



# Susana Gutiérrez Gómez

PhD in Science and Chemical Technology

Barcelona, Spain

## WORK EXPERIENCE

2020 – Present

**POSTDOCTORAL RESEARCHER** – CATALAN INSTITUTE OF NANOSCIENCE AND NANOTECHNOLOGY (ICN2), NanoUP Group.

- + Research topic: Metal Organic Polyhedra (MOPs).

2020 – Present

**HIGH SCHOOL TEACHER** – ENMS CENTRO HISTÓRICO LEÓN, Universidad de Guanajuato.

- + Teacher of Chemistry and Stoichiometry (Online).

2018 - 2019

**RESEARCHER** – CIATEC A.C.

- + Research topic: Hydrocarbons & petroleum derivatives (humic substances).
- + Characterization of products and research in supramolecular identification of metallic cations and other ions.

2014 – 2016

**ASSISTANT PROFESSOR** – UNIVERSITY OF THE BALEARIC ISLANDS

- + Advanced Chemistry Laboratory in Bachelor's degree in Chemistry.
- + Comprehensive chemistry laboratory in Bachelor's degree in Chemistry.

2013 - 2014

**TECHNICAL COORDINATOR** – INTERMET S.A. de C.V

- + Coordination and logistics of Clinical Laboratory in Public Hospitals
- + Clinical Laboratory, supplies & equipment.

2011-2012

**QUALITY CONTROL MANAGER** – Toroza Química

- + Company of research and manufacture of chemical supplies for tanning.
- + Quality control of supplies & finished products, and quality reports.

## EDUCATION

- 2013-2018 **PHD IN CHEMISTRY** – UNIVERSITY OF THE BALEARIC ISLANDS
- + Supramolecular Chemistry
  - + Thesis: "Synthesis and application of nanostructured hybrids compounds based on iron oxides or nanodiamonds"
- Advisors: Prof. Jeroni Morey and Dr. Neus Piña
- 2012-2013 **MASTER IN CHEMISTRY** – UNIVERSITY OF THE BALEARIC ISLANDS
- + Supramolecular Chemistry
  - + Thesis: "Microwave optimization of the conjugation of nanoparticles with organic residues".
- Advisor: Prof. Jeroni Morey
- 2005-2010 **BACHELOR OF SCIENCE IN CHEMISTRY** – UNIVERSITY OF GUANAJUATO
- + Bioinorganic Chemistry
  - + Thesis: "Study of the catalytic potential of Pd complexes with a tridentate binder, in the styrene oligomerization".
  - + Advisor: Prof. Guillermo Mendoza Díaz

## LANGUAGES

Spanish (native), English (fluent).

## CONFERENCE PRESENTATIONS

- 2020 **II Congreso de Desarrollo Territorial 2020: Promoviendo la sustentabilidad.** Ahuacatlán, México. Oral Presentation.
- 2019 **13° Simposium Interancional de Ciencias Químicas.** Gómez Palacio, México. Oral Presentation (20-hours practical theoretical course).
- IV Jornadas Doctorales de la UM.** Murcia, Spain. Poster.
- Materials & Nanomaterials and International Conference.** Paris, France. Poster.
- XL Encuentro Nacional de la AMIDIQ.** Huatulco, México. Poster.
- 2018 **7th Euehems Chemistry Congress.** Liverpool, UK. Oral presentation.
- IV Doctoral Seminars of the University of Murcia.** Murcia, Spain. Poster.
- 2017 **VIII Meeting of Organic Chemistry of the Mediterranean (REQOMED).** Palma de

Mallorca, Spain. Poster.

**XXXVI Biennial Meeting of the Spanish Society of Chemistry.** Sitges, Spain. Poster.

2016

**6th EuChems Chemistry Congress.** Seville, Spain. Poster.

**5th Symposium of CONACyT Scholars in Europe.** Strasbourg, France. Oral presentation.

2015

**XII Symposium of Young Researchers RSEQ-Sigma Aldrich.** Barcelona, Spain.

**12th International Conference on Materials Chemistry (MC12).** York, UK. Poster

2014

**Les Doctoriales Transfronteriers.** Palma de Mallorca, Spain. Participation.

**XI Symposium of Young Researchers RSEQ-Sigma Aldrich.** Bilbao, Spain. Poster.

## GRANTS & AWARDS

2020

**FELOWSHIP** – Granted by "Consejo Nacional de Ciencia y Tecnología (CONACyT)" for Postdoctoral research.

2019

**DISTINCTION** – National Researcher Level 1, by "Sistema Nacional de Investigadores (SNI)" of México; for her outstanding research work in the area of knowledge II (Biology & Chemistry).

