



Lucas Vázquez Besteiro

Generated from: Editor CVN de FECYT

Date of document: 18/03/2025

v 1.4.3

8def8a9f6442ffc909300a7b149d513b

This electronic file (PDF) has embedded CVN technology (CVN-XML). The CVN technology of this file allows you to export and import curricular data from and to any compatible data base. List of adapted databases available at: <http://cvn.fecyt.es/>



Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

I started my career as a Physicist at University of Santiago de Compostela, where I successfully pursued a 5-year degree (Licenciatura) in Theoretical Physics and postgraduate degrees on Material Science, leading to a PhD dissertation on the modelling of semiconductor nanoparticles within the Density Functional Theory formalism, which merited the award of a “**Cum Laude**” distinction. In parallel with my doctoral research, and interested on the modelling of complex systems (in Chemistry, Biology and even the Social Sciences), I pursued a Master degree in Physics of Complex Systems at Universidad Nacional de Educación a Distancia.

Motivated to study systems closer to direct technological application, I changed my main research focus to the study of Plasmonics and trained this new skill set during my first **postdoctoral appointment**. Under the supervision of Prof. Alexander Govorov, at Ohio University (USA), I conducted research on the modelling of fundamental properties of plasmonics nanomaterials, as well as characterizing their potential in applications such as solar energy harvesting, precise chiral biosensing and photothermal therapy. During a three-year period, I developed my profile as a young researcher in this field, building up my expertise on the theoretical description and modelling of fundamental processes in Nanophotonics and starting several fruitful collaborations with experimental groups across the globe.

Borne from that experience, I was later awarded a joint **Postdoctoral Fellowship** by the Institute of Fundamental of Frontier Sciences (IFFS, China, supervised by Prof. Zhiming Wang), at University of Electronic Science and Technology of China, and the Institut National de la Recherche Scientifique (INRS, Canada, supervised by Prof. Federico Rosei) to conduct research in Nanophotonics in close collaboration with several experimental groups both at IFFS and INRS. During the three years invested in this position, I advanced my own research in theoretical plasmonics and collaborated in a wealth of research projects with both fundamental and applied scopes.

In 2020 I joined the Biomedical Research Center (CINBIO, Universidade de Vigo, Spain) as a **Junior PI**, where I work on the application of plasmonic materials in photocatalytic reactions of critical societal relevance, surrounded by world-class teams of experimental researchers with adjacent interests. Currently I hold a **Ramón y Cajal Fellowship** (2021) at the same institution.

Some of the recognitions received for my research include having been named “**Outstanding Postdoctoral Fellow 2018**” by UESTC, selected for a “**Juan de la Cierva - Incorporación**” fellowship in 2018 (declined), and received a “**Young Talent Contribution Award**” by IFFS in 2022.



General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

As of today, my research activity has contributed to the publication of **78 scientific papers** in peer-reviewed journals, 13 of them as a first author and 11 as corresponding author, and accumulated more than **5400 citations** and conducting to a **h-index of 36** (Web of Science). I have also written a book chapter on plasmonic photocatalysis, participated as guest editor in two special issues, and received grant funding for 7 research projects as single PI, one research project as co-PI, and participated in one European research consortium as researcher.



Lucas Vázquez Besteiro

Surname(s): **Vázquez Besteiro**
 Name: **Lucas**
 DNI: **76580762P**
 ORCID: **0000-0001-7356-7719**
 ScopusID: **Besteiro, Lucas V.**
 ResearcherID: **Z-1293-2018**
 Date of birth: **08/07/1984**
 Gender: **Male**
 Nationality: **Spain**
 Country of birth: **Spain**
 Aut. region/reg. of birth: **Galicia**
 City of birth: **Sarria**
 Contact address: **Campus Universitario de Vigo**
 Postcode: **36310**
 Contact country: **Spain**
 Contact city: **Vigo**
 Email: **lucas.v.besteiro@uvigo.es**
 Mobile phone: **(+34) 680373631**
 Personal web page: **http://www.lucasvbesteiro.com**

Current professional situation

Employing entity: Universidade de Vigo **Type of entity:** University
Department: CINBIO
Professional category: Ramón y Cajal Researcher
City employing entity: Vigo, Galicia, Spain
Start date: 01/12/2022
Type of contract: Temporary **Dedication regime:** Full time

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidade de Vigo	Junior PI	01/09/2020
2	University of Electronic Science and Technology of China	Postdoctoral Researcher	15/09/2017
3	Ohio University	Postdoctoral Researcher	01/08/2014

1 **Employing entity:** Universidade de Vigo **Type of entity:** University Research Institute
Department: CINBIO, CINBIO
City employing entity: Vigo, Galicia, Spain
Professional category: Junior PI
Start-End date: 01/09/2020 - 30/11/2022 **Duration:** 2 years - 3 months
Type of contract: Temporary



