

CURRICULUM DATE	21/12/2020
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Part A. PERSONAL DATA

Name	Hermenegildo García Gómez		
I.D. Nr	20402567A	Age	63
Webpage	https://hermenegildogarciagroup.es		
Research I.D. Nrs.	Researcher ID	E-3296-2010	
	Scopus Author ID	57190574339	
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A.1. Current Professional Situation

Organism	UNIVERSITAT POLITÈCNICA DE VALÈNCIA		
Dpt. / Centre	D. Química / E.T.S.I. Industriales		
Address	Avda/ de los Naranjos s/n, 46022, Valencia		
Telephone	00 34 96 387 78 07	Email address	hgarcia@qim.upv.es
Professional Status	University Full Professor	Starting date	1996
Key Words	Photocatalysis, Heterogeneous Catalysis		

A.2. Academic career (degree, institution, date)

Doctorate	University	Year
PhD in Chemistry	Universitat de València	1983
Degree in Chemistry	Universitat de València	1979

A.3. General Scientific Quality Indicators

The number of awarded **six-years research positive evaluations awarded by the Spanish Ministry of Science and Innovation has been the maximum possible** being the last obtained in 2016. The current **H index** (September 2020) is **104** (web of science) and **113** (Google Scholar). The total **number of publications is 814**, over **700** of them have appeared in journals with a current **impact factor equal or higher than 4**. I have published one **Science**, one **Nature Materials**, one **Nature Protocols**, 5 **Energy and Environmental Science**, 3 **Nature Communications**, 3 **Advanced Materials**, 10 **Chemical Reviews**, 9 **Chemical Society Reviews**, 17 **Angewandte**, 33 **JACS**, 23 **Applied Catalysis B**, among others. Over the years, over twenty of these papers have formed the core of **nine research fronts** going from supported gold nanoparticles as catalysts, metal organic frameworks as catalysts, layered double oxides as photocatalysts, solar fuels, plasmon photocatalysis and carbocatalysis. I also appear in **the list of Highly Cited Scientists** according to the **Shanghai-Thomson ranking list**. The current list of Essential Science Indicators (Dec. 2020) includes 25 articles as **Highly Cited Papers**, two of them as **hot papers** and four as **Research Fronts**: graphenes as metal-free catalysts, graphenes as supports of metal nanoparticles, metal-organic frameworks as photocatalysts, mixed metals metal organic frameworks. The number of **PhD supervised** has been **45**. **Four** of them have received the **yearly award** from the Universidad Politècnica de Valencia to **the best PhD** since this distinction started in 2007. The number of former co-workers that have obtained the **"Ramón y Cajal" contracts is seven**, four of which already have become permanent staff members. The number of former co-workers that have gained a **"Juan de la Cierva"** research associate contract has been **four**. The number of former coworkers as **Full and Associate Professors** is 16 (five at foreign Universities).

The number of **invited and plenary lectures in congresses and workshops is over 100**, mostly in international meetings. In the last five years he has delivered 30 plenary and invited lectures plus additional participation in International and National Summer Schools and lectures at University Departments. His team is one of the ten belonging to the **Institute of Chemical Technology** that were **awarded in 2013 and 2016 with the Severo Ochoa award of Excellence**. Dr. Garcia has been participating continuously in **EU funded projects**. In the last ten years eleven EU funded projects including Integrated projects (Novacam, BeingEnergy, Macademia, Next GTL, Topcombi, Energy X, LotherCO2M, Solar2Chem, FlowPhotoChem,

Methasol and a network of Excellence in Catalysis (IDECAT), Feder funded projects (TRAIN2, several LIFES), a project from the European Research Agency and a Science for Peace project funded by NATO. The group is recognized as **group of excellence** funded by the regional Valencian government (**Prometeo 2013/19 and 2017/083**).

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

Hermenegildo García is a **full professor** at the **Instituto de Tecnología Química** of the Technical University of Valencia. In 2015 he has been appointed as **Honorary Professor at King Abdulaziz University**. Prof. García has been active in the field of heterogeneous catalysis working with porous catalysts and nanoparticles and has **contributed to nine research fronts** as defined by the Essential Indicators Database. This research fronts are related to the use of gold nanoparticles as heterogeneous catalysts, metal organic frameworks in catalysis, carbocatalysis, layered double hydroxides as photocatalysts, plasmon photocatalysis and solar fuels production. Four of them are currently (Dec. 2020) still active. Besides fundamental research, Prof. García has carried out over **40 R&D contracts** with companies either local, National or Multinational including **BASF, Repsol, DSM, Aguas de Valencia, FMC, Abengoa, Union Derivan, Ceracasa, Unión Alcorense, Gardian, SPB, Avanzare, Galol**. These R&D contracts have led to a number of **patents (37)**, most of them belonging to companies (see the accompanying list for the most relevant) and others forming part of the Intellectual property portfolio of the Technical University of Valencia and the Spanish National Research Council. Prof. García is **Doctor Honoris Causa from the University of Bucharest** and the recipient of the **2011 Janssen-Cilag award** given by the Spanish Royal Society of Chemistry, **2008 Alpha Gold of the Spanish Society of Glass and ceramics** and **2016 award "Jaime I de Nuevas Tecnologías"**.

