CV date	04/12/2020

Part A. PERSONAL INFORMATION

First and Family name	de Jesús Alcañiz, Ernesto	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0001-8101-1358
	SCOPUS Author ID (*)	7004174825
	WoS Researcher ID (*)	K-6107-2014

(*) Optional
(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad de Alcalá		
Department	Química Orgánica y Química Inorgánica		
Address and Country	Edificio de Farmacia, Campus Universitario 28871 Alcalá de Henares (Madrid), SPAIN		
Phone number	+34918854603	E-mail	ernesto.dejesus@uah.es
Key words			

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

My research training started during my degree studies at the University of Zaragoza with the preparation of organometallic complexes of thallium and gold under the guidance of Antonio Laguna and Rafael Usón. In 1983, I started my PhD thesis at the Universidad de Alcalá on the synthesis and structural characterization of molybdenum and tungsten alkyl complexes under supervision of Amelio Vázquez and Pascual Royo. Between 1987 and 1989, I moved to the University of Strasbourg to perform postdoctoral studies in the group of Pierre Braunstein, where I worked on the synthesis and reactivity of heterometallic clusters. In this period, I developed new methodologies for the rational synthesis of phosphide-bridged heterodimetallic complexes based on the isolobal analogies developed by R. Hoffmann. In 1990, I was trained for 3 months in computational quantum chemistry at the same university under the guidance of Alain Dedieu. After my return to the University of Alcalá in 1992, I developed studies on the preparation and reactivity of molybdenum and tungsten bimetallic complexes in the group of Pascual Royo.

I started an independent scientific career in 1997. Our group initially focused on the chemistry of metal-functionalized dendrimers, being one of the pioneers in the introduction of the chemistry of dendrimers in Spain. We have been funded since 1998 by the Spanish government's research plans (7 three-year proposals have received funding). In addition to the development of new strategies for the functionalization of dendrimers with metal complexes at the desired position, in recent years, we have studied dendrimers as supports for the recovery of catalysts using nanofiltration techniques (see, for instance, C1.1). We have also used dendrimers for the stabilization and size-control of metal nanoparticles. This knowledge has later been applied to the development of different strategies for the synthesis of metal nanoparticles using an organometallic approach (see, for instance, C1.3). On the other hand, we have also experience in the recovery of homogeneous catalysts by supporting them in different type of nanomaterials. In the last 10 years, a significant part of our research has been linked to the use of water as a reaction medium. In particular, we were one of the first groups to prepare, study and apply organometallic complexes with N-heterocyclic carbon ligands (NHC) in aqueous phase catalysis. Between the most relevant

contributions that we have made in the last years in this area are the development and rationalization of the most appropriate conditions for Hiyama-type cross-coupling reactions in aqueous-phase (see C1.9), the preparation of one of the most efficient Pd catalysts for cross-coupling reactions in aqueous phase (see C1.5), or the demonstration that it is possible to stabilize metal nanoparticles in aqueous phase by protecting their surface with hydrophilic NHC ligands (C1.2 or C1.7). More recently, we have initiated studies on the synthesis and reactivity of open shell 4d and 5d transition metal complexes, and more specifically Pd(I) mononuclear complexes.

Part C. RELEVANT MERITS

C.1. Publications (10 selected publications from 1 January 2010)

1. A. Ortiz, P. Gómez Sal, J. C. Flores, E. de JesúsHighly Recoverable Pd(II) Catalysts for the Mizoroki–Heck Reaction based on N-Heterocyclic Carbenes and Poly(Benzyl Ether) Dendrons*Organometallics* ***37***, 3598-3610 (2018). Times cited: 5.2. J. M. Asensio, S. Tricard, Y. Coppel, R. Andrés, B. Chaudret, E. de Jesús, Knight Shift in ^{13}C NMR Resonances Confirms the Coordination of N-Heterocyclic Carbene Ligands to Water-Soluble Palladium Nanoparticles, *Angew. Chem. Int. Ed.* ***56***, 865-860 (2017). Times cited: 22.
3. J. M. Asensio, S. Tricard, Y. Coppel, R. Andrés, B. Chaudret, E. de Jesús, Synthesis of Water-Soluble Palladium Nanoparticles Stabilized by Sulfonated N-Heterocyclic Carbenes, *Chem. Eur. J.* ***23***, 13435–13444 (2017). Hot Chem Eur J Paper. Highlighted in ChemViews Magazine. Times cited: 18.
4. J. M. Asensio, P. Gómez-Sal, R. Andrés, E. de Jesús. Synthesis of water-soluble palladium(II) complexes with N-heterocyclic carbene chelate ligands and their use in the aerobic oxidation of 1-phenylethanol. Dalton Trans 46, 6785-6797 (2017).Times cited: 11.5. R. Garrido, P.S. Hernandez-Montes, A. Gordillo, P. Gómez-Sal, C. López Mardomingo, E. de Jesús. Water-Soluble Palladium(II) Complexes with Sulfonated N-Heterocyclic Carbenes in Suzuki Cross-Coupling and Hydrodehalogenation Reactions. *Organometallics* 34, 1855-1863 (2015). Times cited: 36. Top 20 Most Read Articles from *Organometallics* in May 2015.
6. E. A. Baquero, J. C. Flores, J. Perles, P. Gómez-Sal, E. de Jesús, Water-Soluble Mono- and Dimethyl N-Heterocyclic Carbene Platinum(II) Complexes: Synthesis and Reactivity, *Organometallics,* **33**, 5470−5482 (2014). Times cited: 21.
7. E. A. Baquero, S. Tricard, J. C. Flores, E. de Jesús, B. Chaudret, Highly Stable Water–Soluble Platinum Nanoparticles Stabilized by Hydrophilic N-Heterocyclic Carbenes, *Angew. Chem. Int. Ed.* 53, (2014) 13220-13224. Times cited: 78. Selected as Hot-Topics of Wiley-VCH on Surfaces and Interfaces.
8. E. A. Baquero, G. F. Silbestri, P. Gómez-Sal, J. C. Flores, E. de Jesús, Sulfonated Water-soluble N-Heterocyclic Carbene Silver(I) Complexes: Behavior in Aqueous Medium and as NHC-transfer Agents to Platinum(II), *Organometallics,* 32, 2814-2826 (2013). Times cited: 49. Top 10 Most Read Articles from *Organometallics* in Q2 2013.
9. A. Gordillo, M. A. Ortuño, C. López-Mardomingo, A. Lledós, G. Ujaque, E. de Jesús. Mechanistic Studies on the Pd-catalyzed Vinylation of Aryl Halides with Vinylalkoxysilanes in Water: the Effect of the Solvent and NaOH Promoter. *J. Am. Chem Soc.*, 135, 13749−13763 (2013). Times cited: 33.
10. G. F. Silbestri, J. C. Flores, E. de Jesús. Water-Soluble N-Heterocyclic Carbene Platinum(0) Complexes: Recyclable Catalysts for the Hydrosilylation of Alkynes in Water at Room Temperature. Organometallics, 31, 3355–3360 (2012). Times cited: 64.