- 2** **Employing entity:** University of Electronic Science and Technology of China **Type of entity:** University
Department: Institute of Fundamental and Frontier Sciences
City employing entity: Chengdu, China
Professional category: Postdoctoral Researcher **Leadership and management (Y/N):** No
Start-End date: 15/09/2017 - 31/08/2020 **Duration:** 3 years
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 220207 - Interaction of electromagnetic waves with matter; 221213 - Radiation (electromagnetic)
Secondary (UNESCO code): 220919 - Physical optics; 221022 - Photochemistry; 221302 - Heat transfer (physics of)
Performed tasks: This is a research-only position, concerned with the theoretical study of systems of relevance within Nanophotonics and Material Science. The main thread in the research conducted in this position is the modelling of light-matter interaction, with a particular focus in the field of Plasmonics. Furthermore, I am involved in close collaboration with several experimental groups, with whom I am tackling problems related to the integration of plasmonic nanostructure in novel devices for solar energy conversion through photovoltaic and photocatalytic approaches, the characterization of metallic nanostructures through optical and electron microscopy techniques, modelling of their photoheating capabilities and their usage in enhancing secondary radiation-matter interaction processes, among other topics. As it is common in positions advancing basic scientific research, the main outcomes of my work in this position are the publication of scientific papers in peer-reviewed journals and the communication of my research in professional conferences, workshops and seminars.
Area of leadership and/or management activity: University
Applicability in teaching and/or research: This was a full time position as a researcher, and included the shared supervision of several PhD students.
- 3** **Employing entity:** Ohio University **Type of entity:** University
Department: Department of Physics and Astronomy, Ohio University
City employing entity: Athens, United States of America
Professional category: Postdoctoral Researcher **Leadership and management (Y/N):** No
Start-End date: 01/08/2014 - 31/07/2017 **Duration:** 3 years
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 220207 - Interaction of electromagnetic waves with matter; 221213 - Radiation (electromagnetic)
Secondary (UNESCO code): 220919 - Physical optics; 221022 - Photochemistry; 221302 - Heat transfer (physics of)
Performed tasks: Research position on the theoretical Nanophotonics, modelling plasmonic systems in particular. The topics developed in this period include the study of their fundamental properties, from the optical response of plasmonic nanostructures to the modelling of plasmon dephasing into excited single-particle states, as well as their application to a diverse range of technological applications within medicine and solar energy harvesting and conversion, among others.
Area of leadership and/or management activity: University
Applicability in teaching and/or research: This was a full time position as a researcher, and my main duties pertained to this category. However, I also taught an approximate total of 20 hours of class as a substitute lecturer in courses on Thermodynamics (undergraduate level) and Electrodynamics (graduate level).



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

University degree: Higher degree

Name of qualification: Licenciado en Física Opción Física de las Partículas

Degree awarding entity: Universidad de Santiago de Compostela **Type of entity:** University

Date of qualification: 15/09/2008

Doctorates

Doctorate programme: Doctor en Programa Oficial de Doctorado en Ciencia de Materiales

Degree awarding entity: Universidad de Santiago de Compostela **Type of entity:** University

City degree awarding entity: Santiago de Compostela, Galicia, Spain

Date of degree: 15/07/2014

DEA awarding entity: Universidad de Santiago de Compostela

Date DEA was awarded: 15/07/2010

Thesis title: Influencia de la dimensionalidad en las propiedades estructurales y electronicas de nanomateriales semiconductores: puntos cuanticos, nanohilos y nanotubos

Thesis director: Manuel María González Alemany

Thesis co-director: Javier Gallego del Hoyo

Obtained qualification: Cum Laude

Other postgraduate university studies

Postgraduate qualification: Máster en Física de Sistemas Complejos

Degree awarding entity: Universidad Nacional de Educación a Distancia **Type of entity:** University

Faculty, institute or centre: Facultad de Ciencias

Date of qualification: 23/11/2015

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
German	A1	A2	A1	A1	A1
French	B1	B1	A2	A2	A2
Spanish	C2	C2	C2	C2	C2
Gallegan	C2	C2	C2	C2	C2
English	C2	C2	C2	C2	C2



Teaching experience

Experience supervising doctoral thesis and/or final year projects

- 1 Project title:** Fotocatalizadores plasmónicos híbridos con marcos organometálicos para la síntesis de amoníaco: descubriendo nuevos sistemas combinando métodos teóricos y experimentos
Type of project: Doctoral thesis
Entity: Universidade de Vigo **Type of entity:** University
Student: Maria Merajoddin
Date of reading: 23/02/2026
- 2 Project title:** Modelado teórico de fotocatalizadores plasmónicos con métodos computacionales híbridos: estudiando la interacción metal-molécula
Type of project: Doctoral thesis
Entity: Universidade de Vigo **Type of entity:** University
Student: Muhammad Irfan
Date of reading: 23/02/2026
- 3 Project title:** Diseño de fotocatalizadores plasmónicos para la síntesis sostenible de amoníaco
Type of project: Doctoral thesis
Entity: Universidade de Vigo **Type of entity:** University
Student: Jesús Giráldez Martínez
Date of reading: 30/09/2025
- 4 Project title:** Modelling chiroptical properties of plasmonic assemblies
Type of project: 073
Entity: Universidade de Vigo **Type of entity:** University
Student: Leonor da Conceição Póvoa Coutinho
Date of reading: 15/07/2025
- 5 Project title:** Theoretical study of bimetallic plasmonic nanostars and their efficiency as photocatalysts
Type of project: 073
Entity: Universidade de Vigo **Type of entity:** University
Student: Jesús Giráldez Martínez
Date of reading: 16/07/2021

