CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	José María		
Family name	Lassaletta Simon		
Gender (*)	Male	Birth date (dd/mm/yyyy)	16/01/1961
Social Security, Passport, ID number	28680031C		
e-mail	jmlassa@iiq.csic.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-1772-2723	

A.1. Current position

Position	Research Professor		
Initial date	02/12/2011		
Institution	Consejo Superior de Investigaciones Científicas		
Department/Center	Instituto de Investigaciones Químicas		
Country	España	Teleph. number	+34 954489563
Key words	Asymmetric catalysis. New synthetic methodologies. Organocatalysis. Hydrazones. N-Heterocyclic carbenes, Axial chirality.		

A.2. Previous positions (research activity interuptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
1997-2006	Científico Titular del CSIC
2006-2011	Investigador Cientíifico del CSIC

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Licensed in Chemistry	Universidad de Sevilla (Spain)	1984
Ph.D. Chemistry	Universidad de Sevilla (Spain)	1990

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

José María Lassaletta received his Ph. D. in 1990 under the supervision of Prof. Gómez-Guillén at the University of Seville. After a postdoctoral stage in the 'Instituto de la Grasa y sus Derivados' (CSIC, Seville) he joined the group of Professor Richard R. Schmidt (U. Konstanz, Germany) to develop synthetic methodologies for the total synthesis of Globo-series glycosphingolipids. In 1995 he moved to the Instituto de Investigaciones Químicas (CSIC, Seville) and promoted to Tenured Scientist in 1997, Research Scientist in 2006, and Research Professor in 2011. His current research lines include: 1. The reactivity of hydrazones as carbon nucleophiles, using asymmetric organocatalysis as the main activation strategy. 2. Ligand design, with emphasis in chiral hydrazones and N-heterocyclic carbenes. 3. Atroposelective synthesis of axially chiral (hetero)biaryls.

Prof. Lassaletta has been responsible of numerous national research grants from National and Regional funding agencies, as well as several contracts with industrial partners (Bayer CropScience, Esteve, etc; total price > 600 K€. He has also participated as responsible or co–responsible in grants and actions funded under several European Programs (Research Training Networks, Marie Curie Training Sites, COST D12 actions). The group has participated in a number of national and international collaborations, which in many cases has resulted in joint publications (E.g. Dieter Enders, Aachen, Germany; John M. Brown, Oxford, UK; A. Ricci, Bolonia, Italy, J. L. Mascareñas, Santiago, Spain, P. Pérez, Huelva, Spain, Jêrome Lacour, Geneva, Switzerland, Uwe Pischel, Huelva, Spain; Enrique Gómez-Bengoa, Donosti, Spain, Pedro Merino, Zaragoza, Spain, Carlos R. Correia, Campinas, Brasil). Additionally, Dr. Lassaletta maintain collaborations with José Aleman (UAM, Madrid) and Israel Fernández (U. Complutense, Madrid).

The results obtained in this research have been collected in 140 publications (Web of Science), most of them in journals or high level within the area [(among them, 12 *J. Am. Chem. Soc.*, 7 *Angew. Chem. Int. Ed*., 5 *ACS Catal*., 4 *Adv. Synth. Catal*, 1 *Nat. Commun*., 1 *Chem Catalysis*, 1 *Green Chemistry*, 1 *Chem. Sci*, 8 *Chem. Commun*., 6 *Org. Lett*., 11 *Chem. Eur. J*., 12 *J. Org. Chem*.), 10 review articles (among them, 2 *Chem. Soc. Rev*.), 1 book, 7 book chapters and 4 patents]. These papers were cited 5385 times. Average 392 cites/year in the last 5 years, h=42.

On the other hand, 30 Doctoral Theses have been defended under his supervision, 14 of them from 2013, and 5 more are now under development. At present most of the graduate doctors occupy positions of relevance in the academy [1 Full Professor (Universität Göttingen), 6 PTU (Seville, Huelva, Zaragoza), 1 Senior Scientist CSIC (Seville), 3 postdoctoral fellows (Seville, Wisconsin, Aachen)], in industry [Senior Researchers: Synartro (Stockholm), Charmwood Molecular (Nottingham), Lhasa Limited (Leeds), Mercadem (Amsterdam); Process managers: SIDRA (Oviedo) UTE Termosolar (Morón de la Frontera)], or in secondary education (7 Teachers). She has supervised more than 20 postdoctoral students.

