Rüdiger, O.; DeBeer, S.; Stepanenko, V.; Solano, E.; Würthner, F.; Llobet, A.

34. "Consecutive ligand-based electron transfer in new molecular Cu-based water oxidation catalysts"

Angew. Chem. Int. Ed. **2021**, *60*, 18639-18644, DOI: 10.1002/anie.202104020.

Gil-Sepulcre, M.; Garrido-Barros, P.; Oldengott, J.; Funes-Ardoiz, I.; Bofill, R.; Sala, X.; Benet-Buchholz, J.; Llobet, A."

35. Unravelling the Mechanistic Pathway of the Hydrogen Evolution Reaction Driven by a Cobalt Catalyst".

Angew. Chem. Int. Edit. **2022**, *3861 (40)*, e202209075.

Jiang, B.; Gil-Sepulcre, M.; Garrido-Barros, P.; Gimbert-Suriñach, C.; Wang, J.-W.; Garcia-Anton, J.; Nolis, P.; Benet-Buchholz, J.; Romero, N.; Sala, X.; Llobet, A.

36. "Molecular water oxidation catalysts based on first-row transition metal complexes"

Nat. Catal. **2022**, *5*, 79–82.

Gil-Sepulcre, M.; Llobet, A.

37. "Heterogeneous Electrochemical Ammonia Oxidation with a Ru-bda Oligomer Anchored on Graphitic Electrodes via CH- π Interactions".

ACS Energy Lett., **2023**, *8*, 172-178.

Beiler, A. M.; Denisiuk, A.; Holub, J.; Sánchez-Baygual, F.-J.; Gil-Sepulcre, M.; Ertem, M. Z.; Moonshiram, D.; Piccioni, A.; Llobet, A.

38. Metamorphic oxygen-evolving molecular Ru and Ir catalysts

Chem. Soc. Rev. **2023**, *52*, 196-211.

Vereshchuk, V.; Gil-Sepulcre, M.; Ghaderian, A.; Holub, J.; Gimbert-Suriñach, C.; Llobet, A.

39. Robust Molecular Anodes for Electrocatalytic Water Oxidation Based on Electropolymerized Molecular Cu Complexes

Adv. Mat. **2023**, 2308392.

Amthor, S.; Ranu, K.; Bellido, C. G.; Salomon, F. F.; Piccioni, A.; Mazzaro, R.; Boscherini, F.; Pasquini, L.; Gil-Sepulcre, M.; Llobet, A.

Book

'Molecular Water Oxidation Catalysis: A Key Topic for New Sustainable Energy Conversion Schemes'.

Edited by Antoni Llobet

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