Prof. García is elected **President of the editorial board of ChemCatChem** and serving as **member of the editorial board of Energy and Environmental Science (RSC), Chemistry-A European Journal (Wiley), Journal of Molecular Catalysis A (Elsevier), Nanomaterials (MDPI)** and in the last years also member of the and **Photochemical and Photobiological Sciences (RSC)**. He is **President of the International Advisory Board** of the Center of Excellence in Advanced Materials Research at **KAU (Saudi Arabia)**. He has been in the **evaluation panel** of ERC Consolidator Grant (2018 and 2020), Romanian Ministry of Science and Education and other panels in the Netherlands (NYOK), Belgium (Belspo) Greece and Flanders Science and Technology funding agencies and the KAUST. He was in the **Scientific organising committee** of the XIX and XX IUPAC Symposium on Photochemistry held at Granada and Osaka and the 1st IUPAC Symposium on Green Chemistry at Venice. He was member of the Committee organizing the General IUPAC meeting hold at Paris in July 2019. He has **supervised more than 30 degree projects** and about **10 Master projects**. During his career, Dr. Garcia has had numerous **postdoctoral collaborators**. Four of them are currently Full, assistant or associate Professors at the University of Namur (Dr. Carmela Aprile), Technical University of Lisboa (Dr. Carlos Baleizao), University of Porto (Dr. Claudia Gomes), China University of Mining Science and Technology (Dr. Jinan Niu) Cochin University (Dr. Narayana Manoj) and University of Madurai Kamaraj (Dr. Dhakshinamoorthy), while six of them are Professors in Spanish Universities.

Parte C. Relevant achievements

C.1. Publicacions

Over 780 publications. See extended CV

C.2. Projects

- 1 Materiales LDH de Titanio en monocapas como fotocatalizadores (Universidad Politécnica de Valencia). 03/09/2019-03/09/2022.
- 2 Ayuda predoctoral FPU-Garcia Mulero. (Universidad Politécnica de Valencia). 01/03/2019-01/03/2022.
- 3 Heterouniones de grafeno con configuracion controlada. Sintesis y aplicaciones como soporte en catalisis y electrodos (Universidad Politécnica de Valencia). 01/01/2019-01/01/2022.

- 4 Grafenos como fotoelectrodos para la generación de combustibles solares (Universidad Politécnica de Valencia). 01/11/2017-01/11/2021.
- 5 Programa Estatal de Fomento de la Investigación Científica y Técnica de Excelencia (Universidad Politécnica de Valencia). 01/07/2017-30/06/2021.
- 6 Ayudas para contratos predoctorales para la formación de doctores-Rendon Patiño (Universidad Politécnica de Valencia). 01/05/2017-01/05/2021.
- 7 GRAFENO (Universidad Politécnica de Valencia). 01/01/2019-01/01/2021.
- 8 Equipamiento para el laboratorio de caracterización avanzada de materiales sólidos en el Instituto de Tecnología Química (Universidad Politécnica de Valencia). 01/01/2018-01/01/2021.
- 9 LOTERCO2M European Commission. Hermenegildo Garcia. 01/01/2018- 31/12/2020. 300.000 €.
- 10 Ayuda Santiago Grisolia proyecto: Modelización de Centros Catalíticos en Grafeno (Universidad Politécnica de Valencia). 01/10/2017-01/12/2020.
- 11 ENERGY-X: TRANSFORMATIVE CHEMISTRY FOR A SUSTAINABLE ENERGY FUTURE (Universidad Politécnica de Valencia). 01/03/2019-01/03/2020.
- 12 Formación directa de grafeno sobre superficies plásticas AGENCIA ESTATAL DE INVESTIGACION. (Universidad Politécnica de Valencia). 01/05/2017-01/05/2018.
- 13 Novel catalysts for refining and petrochemistry King Abdulaziz City. Hermenegildo García. 01/01/2015-01/01/2017. 150.000 €.
- 14 ZEolitic reactor hosting Subphthalocyanines and Metal Oxides as photocatalytic system for opto-electronic applications COMISION DE LAS COMUNIDADES EUROPEA. García Gómez Hermenegildo. (Universitat Politècnica de València). Desde 01/09/2016. 158.121,6 €.
- 15 EXPLOTANDO EL USO DEL GRAFENO EN CATALISIS, USO DEL GRAFENO COMO CARBOCATALIZADOR O COMO SOPORTE. MINISTERIO DE ECONOMIA INDUSTRIA Y COMPETITIVIDAD. García Gómez Hermenegildo. (Universitat Politècnica de València). Desde 01/01/2016. 214.170 €.
- 16 AYUDA RAMON Y CAJAL-PRIMO ARNAU MINISTERIO DE ECONOMIA INDUSTRIA Y COMPETITIVIDAD. García Gómez Hermenegildo. (Universitat Politècnica de València). Desde 06/10/2015. 308.600 €.
- 17 NUEVOS FOTOCATALIZADORES BASADOS EN PEROVSKITAS HIBRIDAS HALOGENADAS PARA LA OBTENCION DE COMBUSTIBLES SOLARES A PARTIR DE CO2. FUNDACION RAMON ARECES. Atienzar Corvillo Pedro Enrique. (Universitat Politècnica de València). Desde 07/04/2015. 89.820 €.
- 18 NUEVOS FOTOCATALIZADORES PARA LA GENERACION DE HIDROGENO CON LUZ SOLAR BASADOS EN EL EMPLEO DE BIOPOLIMEROS COMO PLANTILLAS UNIVERSIDAD POLITECNICA DE VALENCIA. Primo Arnau Ana Maria. (Universitat Politècnica de València). Desde 01/01/2015. 5.140 €.