C.2. Research projects (from 1 January 2010)

1. N-Heterocyclic Carbene Ligands for the Preparation of Mononuclear Pd(I) Complexes and Group 10 and 11 Hydrosoluble Complexes and Nanoparticles. Ministerio de economía, industria y competitividad. Ref. CTQ2017-85203-P (80.000 €). 1/01/2018-31/12/2020. Main researcher: Dr. Ernesto de Jesús Alcañiz (IP1), Dr. Juan Carlos Flores Serrano (IP2).
2. Metal Complexes based on N-Heterocyclic Carbene Ligands: From Aqueous Chemistry to Catalyst Recovery. Ministerio de Economía y Competitividad. Ref. CTQ2014-55005-P (85.000 €). 1/01/2015-31/01/2017. Main researcher: Dr. Ernesto de Jesús Alcañiz (IP1), Dr. Juan Carlos Flores Serrano (IP2).
3. Homogeneous catalysts confined in solid supports, dendrimers or aqueous phase. Ministerio de Ciencia e Innovación. Ref. CTQ2011-24096 (111.000 €). 1/01/2012-31/12/2014. Main researcher: Dr. Ernesto de Jesús Alcañiz.

C.3. Contracts, technological or transfer merits (from 1 January 2010)

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C.4. Patents (from 1 January 2010)

1. F. J. Martínez Olid, R. Andrés, E. de Jesús, J. C. Flores, K. Heuzé, L. Vellutini. Complejos NHC de paladio heterogeneizados y sus usos como catalizadores recuperables. Register number: **ES 2555613 A1**. Priority date: 26/06/14. Holder entity: Universidad de Alcalá. Priority countries: España. Also published with the same authors and prioriy date as*:* **WO 2015 197890 A1**. Countries: States signing the PCT accord.
2. F. J. Martínez Olid, R. Andrés, E. de Jesús, J. C. Flores. Complejos NHC de paladio heterogeneizables. Register number: **ES 2555328 A1**. Priority date: 26/06/14. Holder entity: Universidad de Alcalá. Priority countries: España. Also published with the same authors and prioriy date as*:* **WO 2015 197891 A1**. Countries: States signing the PCT accord.

C.5. Invited lectures (from 1 January 2010)

1. 4 invited lectures in chemical society meetings: 7th Latin American Symposium on Coordination and Organometallic Chemistry (SILQCOM7). Cartagena de Indias, Colombia (27-30/08/2019) 55th Serbian Chemical Society Meeting. Novi Sad (Serbia) (8-9/06/2018) // XXXIV GEQO meeting, Girona (7-9/09/2016) // VIII Jornades de Joves Investigadors. Andorra La Vella. (27-29/11/2013).
2. 2 invited lectures in international symposiums. International Symposium on Chemical Synthesis and Materials (ISCHEM 2018). Florianópolis, Brasil (14-16/12/2018) // International Symposium on Coordination Chemistry and Molecular Materials, Bordeaux, Francia, (1 – 2/12/2011).
3. 16 invited lectures in universities, research centers and other scientific meetings. Universidad de La Rioja, I (3/06/2010). Université de Bordeaux I – CNRS (22/06/2010). Université Paul Sabatier - Toulouse III–CNRS (24/06/2010). Universidade da Coruña (02/11/2010). Universidad de Santiago (03/11/2010). Universidad de Oviedo (03/05/2011). Universidad de Málaga (04/11/2011). Universidad de La Serena (Chile) (4/12/2013). Universidad Complutense de Madrid (15/04/2015). Universidad de Barcelona (27/04/2016). Universidad de Zaragoza (26/10/2016). Universidad Rey Juan Carlos (5/5/2017). Universidad Industrial del Sur, Bucamaranga, Colombia (30/08/2017). Universidad Nacional de Colombia, Facultad de Química, Bogotá (31/08/2017). UNED, Madrid, (13/03/2019). Instituto de Química Orgánica General, CSIC (08/05/2019)

C.6. Other

- Head of the Del Rio Chemical Research Institute, Universidad de Alcalá (2017-2020)

- Member of the Chemistry Commission of the Spanish National Agency of Prospective (ANEP) (2012-2015).
- Codirector of the Fine Chemistry Doctorate, Universidad de Alcalá, (2010–2012)

Parte A. DATOS PERSONALES

Fecha del CVA	29/4/2020

Nombre y apellidos	Mercedes Cano Esquivel		
Núm. identificación del investigador		Researcher ID	
		Código Orcid	0000-0002-7051-5953

A.1. Situación profesional actual

Organismo	Universidad Complutense de Madrid			
Dpto./Centro	Facultad de Ciencias Químicas			
Dirección	Avda. Complutense s/n, Ciudad Universitaria, 28040 Madrid			
Teléfono	913944340	correo electrónico	mmcano@ucm.es	
Categoría profesional	Catedrática de Universidad		Fecha inicio	20/09/1999
Espec. cód. UNESCO	230321, 230307			
Palabras clave	Compuestos de coordinación. Materiales moleculares. Cristales líquidos. Luminiscencia. Arquitectura supramolecular. Sensores. OLEDs			

A.2. Formación académica *(título, institución, fecha)*

Licenciatura/Grado/Doctorado	Universidad	Año
Licenciado en Ciencias Químicas	Universidad Complutense de Madrid	06/1970
Doctor en Ciencias Químicas	Universidad Complutense de Madrid	09/1975

A.3. Indicadores generales de calidad de la producción científica

Sexenios de investigación: 6, consecutivos desde el año 1972 (último concedido en 2006).
Nº tesis defendidas en los últimos 10 años: 6
Número de artículos: 136 (1 no encontrado en base de datos, 1 en revista no indexada, 1 capítulo de libro)
Informe de citas: 134 artículos indexados (29/04/2020)
Total de veces citado: 1751
Total de veces citado sin citas propias: 917
Artículos en que se cita: 746
Artículos totales en que se cita sin citas propias: 639
Promedio de citas por elemento: 10.67
Publicaciones totales en primer cuartil (Q1): 28 (utilizando JCR-2016)
h-index: 24

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

Licenciada en CC Químicas, inicia su trayectoria científica con el desarrollo de la Tesis Doctoral sobre acetiluros y cianuros de mercurio y zinc bajo la dirección de la Dra. A. Santos, defendida en 1974 (sobresaliente-cum-Laude, premio extraordinario de doctorado). Desde el inicio, la vinculación con la UCM ha sido permanente, estando siempre integrada en el Dpto. Q. Inorgánica-UCM dentro del área de Q. Coordinación y Organometálica. Después de pasar por diferentes categorías, en 1978 accede a Profesora Titular de Universidad, y en 1999 a Catedrática de Universidad.

Desde 1983 es responsable del grupo de investigación “Materiales moleculares basados en Compuestos de Coordinación” (grupo consolidado UCM), favorablemente evaluado en todo proceso. Desde entonces, ha mantenido una financiación constante a través de proyectos europeos, nacionales, autonómicos y de la propia UCM.

El tema de investigación inicial se centró en el estudio de compuestos con enlace meta-metal, analizando factores determinantes de las características estructurales y de enlace.