He has given 57 invited conferences in national and international congresses, universities, research centers and companies, 38 of them in the last 10 years.

Other merits include:

Peer reviewing: He is a frequent reviewer of research articles in the area, with 136 peer review records from 2015, mainly in for highly reputed journals: *J. Am. Chem. Soc*., *Angew. Chem. Int. Ed*., *Nature Chemistry*, *Nature Synthesis*, *Nat. Commun*., *Chem. Catal*., *ACS Catal. Chem. Eur. J*., *Chem. Commun*., *Chem. Soc. Rev*., *Chem. Asian J*., J. *Org. Chem*., *Org. Lett*., *Synlett*, *Eur. J. Org. Chem*., etc. He is also ocasional reviewer for *Science*.

Frequent evaluator for the Spanish Research Agency AEI. Occasional evaluator for foreign research agencies: The Nobel Committee for Chemistry (Royal Swedish Academy of Sciences), European Science Foundation (ESF), ACS Petroleum Research Fund (EEUU), Agence Nationale de la Recherche (ANR, France), Fondecyt (Chile), National Council for Development and Innovation (Rumania), National Science Centre (Poland).

Member of the acreditation committe for EUROLABELS (ANECA)

Recognitions Dr. José M. Lassaletta has been 'Felix Serratosa Lecturer' in 2011, invited professor at the University Pierre et Marie Curie (Paris, France) in 2016, and recipient of the 'Ignacio Ribas' medal, Organic Chemistry Division of the Royal Society of Chemistry in 2017.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications *(selected, 10 last years)*

1. A. Ros, B. Estepa, P. Ramírez-López, E. Álvarez, R. Fernández, J. M. Lassaletta. *Dynamic Kinetic Cross-Coupling Strategy for the Asymmetric Synthesis of Axially Chiral Heterobiaryls. J. Am. Chem. Soc.* **2013***, 135,* 15730–15733.

2. A. Ros, R. Fernández, V. J. M. Lassaletta. "Functional group directed C–H borylation" *Chem. Soc. Rev.* **2014**, *43*, 3229–3243. **Highly cited paper (WOK).**

3. P. Ramírez-López, A. Ros, A. Romero-Arenas, J. Iglesias-Sigüenza, R. Fernández, J. M. Lassaletta. "Synthesis of IAN-type N,N-Ligands via Dynamic Kinetic Asymmetric Buchwald−Hartwig Amination" *J. Am. Chem. Soc.* **2016** *138,* 12053–12056. **Highlight**: *Synfacts* ***2016****, 12(12),1278.*

4. V. Hornillos, J. A. Carmona, A. Ros, J. Iglesias, J. López-Serrano, R. Fernández, J. M. Lassaletta. *Dynamic Kinetic Resolution of Heterobiaryl Ketones via Zn-Catalyzed Asymmetric Hydrosilylation*. *Angew. Chem. Int. Ed.* **2018**, *57*, 3777–3781. **Highlight**: Synfacts 2018, 14(05), 0507.

5. J. A. Carmona, V. Hornillos, P. Ramírez-Lopez, A. Ros, J. Iglesias-Sigüenza, E. Gomez-Bengoa, R. Fernandez, José M.Lassaletta. "Dynamic Kinetic Asymmetric Heck Reaction for the Simultaneous Generation of Central and Axial Chirality" *J. Am. Chem. Soc.* **2018**, *140*, 11067−11075.

6. P. García-Fernandez, J. Iglesias-Sigüenza, P. Rivero-Jerez, E. Díez, E. Gómez-Bengoa, R. Fernández, J. M. Lassaletta. *Au(I)-Catalyzed Hydroalkynylation of Haloalkynes J. Am. Chem. Soc.* **2020,** *142*, 16082–16089. **Highlight**: *Synfacts* **2020**, *16*(11), 1320. **Highlight**: *Organic Chemistry* Portal: https://www.organic-chemistry.org/abstracts/lit7/531.shtm.

7. A. Romero-Arenas, V. Hornillos, J. Iglesias-Sigüenza, R. Fernández, J. López-Serrano, A. Ros, J. M. Lassaletta. *Ir-Catalyzed Atroposelective Desymmetrization of Heterobiaryls: Hydroarylation of Vinyl Ethers and Bicycloalkenes*. *J. Am. Chem. Soc.* **2020***, 142*, 2628-2639.