C.3. Contracts

- 1 MOLECULA VALENCIA SUAVIZANTES Y PLASTIFICANTES BITUMINOSOS S.L.. 05/02/2019-05/02/2020.
- 2 HETEROGENEOUS CATALYSTS FOR THE SELECTIVE CO2 HYDROGENATION TO CHEMICALS BASF AKTIENGESELLSCHAFT. 02/01/2019-P1Y.
- 3 Colaboración en proyecto de incorporación de nuevos ingredientes en detergencia capaces de modificar la superficie de los tejidos SUAVIZANTES Y PLASTIFICANTES BITUMINOSOS S.L.. 06/11/2018-P5M.
- 4 Colaboración en proyecto estudio y desarrollo de nanomateriales que aumenten la eficacia de los recubrimientos anticorrosivos GALOL S.A.. 06/11/2018-P6M.
- 5 GRAFENO EN FORMULACIONES CAPILARES SUAVIZANTES Y PLASTIFICANTES BITUMINOSOS S.L. 10/05/2018-P1Y.
- 6 Nueva alternativa para la conversión de fangos de EDAR en productor de valor añadido DEPURADORA DE AGUAS DEL MEDITERRANEO S.L.. 26/12/2017-P1Y6M.
- 7 Polymer surface functionalization by graphene and other two dimensional materials: Method for plating polymers Cr(VI) free SRG GLOBAL INC. 08/06/2017-P1Y.

- 8 Acuerdo de colaboración tecnológica para la realización del estudio "adecuación y mejoras funcionales mediante nuevas tecnologías de la cola base almidón destinada al sector del cartón ondulado" NEWTEC grupo. 24/11/2016-P2Y.
- 9 Next generation personal protection garments against warfare agents (prosafe) EUROPEAN DEFENCE AGENCY. Alvaro Rodríguez María Mercedes. (Universitat Politècnica de València). 09/03/2015-P30M.

C.4. Patents

- 1 Procedimiento para la preparación de heterouniones de grafeno y nitruro de boro 03/12/2018. Universidad Politécnica de Valencia.
- 2 Procedimiento de preparación de un catalizador basado en nanopartículas de Hierro, Cobalto y sus aleaciones, catalizador preparado y uso España. 28/11/2018. Universidad Politécnica de Valencia.
- 3 Procedimiento para la producción y almacenamiento de hidrógeno mediante deshidrogenación catalítica, y uso de un catalizador de un metal de transición anclado sobre un soporte de un material de carbono para la obtención de hidrógeno mediante reacciones de deshidrogenación catalítica 06/08/2018. Universidad Politécnica de Valencia.
- 4 Hermenegildo García; Ana Primo; Josep Albero. P201630203. Fotocatalizador a base de grafeno para la producción de combustibles solares España. 23/02/2016. Universidad Politécnica de Valencia.
- 5 García Gómez Hermenegildo; J.A. Maciá-Agulló. P201530280. Procedimiento fotoquímico para la eliminación de H₂S en efluentes gaseosos mediante conversión a H₂ y S 04/03/2015. UPV-CSIC.
- 6 García Gómez Hermenegildo; Primo Arnau Ana Maria. P201430848. Procedimiento de hidrogenación de sustratos utilizando material grafénico como catalizador 03/06/2014. UPV-CSIC.
- 7 García Gómez Hermenegildo, Gurrane Tayari, Abdessamad, Garcia Mondría, Regina, Llobell Juan y Alandí Francisco, Phosphate-Free Fire Retardant, PCT 2020 Appl. 29 Dec. 2020. In exploitation by Primalchit Solutions.