Tras su estancia en la U. Birmingham (UK, 1988) con el Prof. J. McCleverty, inicia un nuevo tema de investigación centrado en el uso de ligandos tipo trispirazolilborato en compuestos de coordinación dirigido hacia la consecución de materiales con propiedades ópticas no lineares (ONL). La evaluación de ciertas especies como materiales con estas propiedades fue posteriormente realizada en España en colaboración con el Prof. F. Agulló, catedrático de Física (UAM).

A partir de 1998, la nueva propuesta de investigación deriva a la consecución de materiales cristal líquid (CL) de interés tecnológico. El punto de partida se centró en el diseño de metalomesógenos basados en ligandos pirazol modificados en su estructura electrónica y estérica. El examen de distintas variables introducidas en los nuevos ligandos (grupos coordinantes, número, posición y longitud de las cadenas sustituyentes, etc.), y geometrías moleculares/estereoquímicas en los complejos ha conducido al diseño de especies con propiedades CL optimizadas. En los últimos años la investigación se ha volcado en la búsqueda de luminiscencia como propiedad adicional al comportamiento líquido-cristalino en compuestos metalomesogénicos. Así se han logrado nuevas especies de Zn(II), Pt(II), Ag(i), Au(I), como materiales bifuncionales (líquido-cristalinos y luminiscentes), de probada utilidad como quimio- o termosensores así como en otros aspectos tecnológicos.

El trabajo realizado se refleja en más de un centenar de publicaciones en revistas internacionales de alto índice de impacto y más de cien comunicaciones presentadas a congresos nacionales e internacionales, y 2 conferencias internacionales invitadas.

Es de resaltar también la participación en actividades como evaluador de proyectos de investigación, becas y contratos pre- o posdoctorales, y censor de artículos en diferentes revistas internacionales del área.

Ha participado en diversas actividades de divulgación científica resaltando la naturaleza de los materiales CLs y su incidencia en la sociedad (charlas TED, conferencias invitadas), así como en actividades docentes (Proyectos de Innovación Docente) y Congresos (INDOQUIM). Es coordinadora en España del Máster Erasmus Mundus “Molecular nano and bio-photonics for telecommunications and biotechnologies”. Se debe también resaltar la participación en otras actividades de evaluación, como son procesos de acreditación de títulos (ACSUG).

Parte C. MÉRITOS MÁS RELEVANTES

C.1. Publicaciones (últimos 5 años: 2015-2020)

1. R. Jiménez, F. Duarte, S. Nuti, J. A. Campo, C. Lodeiro, M. Cano, C. Cuerva. Thermochromic and acidochromic properties of polymer films doped with pyridyl-β-diketonate boron(III) complexes. *Dyes and Pigments*, v. 177, 108272., 2020
2. C. Cuerva, J. A. Campo, M. Cano, M. Caño-García, J. M. Otón, C. Lodeiro. Aggregation-induced emission enhancement (AIEE)-active Pt(II) metallomesogens as dyes sensitive to Hg2+ and dopant agents to develop stimuli-responsive luminescent polymer materials. *Dyes and Pigments*, v. 175, 108098, 2020
3. C. Cuerva, J. A. Campo, M. Cano, R. Schmidt. Lamellar columnar liquid-crystalline mesophases as a 2D platform for anhydrous proton conduction. Journal of Materials Chemistry C, v. 7, pp. 10318-10330, **2019**
4. C. Cuerva, J A. Campo, M. Cano, C. Lodeiro. Multi-stimuli-responsive properties of aggregation-enhanced emission-active unsymmetrical Pt^{II} metallomesogens through self-assembly. Chemistry – A European Journal, v. 25, pp 12046 – 12051, **2019**.
5. C. Cuerva, José A. Campo, M. Cano, R. Schmidt, C. Lodeiro. Multifunctional Pt(II) metallomesogens exhibiting luminescence and proton conductivity in the mesophase near room-temperature. *Journal of Materials Chemistry C*, v. 6, pp. 9723 - 9733, **2018**.
6. I. Sánchez, C. Cuerva, G. Marcelo, E. Oliveira, H. M. Santos, J. A. Campo, C. Lodeiro; Mercedes Cano. Designing Eu-β-diketonate complexes as a support of ionic liquid crystals (ILCs) with additional luminescent properties. *Dyes and Pigments*, v. 159, pp. 395 - 405, **2018**.
7. C. Cuerva; N. Morais; J. A. Campo; M. Cano; C. Lodeiro. Isoquinolinylpyrazoles and pyridylisoxazoles as luminescent materials with sensorial ability towards pollutant toxic metal ions. Experimental and computational studies. *Journal of Luminescence*, v. 198, pp. 517 – 530, **2018**.
8. L. Soria, C. Cuerva, M. Cano, J. A. Campo, C. Lodeiro. Bifunctional dipyridylpyrazole silver complexes with tunable thermotropic liquid crystal and luminescent behaviour. *Dyes and Pigments*, v. 150, pp. 323 - 334, **2018**.
9. M. Jesús Pastor, C. Cuerva, A. Fernández-Lodeiro, C. Lodeiro, J. Antonio Campo, M. Cano. Designing Zn(II) complexes as a support of bifunctional liquid crystal and luminescent materials. *Dyes and Pigments*, v. 149, pp. 37 – 50, **2018**.

10. L. Soria, M. Cano, J. A. Campo, M. R. Torres, C. Lodeiro. Silver compounds base don N,N,N-tridentate pyridylpyrazolate ligands. An opooortunity to build cyclic trimetallic and oligomeric luminescent liquid crystals. *Polyhedron,* v. 125, pp. 141-150, **2017**.

11. C. Cuerva, J. Antonio Campo, M. Cano, R. Schmidt. Nanostructured discotic Pd(II) metallomesogens as one-dimensional proton conductors, *Dalton Transactions*, v. 46, pp. 96 – 105, **2017**.

12. M. J. Pastor, C. Cuerva, J. Antonio Campo, R. Schmidt, M. Rosario Torres, M. Cano. Diketonylpyridinium Cations as a Support of New Ionic Liquid Crystals and Ion-Conductive Materials: Analysis of Counter-Ion Effects, *Materials*, v. 9, 360, **2016**.

13. I. Sánchez, A. Fernández-Lodeiro, E. Oliveira, J. A. Campo, M. R. Torres, M. Cano. Diketonylpyridinium cations as a support of new ionic liquid crystals and ion-conductive materials: analisys of counter-ion effects. *Materials*, v. 9, 360, **2016**.

14. N. M. M. Moura, Cristián Cuerva, José A. S. Cavaleiro, Ricardo F. A. A. Paz, Mercedes Cano, M. Graça P. M. S. Neves, Carlos Lodeiro. Metallomesogens with Luminescent Behaviour: Palladium Complexes Derived from Alkylamide Tetraarylporphyrins, *ChemPlusChem*. v. 81, pp. 262 – 273, **2016** (Cover picture).

15. C. Cuerva, J. A. Campo, M. Cano, C. Lodeiro. Platinum(II) Metallomesogens: New External-Stimuli-Responsive Photoluminescence Materials. *Chemistry-A European Journal*, v. 22, pp. 10168 – 10178, **2016**.