8. E. Matador, J. Iglesias-Sigüenza, D. Monge, P. Merino, R. Fernández, J. M. Lassaletta "Enantio- and Diastereoselective Nucleophilic Addition of *N-tert*-Butyl Hydrazones to Isoquinolinium Ions through Anion-Binding Catalysis" *Angew. Chem. Int. Ed.* **2021**, *60*,5096-5101**. 'Hot paper'. Highlight**: *Synfacts* **2021**, *17*, 0210.

9. A. Carmona, C. Rodríguez-Franco, R. Fernández, V. Hornillos, J. M. Lassaletta "Atroposelective Transformation of Axially Chiral (Hetero)Biaryls. From Desymmetrization to Modern Dynamization Strategies" *Chem. Soc. Rev.* **2021**, *50*, 2968-2983. **Highly cited paper (WOK).**

10. José A. Carmona, P. Rodríguez-Salamanca, R. Fernández, J. M. Lassaletta, V. Hornillos, "Dynamic Kinetic Resolution of 2-(Quinolin-8-yl)Benzaldehydes: Atroposelective Iridium-Catalyzed Transfer Hydrogenative Allylation" *Angew. Chem. Int. Ed.* **2023**, e202306981**. 'Very important paper'**

C.2. Conferences *(selected, 10 last years)*

1. Title: Innovative Strategies in Asymmetric Catalysis: Hetero-Carbonyl-Ene Reactions and Cross-Couplings to (Hetero)biaryls as Cases of Study
Type of contribution: **Plenary Lecture**
Event: Le 55e Groupe d'Etude en Chimie Organique (GECO 55). Samatan, France, 2014.

2. Title: Dynamic Kinetic Resolution strategies for the asymmetric synthesis of axially chiral heterobiaryls
Type of contribution: **Lecture**
Event: Cycle of conferences, Univ. Pierre et Marie Curie, Paris Date: 20/06/2016.

3. Title: Dynamic Kinetic Resolution Strategies for the Atroposelective Synthesis of Axially Chiral Heterobiaryls
Type of contribution: **Invited Lecture**
Event: XXXVI Reunion Bienal de la RSEQ. Sitges, 2017.

4. Title: Tools & Strategies for the Synthesis of Axially Chiral (Hetero)biaryls
Type of contribution: **Plenary Lecture**
Event: Organic Chemistry Lectures, Institute of Organic and Biomolecular Chemistry, Georg-August-Universität Göttingen. Göttingen, Germany, 2018.

5. Title: Dynamization Strategies for the Synthesis of Axially Chiral Heterobiaryls
Type of contribution: **Lecture**
Event: Semninars @ I+D Janssen España. Toledo , 2018.

6. Title: Dynamization Strategies for the Synthesis of Axially Chiral Heterobiaryls
Type of contribution: **Invited Lecture**
Event: 33° Congreso Latinoamericano de Química (33-CLAQ). La Habana, Cuba, 2018.

7. Title: Dynamization Strategies for the Synthesis of Axially Chiral Heterobiaryls
Type of contribution: **Plenary Lecture**
Event: 8th Spanish-Portuguese-Japanese Organic Chemistry Symposium (8th SPJOCS). Kyoto, Japan, 2018.

8. Title: Dynamization Strategies for the Synthesis of Axially Chiral Heterobiaryls
Type of contribution: **Lecture**
Event: Ciclo de Seminarios en la Universidad de Tohoku. Sendai, Japan, 2018.

9. Title: Dynamization Strategies for the Synthesis of Axially Chiral Heterobiaryls
Type of contribution: **Lecture**
Event: Cycle of conferences, Laboratoire de Chimie de Coordination (LCC, CNRS)
Place: Toulouse, Francia Date: 29/03/2019.

10. Title: Estrategias de Dinamización y Desimetrización para la Síntesis Atroposelectiva de Heterobiarilos
Type of contribution: **Lecture**
Event: 'Seminarios Avanzados'. Master en Química Sintética e Industrial, Universidad del País Vasco (EHU), Bilbao 2019.

C.3. Research projects. (As principal invatigator)

✦. RTN 2001 0244. *Design, Analysis and Computation for Catalytic Organic Reactions.* Funding entity: Commission of the European Communities. Duration: 2002 to 2006. Amount: 195.000,00€.

✦. CTQ2004-00290/BQU: *Carbenos N-Dialquilamino Heterocíclicos Quirales. Aplicaciones en Catálisis Homogénea Enantioselectiva.* Funding entity: MEC. Duration: 2004 to 2007. Amount: 100.250,00 €.