2014 - 2018

**FELOWSHIP** – Granted by "Consejo Nacional de Ciencia y Tecnología (CONACyT)" for PhD studies abroad.

2012 - 2013

**FELOWSHIP** – Granted by "Fundación Carolina and Banco Santander" for Master Studies.

## PUBLICATIONS

2020

**Effective Elimination and Biodegradation of Polycyclic Aromatic Hydrocarbons from Seawater through the Formation of Magnetic Microfibrils.** M. Susana Gutiérrez, Alberto J. León, Paulino Duel, Rafael Bosch, M. Nieves Piña, Jeroni

Morey. *International Journal of Molecular Sciences*. **2020**. 22, 17, 1-11.  
[10.3390/ijms22010017](https://doi.org/10.3390/ijms22010017)

**Introducing Selectivity on Carbonaceous Material: Removing Noble Salts, Au<sup>3+</sup>, and Ag<sup>+</sup> from Aqueous Media by Nanodiamonds Functionalized with Squaramides.** M. Susana Gutiérrez, Kenia A. López, Jeroni Morey, M. Nieves Piña. *Materials*. **2020**. 13, 5, 1086. [doi: 10.3390/MA13051086](https://doi.org/10.3390/MA13051086)

2019

**Influence of the aromatic surface on the capacity of adsorption of VOCs by magnetite supported organic-inorganic hybrids.** María de las Nieves Piña, María Susana Gutiérrez, Mario Panagos, Paulino Duel, Alberto León, Jeroni Morey, David Quiñonero and Antonio Frontera. *RSC Advances*, **2019**. 9, 24184-24191. [doi: 10.1039/C9RA04490F](https://doi.org/10.1039/C9RA04490F)

2018

**A Very Highly Efficient Magnetic Nanomaterial for the Removal of PAHs from Aqueous Media.** M. Susana Gutiérrez, Paulino Duel, Fernando Hierro, Jeroni Morey and M. Nieves Piña. *Small*, **2018**, 14, 1702573. [doi: 10.1002/smll.201702573](https://doi.org/10.1002/smll.201702573)

**Adsorption and quantification of VOCs using Hybrid Magnetic Nanoparticles.** M. Nieves Piña, Paulina Rodríguez, M. Susana Gutiérrez, David Quiñonero, Jeroni Morey and Antonio Frontera. *Chemistry A European Journal*. **2018**, 24, 12820-12826. [doi: /10.1002/chem.201802945](https://doi.org/10.1002/chem.201802945)

**Removal of Au<sup>3+</sup> and Ag<sup>+</sup> from aqueous media with magnetic nanoparticles functionalized with squaramide derivatives.** Paulino Duel, M. Susana Gutiérrez, Paulina Rodríguez, Alberto León, Kenia A. López, Jeroni Morey and M. Nieves Piña. *RSC Advances*, **2018**, 8, 36123. [doi: 10.1039/c8ra07793b](https://doi.org/10.1039/c8ra07793b)

2017

**A Fast microwave-assisted conjugation of magnetic nanoparticles with carboxylates of biological interest.** M. S. Gutierrez, M. N. Piña and J. Morey. *RSC Advances*, **2017**, 7, 19385. [doi: 10.1039/c7ra00830a](https://doi.org/10.1039/c7ra00830a)

## SKILLS & TECHNIQUES

- + Magnetic nuclear resonance (<sup>1</sup>H, <sup>13</sup>C, and <sup>13</sup>C in solid state).
- + Fluorescence spectroscopy.
- + FT-IR spectroscopy.
- + UV-Vis spectroscopy.
- + Thermogravimetric analysis (TGA).

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[mariasusana.gutierrez@icn2.cat](mailto:mariasusana.gutierrez@icn2.cat)

- + Dynamic Light Scattering (DLS).
- + Z-potential.
- + X-Ray diffraction.
- + Gas chromatography.
- + High-performance liquid chromatography (HPLC).
- + Mass spectrometry.