16. C. Cuerva, J. A. Campo, M. Cano, J. Sanz, I. Sobrados, V. Diez Gómez, R. Schmidt, A. Rivera Calzada. Water-Free Proton Conduction in Discotic Pyridylpyrazolate-based Pt(II) and Pd(II) Metallomesogens. *Inorganic Chemistry*, v.55, pp. 6995 – 7002, **2016**.

17. C. Cuerva, J. A. Campo, M. Cano, B. Arredondo, B. Romero, E. Otón, J. M. Otón. Bis(pyridylpyrazolate)platinum(II): a mechanochromic complex useful as a dopant for colour-tunable polymer OLEDs. *New Journal of Chemistry*. v. 39, pp. 8467 – 8473, **2015**.

18. C. Cuerva, P. Ovejero, M. R. Torres, M. Cano, J. A. Campo. Dicatenar pyridylpyrazoles: An opportunity to induce mesomorphism. Synthesis, X-ray characterisation and DFT calculations. *Polyhedron*, v. 100, pp. 100 – 107, **2015** (Cover picture).

C.2. Proyectos (últimos 5 años)

1.Referencia: **CTQ2015-63858-P**.
Título del proyecto: Materiales moleculares multifuncionales para tecnologías y biotecnologías.
Investigadores responsables: Reyes Jiménez Aparicio y Mercedes Cano Esquivel
Entidad financiadora: Ministerio de Economía y Competitividad.
Duración: 01/01/2016 - 31/12/2018.
Financiación: 100.793 euros

2.Referencia: **CTQ2011-25172**.
Título del proyecto: Materiales moleculares cristal líquido y luminiscentes con aplicaciones tecnológicas. Diseño, preparación, estudio y aplicabilidad.
Investigadores responsables: mercedes Cano Esquivel
Entidad financiadora: Ministerio de Economía y Competitividad
Duración: 01/01/2012 - 01/06/2015.
Financación: 78.650 euros

3.Referencia: **CTQ2010-19470**
Título del proyecto: Cristales líquidos luminiscentes basados en compuestos de coordinación de metales de transición, lantánidos y aductor de BF2. Luminiscencia en la mesofase. Sensores – sondas.
Investigadores responsables: Mercedes Cano Esquivel
Entidad financiadora: Ministerio de Economía y Competitividad.
Duración: 01/01/2011 - 31/12/2011.
Financiación: 10.890 euros

C.3. Organización de actividades

- Presidente del Comité Organizador de la XI Reunión del Grupo Especializado de Química Organometálica, El Escorial 1991
- Responsable de la organización de una actividad sobre cristales líquidos en la Semana de la Ciencia de Madrid, años 2004-2019.

C.4. Participación en tareas de evaluación científicas

- Evaluador de revistas científicas: Inorg. Chem., Dalton Trans. Eur. J. Inorg. Chem., Polyhedron, J. Organomet. Chem., Inorg. Chim. Acta, Dyes Pigments, Inorg. Chem. Commun., J. Mol. Liq., entre otras.
- Evaluador de ayudas para la consolidación y estructuracióin de unidades de investigación competitivas del Sistema Universitario de Galicia, años 2014, 2016.
- Evaluador para la ANEP.
- Evaluador de proyectos de investigación para la Agencia Nacional de Promoción Científica y Tecnológica (Argentina), años 2016-2011.
- Evaluador de ayudas para investigadores emergentes de la Comunidad Valenciana, 2006.
- Vocal de la Comisión Evaluadora de Concurso-oposición de Escalas de Investigadores Científicos del CSIC, 2008.

C.5. Participación en otras tareas de evaluación

- Vocal académico de la Comisión para la acreditación de títulos de la ACSUG, año 2014.

C.5. Cargos académicos desempeñados

- Coordinadora española del Máster Erasmus Mundus “Molecular nano- and bio-photonics for telecommunications and biotechnlogies”, desde 2006.

C.6. Dirección de trabajos

- Dirección de 11 Tesis Doctorales (7 en los últimos diez años)
- Dirección de 6 Trabajos Fin de Máster del Máster en Ciencia y Tecnología Químicas de la UCM, años 2011-2017.
- Dirección de 2 Trabajos dentro del Programa de Doctorado en Química Avanzada, año 2010.
- Dirección de 1 Trabajo conducente a la obtención del Diploma de Estudios Avanzados, año 2007.
- Dirección de 21 Trabajos Fin de Grado en Química o Proyectos de la Licenciatura en Química de la UCM, desde 2004.

C.7. Otros

- Quinquenios de docencia: 6
- Ponente en la edición TED-Alcarria “Explorando los límites del conocimiento” con la conferencia titulada ¿Contribuye la química al bienestar de la sociedad?, Guadalajara 2014.
- Ponente en el ciclo “Pensamiento y Sociedad. Encuentros con la Ciencia” en la Fundación Siglo Futur, con la conferencia titulada “ La Química en nuestras vidas”, Guadalajara 2011.
- Publicación de artícyulos de divulgación a través de la Universidad de Información Científica y Divulgación de la Investigación (OTRI, UCM), Grupo Tecnipublicaciones y Servicio de Información y Noticias Científicas (FECYT)
- Reseña del grupo de investigación en el periódico La Razón, 2010.

MINISTERIO DE CIENCIA E INNOVACIÓN

CURRICULUM VITAE (maximum 4 pages)

AGENCIA ESTATAL DE INVESTIGACIÓN

CV date	09/02/2021

Part A. PERSONAL INFORMATION

First and Family name	Agustín Lara Sánchez		
Social Security, Passport, ID number		Age	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0001-6547-4862	
	SCOPUS Author ID (*)		
	WoS Researcher ID (*)	J-9921-2014	

(*) Optional
(**) Mandatory

A.1. Current position

Name of University/Institution	University of Castilla-La Mancha (UCLM)		
Department	Inorganic Chemistry, Organic Chemistry and Biochemistry		
Address and Country	Avd. Camilo José Cela, Nº 10, 13071, Ciudad Real, Spain		
Phone number		E-mail	Agustin.Lara@uclm.es
Current position	Catedrático de Universidad	From	18/10/2019
Key words	Carbon dioxide, biodegradable polymers, organometallic chemistry		

A.2. Education

PhD, Licensed, Graduate	University	Year
Bachelor of Chemical Sciences	University of Castilla-La Mancha	1995
Doctor on Chemical Sciences	University of Castilla-La Mancha	1999

A.3. General indicators of quality of scientific production *(see instructions)*

- 4 research six-year periods: 1º (1996-2001), 2º (2002-2007), 3º (2008-2013) and 4º (2014-2019, July 2020).
- Number of thesis directed in the last 10 years: 6.
- Sum of times cited: 3165 (Web of Science).
- Average citations (last 5 years): 262 (Web of Science).
- h-index: 35 (Web of Science).
- Total publications: 95; 80 (Q1) (Web of Science).