✦. CTQ2007-61915/BQU: *Diseño de nuevos carbenos N-heterocíclicos y catalizadores derivados. Modulación de Propiedades y Aplicaciones en Catálisis Asimétrica Enantioselectiva.* Funding entity: MEC. Duration: 2007 to 2010. Amount: 121.250,00 €.

✦. FQM 383. *Aproximaciones organocatalíticas a la síntesis enantioselectiva de beta-amino ácidos, ácidos gamma-aminobutíricos (GABAs) e hidrazino péptidos.* Funding entity: Junta de Andalucía. Duration: 2009 to 2013. Amount: 291.923,60 €.

✦. CTQ2010- 15297/BQU: *Ligandos Monodentados, Heteromultidentados y Hemilábiles Basados en Carbenos N-Heterocíclicos. Del Diseño Racional a las Soluciones en Catálisis Asimétrica.* Funding entity: MICINN. Duration: 2010 to 2013. Amount: 128.260,60 €.

✦. FQM 1078: *Desarrollo de modos de activación, sistemas reactivos y catalizadores bifuncionales para la expansión de las reacciones heteroénicas.* Funding entity: Junta de Andalucía. Duration: 2014 to 2019. Amount: 273.894,00 €.

✦. CTQ2013-48164-C2-1-P: *Sistemas catalíticos y reactivos de nueva generación para aplicaciones en síntesis asimétrica.* Funding entity: MINECO. Duration: 2014 to 2016. Amount: 147.620,00 €.

✦. CTQ2016-76908-C2-1-P: *Desarrollo y diversificación de sistemas catalíticos innovadores. Aplicaciones en catálisis asimétrica.* Funding entity: MINECO. Duration: 2016 to 2018. Amount: 140.360,00 €.

✦. P18-FR-3531: *Doble Resolución Cinética Dinámica Como Estrategia Para la Síntesis de Derivados de Quinap y Map.* Funding entity: Junta de Andalucía. Duration: 2020 to 2023. Amount: 149.400,00 €.

✦. PID2019-106358GB-C21: ***CA****TALIZADORES,* ***LI****GANDOS,* ***ME****TODOS Y* ***R****EACTIVOS PARA SINTESIS* ***O****RGANICA SELECTIVA (****CALIMERO****),* Funding entity: MICINN. Duration: 2020 to 2023. Amount: 177.870,00 €.

✦. PID2019-106358GB-C21: ***CA****TALIZADORES,* ***LI****GANDOS,* ***ME****TODOS Y* ***R****EACTIVOS PARA SINTESIS* ***O****RGANICA SELECTIVA (****CALIMERO****),* Funding entity: MICINN. Duration: 2020 to 2023. Amount: 177.870,00 €.

✦. PID2022-143230NB-I00: ***DYNAMI****ZATION STRATEGIES FOR ATROPOSELECTIVE* ***CA****TALYSIS (****DYNAMICA****).* Funding entity: MICINN. Duration: 2023 to 2026. Amount: 250.000,00 €.

C.4. Contracts, technological or transfer merits.**Patents**

1. H. Dietrich, M. J. Ford, T. Müller, J. M. Lassaletta, A. Ros, A. Magriz. *Method for the production of optically active cyclic amines*. Application no.: PCT WO 2006/072374 A1. Country of priority: DE. Date: 30/12/2004. Holder entity: Bayer CropScience GmbH

2. J.M. Lassaletta, A. Ros Laó, R. López, R. Fernández, B. Estepa. *Derivado 2,6-diborilado de areno y su obtención mediante diborilación orto-dirigida.* Application no.: P201230260. Country of priority: ES. Date: 21/02/2012. Holder entity: CSIC

3. J.M. Lassaletta, A.M. Crespo-Peña, D. Monge, R. Fernández, E. Martín-Zamora. *Procedimiento de obtención de un azocompuesto o nitrosoderivado enantioméricamente puro o enriquecido mediante reacción hetero-carbonil-énica.* Application no.: P201230770. Country of priority: ES . Date: 23/05/2012. Holder entity: CSIC

4. J.M. Lassaletta, A. Ros Laó, R. Fernández, B. Estepa, P. Ramírez. *Procedimiento de síntesis de compuestos heterobiarílicos con quiralidad axial, compuestos obtenidos y uso.* Application no.: P201331068. Country of priority: ES. Date: 12/07/2013. Holder entity: CSIC