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

In November of 1999, I defended my Doctoral Thesis reaching the Doctor's Degree. During the year 2000 make a postdoctoral stay at the University of Alcalá under the direction of Professor Mariano Fajardo with funding from the Community of Madrid. In 2001 I got a Marie Curie Postdoctoral Fellowship funded by the European Union for a postdoctoral stay at the University of East Anglia working with Prof. Manfred Bochmann. Later I joined as Assistant Professor of Faculty to the Faculty of Sciences and Chemical Technologies of the University of Castilla-La Mancha beginning my career as a Senior Researcher. In 2004 I got a position as Professor Contracted Doctor since I played until 2009 where I got a position as Professor of University in said center. Currently, I am Full Professor in Inorganic Chemistry (October 2019). During these years I have published 95 articles in scientific international journals, a book chapter, I am the author of a patent, I have directed 6 Doctoral Theses, 1 Thesis of Degree, 3 Diplomas of Advanced Studies and 11 Master of Research in Chemistry. I have supervised multiple End-of-Degree Jobs (20) for students of the Degree in Chemistry. I am researcher in charge of two national project (MINECO CTQ2017-84131-R and MINECO CTQ2014-52899-R) and of one european project (HPMFCT-2000-00710). As a researcher, I have participated in 8 national research projects, 4 regional projects research and 1 research project with an industrial company. I have been the researcher responsible for 3 Scientific Outreach Projects funded by the FECYT in the Campus Summer Scientists. I have participated in more than 91 international or national scientific congresses, with 3 invited conferences and 5 oral communications. Highlight collaborations with other international research groups such

as: Prof. Michael North (University of York, United Kingdom), Prof. René Rojas (Pontificia Universidad Católica de Chile), Prof. Verónica Salazar (Autonomous University of the State of Hidalgo, Mexico), Prof. Luciano Marchio (University of Parma) and Prof. Paula Diaconescu (University of California Los Ángeles, UCLA). Nationals like; Prof. Miguel Angel Sierra (Universidad Complutense, Madrid), Prof. Margarita Paneque (CSIC, Sevilla) and Dr. Antonio Rodríguez Diéguez (University of Granada).
During my research career I have focused my work on the development of new entities organometallic and coordination complexes of main groups metals such as Li, Mg, Zn and Al, transition metals groups 4 (Ti, Zr, Hf) and 5 (Nb), and metals of the so-called rare-earth-like Sc, Y, La, Nd, Sm and Lu. The aims of these complexes have been the search for catalytic applications in different processes of industrial interest such as the olefins polymerization, the synthesis of new biodegradable materials, hydroelementation processes and the use of CO2 as a carbon source. In recent years, the main aims of my work have been directed towards the study of catalytic processes for the synthesis of products of industrial interest such as cyclic carbonates and biodegradable polymers from CO_2 and renewable resources.

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

C.1. Publications *(see instructions)*

1. Authors: F. de la Cruz-Martínez, M. Martínez de Sarasa Buchaca, J. Martínez, J. Tejeda, J. Fernández-Baeza, C. Alonso-Moreno, A. M. Rodríguez, J. A. Castro-Osma, **A. Lara-Sánchez*** Title: **"**Bimetallic Zinc Catalysts for Ring-Opening Copolymerization Processes**"** Journal: ***Inorg. Chem. 2020, 59, 8412−8423***.

2. Authors: F. de la Cruz-Martínez, M. Martínez de Sarasa Buchaca, J. Martínez, J. Fernández-Baeza, L. F. Sánchez-Barba, A. Rodríguez-Dieguez, J. A. Castro-Osma, **A. Lara-Sánchez*** Title: **"**Synthesis of Bio-Derived Cyclic Carbonates from Renewable Resources**"** Journal: ***ACS Sustainable Chem. Eng, 2019, 7, 20126−20138***.

3. Authors: F. de la Cruz-Martínez, J. Martínez, M. A. Gaona, J. Fernández-Baeza, L. F. Sánchez-Barba, A. M. Rodríguez, J. A. Castro-Osma, A. Otero, **A. Lara-Sánchez*** Title: **"**Bifunctional aluminium catalysts for the chemical fixation of carbon dioxide into cyclic carbonates**"** Journal: ***ACS Sustainable Chem. Eng, 2018, 6, 5322-5332***.

4. Authors**:** J. Martínez, J. Fernández-Baeza, L. F. Sánchez-Barba, J. A. Castro-Osma, A. Otero, **A. Lara-Sánchez*.** Title**:** "An Efficient and Versatile Catalyst for Carbon Dioxide Fixation into Cyclic Carbonates" Journal**: *ChemSusChem, 2017, 10, 2886-2890.***

5. Authors: J. Martínez, J. A. Castro-Osma, C. Alonso-Moreno, A. Rodríguez-Dieguez. M. North, A. Otero, **A. Lara-Sánchez*.** Title: "One-component aluminium(heteroscorpionate) catalysts for the formation of cyclic carbonates from epoxides and carbon dioxide" Journal: ***ChemSusChem, 2017, 10, 1175-1185.***

6. Authors: J. Martínez, J. A. Castro-Osma, **A. Lara-Sánchez***, A. Otero, J. Fernández-Baeza, J. Tejeda, L. F. Sánchez-Barba, A. Rodríguez-Dieguez. Title: "Ring-opening copolymerisation of cyclohexene oxide and carbon dioxide catalysed by scorpionate zinc complexes" Journal: ***Polym. Chem. 2016, 7, 6475-6484.***

7. Authors: J. Martínez, J. A. Castro-Osma, A. Earlam, C. Alonso-Moreno, A. Otero, **A. Lara-Sánchez*,** M. North, A. Rodríguez-Diéguez. Title: "Synthesis of cyclic carbonates catalysed by aluminium heteroscorpionate complexes" Journal: ***Chem. Eur. J.*** **2015, 21, 9850-9862.**

8. Authors: J. A. Castro-Osma, C. Alonso-Moreno, **A. Lara-Sanchez***, J. Martínez, M. North, A. Otero.

Title: “Synthesis of cyclic carbonates catalysed by aluminium heteroscorpionate complexes”
Journal: ***Catal.Sci.Technol. 2014, 4, 1674-1684.***

9. Authors: A. Otero, J. Fernández-Baeza, **A. Lara-Sánchez*,** L. F. Sánchez-Barba.
Title: “Metal complexes with heteroscorpionate ligands based on the bis(pyrazol-1-yl)methane moiety: Catalytic chemistry”
Journal: ***Coord. Chem. Rev. 2013, 257, 1806-1868.***

10. Authors: J. A. Castro-Osma, C. Alonso-Moreno, J. C. García-Martinez, J. Fernández-Baeza, L. F. Sánchez-Barba, **A. Lara-Sánchez***, A. Otero.
Title: “Ring-Opening (ROP) versus Ring-Expansion (REP) Polymerization of ε-Caprolactone to Give Linear or Cyclic Polycaprolactones”
Journal: ***Macromolecules, 2013, 46, 6388-6394.***

C.2. Research projects

-Title: “Procesos cataliticos para la conversion de CO_2 en productos de interés industrial”
Project amount: 127.050 €
Financing entity: Ministerio de Economía y Competitividad, CTQ2017-84131-R
Affiliation entity: Universidad Castilla-La Mancha
Date; from: January 2018 to: June 2020
Type of participation: Principal researcher.

-Title: **“**Red ORFEO-CINQA, Centro de Innovación en Química Avanzada”
Project amount: 20.000 €
Financing entity: Ministerio de Ciencia, Innovación y Universidades, RED2018-102387-T
Affiliation entity: Coordinated by the Complutense University of Madrid, Prof. Miguel Ángel Sierra
Date: from: January 2020 to: December 2021
Type of participation: Researcher.

-Title: **“**Transformación química de materias primas renovables, CO_2, lactidas y lactonas, mediante procesos catalíticos homogéneos”
Project amount: 134.310 €
Financing entity: Ministerio de Economía y Competitividad, CTQ2014-52899-R
Affiliation entity: Universidad Castilla-La Mancha
Date: from: January 2015 to: June 2018
Type of participation: Principal researcher.

-Title: “Red ORFEO-CINQA, “Centro de Innovación en Química Avanzada**”**
Project amount: 41.500 €
Financing entity: Ministerio de Economía y Competitividad, CTQ2016-81797-REDC
Affiliation entity: Coordinated by the Complutense University of Madrid, Prof. Miguel Ángel Sierra.
Date: from: June 2017 to: June 2019
Type of participation: Researcher.

-Title: **“**Síntesis y aplicaciones de entidades organometálicas de metales de transición de los primeros grupos y lantánidos**”**
Project amount: 80.000 €
Financing entity: Junta de Comunidades de Castilla-La Mancha. PEII-2014-013-A.
Affiliation entity: Universidad Castilla-La Mancha
Date, from: September 2014 to: September 2015
Type of participation: Researcher**.**

-Title: **“**Organometálicos de metales de transición de los primeros grupos y grupos principales; sus aplicaciones en procesos catalíticos**”**
Project amount: 166.980 €

Financing entity: Ministerio de Ciencia e Innovación, Subdirección General de Proyectos de Investigación. (CTQ2011-22578/BQU).
Affiliation entity: Universidad Castilla-La Mancha
Date: from: January 2012 to: December 2014
Type of participation: Researcher**.**

-Title: **"**Desarrollo de Entidades Organometálicas para reacciones de Funcionalización selectiva en moléculas orgánicas" (CSD2007-00006),
Project amount: 5.000.000 €
Financing entity: Ministerio de Educación y Ciencia, Subdirección General de Proyectos de Investigación (CSD2007-00006)
Affiliation entity: Eleven groups from different institutions (One of them, my group from University of Castilla-La Mancha)
Date, from: January 2007 hasta: January 2012
Type of participation: Researcher

C.3. Contracts, technological or transfer merits
Project name: "Estudios sobre nuevas formulaciones de calcio, magnesio y potasio como fertilizantes inorganicos". (UCTR-06-0225)
Researcher in charge: Prof. Antonio Antiñolo garcía (UCLM)
Participating entities: Carbotecnia S.A and UCLM
Start date: 01/02/2007, 1 year
Total amount: 23.200 €

C.4. Patents
Title: "Organocatalizadores para la obtención de carbonatos cíclicos"
Inventors: J. Castro-Osma, J. Tejeda, A. Otero, J. Fernández-Baeza, A. Lara-Sanchez
Entity owner: UCLM
Reference/registration code: Nº: P201631419; ES2667439
Date: 07/02/2019
EU Patent: Yes

C.5. Chapters of books: Comprehensive Organometallic Chemistry III. Eds: R. H. Crabtree, D. M. P. Mingos; Elsevier: Oxford 2006; ISBN:008044590X; Vol. 5, Niobium Organometallics, p. 61-100; A.Otero, A. Antiñolo, A. Lara

C6. Direction of works. I have directed 6 Doctoral Theses, 1 Thesis of Degree, 3 Diplomas of Advanced Studies and 11 Master of Research in Chemistry.

C7. Participation in assessment or advisory tasks. Referee for international Journals: Green Chem., ChemSusChem, ACS Sustain. Chem. Eng, J. CO2 Util., Macromolecules, Polym. Chem, Inorg. Chem., J. Environ. Chem. Eng, Organometallics, Polymers, Catalysts, N. J. Chem., J. Organomet. Chem.

-Project Evaluator for the State Research Agency.

C8. Responsibilities held and others
-Vice-dean of Degree in Chemistry, Faculty of Chemical Sciences and Technologies. University of Castilla-La Mancha (From May 2013-Present).
-Coordinator of the PhD Program in Chemistry of the University of Castilla-La Mancha (Since January 2014-Present).
- Member of the Royal Spanish Society of Chemistry (RSEQ) and GEQO group.

MINISTERIO DE CIENCIA E INNOVACIÓN

CURRICULUM VITAE (maximum 4 pages)

AGENCIA ESTATAL DE INVESTIGACIÓN

CV date	12/01/2021

Part A. PERSONAL INFORMATION

First and Family name	Marta Elena González Mosquera	
Social Security, Passport, ID number	10877117-A	
Researcher codes	WoS Researcher ID *(*)*	C-9500-2011
	SCOPUS Author ID*(*)*	7005915337
	Open Researcher and Contributor ID (ORCID) **	0000-0003-2248-3050

(*) At least one of these is mandatory
(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad de Alcalá.		
Department	Química Orgánica y Química Inorgánica		
Address and Country	Campus Universitario		
Phone number	91 8854779	Phone number	91 8854779
Current position	Full Professor (Programa de Excelencia del Profesorado Univesitario de la CAM)	From	2020
Key words	Coordination and Organometallic Chemistry, Catalysis, Polymerization, Crystallography, Main group metals, Ru, Ti, Halogen bonding, Bioplastics, Functionalized Polymers,		

A.2. Education

PhD	University	Year
Chemistry	University of Oviedo	1997

A.3. JCR articles, h Index, thesis supervised…

- Four *sexenios de investigación*: 1993-1998; 1999-2004, 2005-2010 and 2011-2016 (31-12-2016)
- Number of supervised doctoral thesis in the last 10 years: 7 (3 ongoing)
- Total citations: 1368; Average number citation/year (last 5 years): 103. H index 21, Index i10: 53
- Total Publications in JCR journals: 118, in Q1 journals: 101, including the D1 journals: *Angew. Chem. Int. Ed (4), JACS (1), J. Hazard. Materials (1), ChemComm (*15), *Inorg Chem (*6), as well as 4 *Chemistry Eur. J.*, 21 *Dalton Trans*, 29 *Organometallics*.

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

Marta E. G. Mosquera, PhD, FRSC, is Full Professor in Inorganic Chemistry within the Madrid Region Program for Excellence. She graduated in Chemistry from Oviedo University, where she carried out her doctorate on Ru(II) complexes with P-donor ligands. After her PhD, she moved to Cambridge University with a Maire Curie Fellowship to join Prof. D. S. Wright group where her research was focused on main group chemistry. She returned to Oviedo as an Assistant Professor, where she worked on diphosphine carbenes. Finally, in 2003 she moved to Alcalá University where she started her independent career. Her current fields of research are Organometallic, Coordination and Structural Chemistry, Catalytic Polymerization and Bioplastics. Her efforts are oriented towards three different areas:

1. Homo and heterometallic main group compounds active in catalytic processes and in the generation of new C-C bonds. This work involves the design and synthesis of new mono and polymetallic species containing group 13 and alkaline metals, and the study of their activity in catalytic processes of polymerization of functionalized monomers and co-polymerization with CO_2. Aiming in particular to develop catalysts for the generation of bioplastics using agricultural waste as feedstock. (*ChemComm.* 2011; *Organometallics*, 2008, *Dalton Trans*., 2014,; *Organometallics*. 2015*; Dalton Trans*. 2016, *ChemCatChem* , 2018, *Chem Commun., 2018,*

Dalton Transactions, 2019, *European Polymer Journal*, 2020, *Polymer*, 2020, *Organometallic*s, 2020)

2. Design and synthesis of new metal-organic frameworks (MOFs) containing transition or main group metals with multifunctionalized ligands and their application as antimicrobial agents. (*CrystEngCommun.*, 2014, *Eur. J. Inorg. Chem*, 2017, *Journal of Hazardous Materials* 2021)

3. Study of systems with weak interactions such as Halogen Bonding, and the analysis of the implications of their presence in the structure and reactivity. (*Dalton Trans*., 2013, *Inorg. Chem.* 2016; *Faraday Discussions*, 2017; *CrystEngComm* 2020)

She has participated in 28 national and interactional research projects (11 as PI) and her work has been reported in 118 papers in JCR journals (93 in Q1) and more than 100 conferences contributions (several as invited speaker). Within these research areas she has supervised 25 Master and PhD thesis. She has been invited to give talks in Spanish and European Universities (Hertfordshire, 2005; Strathclyde, 2013; Complutense de Madrid, 2013; Politécnica de Madrid, 2015 and 2018; Gdansk, 2015 and Zaragoza, 2017.

She was a member of the Organizing Committee of the "XXII Congress and General Assembly of the IUCr" (Madrid, 2011) where 3000 people attended. She has participated in the organization of Symposia in various national and international conferences. Member of the International Scientific Advisory board of the 1st International Conferences on Noncovalent Interactions (ICNI2019) in Lisbon. In the University of Alcala she has co-organized the Organometallic Day (2017), the IV CHAOS COST action meeting (2018), 1st UK-Spain Organometallic Chemistry Symposium (2019) (she was Chair of the Organizing committee) and the *EUCOMC XXIV* (to be hosted in 2021). She is member of the Editorial Board of: Journal of Chemistry (Inorganic section), Frontiers in Chemistry and Crystals. Guest editor for the *Dalton Transactions* themed web collection on Inorganic Chemistry of the p-Block Elements in 2019.

Part C. RELEVANT MERITS

C.1. Publications (including books). In the past ten years she has published 50 publications.

1. S. Ghosh, G. Amariei, **Marta E. G. Mosquera** and R. Rosal. Polymeric ruthenium precursor as a photoactivated antimicrobial agent. ***Journal of Hazardous Materials*** (2021). 402, 123788. DOI: 10.1016/j.jhazmat.2020.123788
2. V. Sessini, M. Palenzuela, J. Damián and **Marta E. G. Mosquera**. Bio-based polyether from limonene oxide catalytic ROP as green polymeric plasticizer for PLA. ***Polymer*** (2020). 210: 123003. DOI: 10.1016/j.polymer.2020.123003.
3. M. Fernandez-Millan, M. Temprado, J. Cano, T. Cuenca, **Marta E. G. Mosquera**. Alkali-Metal Compounds with Bio-Based Ligands as Catalysts for Isoselective Lactide Polymerization: Influence of the Catalyst Aggregation on the Polymerization Control. ***Organometallics*** (2020), 39, 12, 2278–2286. DOI: 10.1021/acs.organomet.0c00237
4. **Marta E.G. Mosquera**, S. Dortez, F. Fernandez-Palacio, J. Damian, C. Gaiteiro, J. Ramos, P. Gomez-Sal. Halogen bonding (HaB) in E-I···X-M systems: influence of the halogen donor on the HaB nature. ***CrystEngComm*** (2020), 22, 870-877. DOI:10.1039/c9ce01449g. *Front Cover Supramolecular & Polymorphism and 1st International Conference on Noncovalent Interactions.*
5. F. G. García-Valle, V. Tabernero, T. Cuenca, J. Cano, **M.E.G. Mosquera.** Intramolecular C–F Activation in Schiff-base Alkali Metal Complexes. ***Organometallics*** (2019), 38, 894−904. *DOI:* 10.1021/acs.organomet.8b00868.
6. M. Palenzuela, M.T. Muñoz, J.F. Vega, A. Gutiérrez-Fernández, T. Cuenca, **M.E.G. Mosquera**. Heterobimetallic aluminate derivatives with bulky phenoxide ligands: catalyst for selective vinyl polymerization. ***Dalton Trans***. (2019), 48, 6435-6444. *DOI:10.1039/C9DT00761J.*
7. D. Sanchez-Roa, T. G. Santiago, M. Fernandez-Millan, T. Cuenca, P. Palma, J. Campora, **Marta E. G. Mosquera.** Interaction of an imidazolium-2-amidinate (NHC-CDI) zwitterion with zinc

dichloride in dichloromethane: role as ligands and C–Cl activation promoters. ***Chem Commun***. *(*2018), 54, 12586-12589. *DOI: 10.1039/c8cc07661h.*

8. Garcia-Valle F M; Cuenca T; Tabernero V; **Mosquera Marta E G**; Cano, J.; Milione, S. Biodegradable PHB from rac-β-Butyrolactone: Highly Controlled ROP Mediated by a Pentacoordinated Aluminum Complex. ***Organometallics*** (2018), 37, 837–840. DOI: 10.1021/acs.organomet.7b00843.
9. Mª Teresa Muñoz, Miguel Palenzuela, Tomás Cuenca, **Marta E. G. Mosquera.** New Aluminium Aryloxide Compounds Very Active Catalysts for Glycidyl Methacrylate Selective ROP Polymerization. ***ChemCatChem*** (2018), 10, 936-939. DOI: 10.1002/cctc.201701377
10. **Mosquera, Marta E. G**.; Gomez-Sal, Pilar; Diaz, Isabel; Aguirre, Lina M.; Ienco, A.; Manca, Gabriele; Mealli, Carlo. Intriguing I_2 Reduction in the Iodide for Chloride Ligand Substitution at a Ru(II) Complex: Role of Mixed Trihalides in the Redox Mechanism. ***Inorg. Chem***. *(2016), 55, 283-291*. DOI:10.1021/acs.inorgchem.5b02307
11. F. M. García-Valle, R. Stivill, C. Gallegos, T. Cuenca, **Marta E. G. Mosquera**, Vanessa Tabernero, Jesús Cano Metal and Ligand-Substituent Effects in the Immortal Polymerization of rac-Lactide with Li, Na, and K Phenoxo-imine Complexe, *Organometallics*., 2015, 477-487
12. Mª T. Muñoz, C. Urbaneja, M. Temprado, **Marta E. G. Mosquera**, T. Cuenca, Lewis Acid Fragmentation of a Lithium Aryloxide Cage: Generation of New Heterometallic Aluminium-Lithium Species, *ChemComm* . 2011, 47, 11757-11759

C.2. Research projects and grants. She has participated in 28 national and international projects

1. ***Reference: EPU-INV/2020/001.*** Title: Excellence for the University Academic staff. (**Ayuda de Excelencia para el Profesorado Universitario)** Funding Body: Comunidad de Madrid. from: 01/12/2020 to: 31/12/2023. Amount of subsidy: 150.000 €. Principal Investigator: Marta E. González Mosquera.
2. ***Reference: RTI2018-094840-B-C31***; Title: From agricultural wastes to functionalized bioplastics; Funding Body: Ministerio de Ciencia y Universidades; From: 01/01/2019 to 31/12/2021; Amount of subsidy: 92.000 €. Principal Investigators: Marta E. González Mosquera and Gerardo Jiménez.
3. ***Reference: CCG19/CC-037;*** Title: Functionalized Polymeric Nanoparticles with antimicrobial activity. Funding Body: Universidad de Alcalá. From 01-01-20 to 31-12-20. Amount of subsidy: 8500 €. Principal Investigator: Dr. Marta Elena González Mosquera
4. ***Reference:*** **CA15106,** Title: **C-H Activation in Organic Synthesis (CHAOS) Cost Action**. Funding Body: European Union. Participating entities: Institution from 30 countries. Period from: 21/03/2016 to: 20/03/2020. PI: Prof. Michael Schnurch (Chair of the Action). Local PI: **Marta E. González Mosquera**. Amount of subsidy: 168.000 €.
5. ***Reference: CTQ2014-58270-R***; Title: From atmosferic pollutants to products of industrial interest via new catalitic systems; Funding Body: MINECO; From: 01/01/2015 to 31/12/2017; Amount of subsidy: 74.000 €. Principal Investigators: Marta E. González Mosquera and Gerardo Jiménez.
6. ***Reference: PRI-AIBPT-2011-1157***; Title: C-C bond formation using heterometallic alkali metal- aluminium compounds. Funding Body: Universidad de Alcalá; From: 15-12-14 to 15-12-14; Amount of subsidy: 7400. Principal Investigator: Marta E. González Mosquera.
7. ***Reference: 2010 CSD2006-00015***; **(CONSOLIDER-INGENIO)** Title: Factory of Crystallization; Funding Body: Ministerio de Educación y Ciencia, Principal Investigator: Dr. Juan Manuel García Ruíz (CSIC); From: 16/09/2006 to 06/12/2014; Amount of subsidy: 5.000.000 €; Participation: Researcher.
8 ***Reference: CCG10-UAH/PPQ-5925.*** Title: Synthesis and Characterization of new Zn(II) and Ru(II) metalorganic networks. Study of theure photochemical and phocataltys properties. Funding Body: Universidad de Alcalá and CAM (Comunidad Autónoma de Madrid), 2010; From: 01/01/11 to 31/12/11; Amount of subsidy: 12000 €; Principal Investigator: Marta E. González Mosquera.
9. ***Reference: DGICYT. MAT2007-60997***; Title: Producción de materiales poliolefínicos con sistemas precatalíticos y cocatalíticos basados en complejos organometálicos. Funding Body: Ministerio, 2006; Principal Investigator: Prof. Pascual Royo Gracia, Universidad de Alcalá; From: 01/10/2007 to 30/09/2010; Amount of subsidy: 417.450 €; Participation: Researcher.

10. ***Reference: S-0505/PPQ/0328-02***; Title: Construcción molecular mediante procesos catalizados por complejos organometálicos; Fundinf Body: Comunidad de Madrid, 2005; Principal Investigator: Prof. Pascual Royo Gracia, Universidad de Alcalá; From: 01/01/2006, to: 31/12/2009; Amount of subsidy: 664.665 €; Participation: Researcher.

C.4. Patents

1. Authors: T. Cuenca; **Marta E. G. Mosquera**; Mª Teresa Muñoz Fernández. Title: Very Active Catalysts for Glycidyl Methacrylate Selective ROP Polymerization. P201500768. Nº: ES2610432. Spain Date of priority: 27/10/2015. UNIVERSIDAD DE ALCALA.

2. **Marta E. G. Mosquera,** R. Rosal, S. Ghosh, G. Amariei**.** Conjugated polymeric nanofibres with photoactivated antimicrobial activity for applications on photodisinfectable surfaces Application: 202031199. UNIVERSIDAD DE ALCALA

C5. Memberships of scientific societies

- Fellow of the RSC
- Member of the Government Board of the Spanish RSEQ and the GE3C

C6. Reviewer and Evaluator assignments

- Reviewer of speciality journals from Elsevier, ACS, RSC, Nature and Wiley.
- Evaluator for the UE research programs (VII Framework and H2020), National Science Centre from Poland, UK RSC Grants and the Spanish Agencia Estatal de Investigacion (AEI)
- Member of several PhD and academic positions examination panels in Spain.
- Member of the judging committees: Crystallization contest for secondary school students in Madrid (2016 and 2018); RSEQ Castilla-La Mancha section Excellent Chemistry Awards (2020), Xavier Solans award (2016) and for posters awards in several international congresses.

C.7. Congresses. More than 100 contributions to congresses, 70 in the last ten years. Selected ones:

- *Influence of Halogen Bonding in M-Cl substitution processes and C-Cl activation reactions,* 4th International Symposium on Halogen Bonding. Stellenbosch, Sudáfrica Nov. 2020. Invited talk.
- *Halogen Bonding influence in chloride substitution reactions*, 1st International Conferences on Noncovalent Interactions (ICNI-2019), Lisbon, Portugal**,** 1-6 Septembre 2019, Invited talk
- *Earth abundant metals compounds as catalysts for the production of bioplastics*. 4th EuCheMS Conference on Green and Sustainable Chemistry, Tarragona, Spain, 22-25 Sept. 2019.
- *Halogen-bonding mediated reactions* XXXI ECM Oviedo 22-27 August 2018. Invited talk
- *Homo vs heterometallic main group derivatives as catalysts in controlled polymerization processes*. ISACS: Challenges in Inorganic Chemistry. Manchester (UK). 10-13 April 2017.
- *Low nuclearity aluminum and aluminate derivatives with unusual structures: reactivity and catalytic activity*, 42nd International Conference on Coordination Chemistry, Brest, France, 2016.
- *Bio-Based Main Group Catalysts: Polymerization and C-H Activation Studies*. 14th International Symposium on Inorganic Ring Systems (IRIS-14), Regensburg (Alemania) 25-31 July 2015.
- *Síntesis de redes metalorganicas de Zn(II) con grupos amino no coordinados y estudio de su funcionalización postsíntesis*. XXII GE3C, Sevilla, 26-29 Junio 2012. Invited talk

C.8. Dissemination and Outreach.

Invited speaker in the presentation of the special issue that the RSEQ published for the International Year of the Periodic Table in May 2019, at the Universidad Complutense de Madrid. Participation in Pint of Science 2019, Week of Science 2019 and "Chemistry in action" at Alcalá University (2004-2020).