Plurality, interdisciplinarity and teaching complexity

My teaching activity includes experience at the undergraduate and graduate level. In the former, I have taught a fraction of **Thermal Physics** at Ohio University, led the teaching of **Physics 101** (Kinematics and Dynamics) and **Physics 102** (Electromagnetism and Thermodynamics) in the Engineering School at Universidade de Vigo, and also an introduction to **Atmospheric and Climate Science** in the Dept. of Biology at Universidade de Vigo.



At the graduate level, I have taught different sections in the course **Properties of Materials** in a Master on Industrial and Research Chemistry shared between Universidade de Santiago de Compostela and Universidade de Vigo, and taught a fraction of **Electrodynamics** at Ohio University.

I have also directed a **Master Thesis**, and I am currently directing a Bachelor Degree Thesis, a Master Thesis and **three PhD students**.

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1** **Name of the project:** Molecular materials for on-chip integrated quantum light sources (ARTEMIS)
Entity where project took place: Universidade de Vigo + 9 other consortium partners
Nº of researchers: 33
Funding entity or bodies:
Comisión Europea **Type of entity:** EIC Pathfinder
Start-End date: 01/10/2023 - 30/09/2027
Total amount: 3.700.352 €
- 2** **Name of the project:** Diseño computacional de fotocatalizadores plasmónicos híbridos para la conversión de energía solar
Entity where project took place: Universidade de Vigo **Type of entity:** University
City of entity: Vigo, Galicia, Spain
Name principal investigator (PI, Co-PI....): Lucas Vázquez Besteiro
Nº of researchers: 1
Funding entity or bodies:
XUNTA DE GALICIA
Start-End date: 01/09/2024 - 31/08/2027
Total amount: 90.000 €
- 3** **Name of the project:** Modelado de transferencia de quiralidad de luz a materia a través de fotocatálisis plasmónica
Entity where project took place: Universidade de Vigo **Type of entity:** University
City of entity: Vigo, Galicia, Spain
Name principal investigator (PI, Co-PI....): Lucas Vázquez Besteiro
Nº of researchers: 1
Funding entity or bodies:
Ministerio de Ciencia e Innovación **Type of entity:** -
Start-End date: 01/12/2024 - 30/11/2024
Total amount: 125.000 €



- 4** **Name of the project:** Multiscale Models for Plasmon Photocatalysis Engineering (LIGHTtoGAS)
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** National
Entity where project took place: Universidade de Vigo **Type of entity:** University
City of entity: Vigo, Galicia, Spain
Name principal investigator (PI, Co-PI....): Lucas Vázquez Besteiro
Nº of researchers: 1
Funding entity or bodies: Ministerio de Ciencia e Innovación **Type of entity:** Government
Name of the programme: Proyectos de I+D+i
Code according to the funding entity: PID2020-118282RA-I00
Start-End date: 01/09/2021 - 31/08/2024 **Duration:** 3 years
Total amount: 114.950 €
- 5** **Name of the project:** Multiscale models of solar-driven nitrogen fixation using plasmonic photocatalysis
Entity where project took place: Institute of Fundamental and Frontier Sciences **Type of entity:** University Research Institute
City of entity: Chengdu, China
Name principal investigator (PI, Co-PI....): Lucas Vázquez Besteiro
Nº of researchers: 1
Funding entity or bodies: National Natural Science Foundation of China (NSFC)
Start-End date: 01/01/2023 - 31/12/2023
Total amount: 55.000 €
- 6** **Name of the project:** Hybrid photocatalysts for solar-driven ammonia synthesis: plasmonic nanoparticles and single-atom catalysts combine in metal-organic frameworks (N₂-AIRtoSOIL)
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** National
Entity where project took place: Universidade de Vigo **Type of entity:** University
City of entity: Vigo, Galicia, Spain
Name principal investigator (PI, Co-PI....): Lucas Vázquez Besteiro; Margarita Vázquez González
Nº of researchers: 2
Funding entity or bodies: Ministerio de Ciencia e Innovación **Type of entity:** Government
Name of the programme: Proyectos Estratégicos Orientados a la Transición Ecológica y a la Transición Digital
Code according to the funding entity: TED2021-130828B-I00
Start-End date: 01/12/2022 - 30/11/2022 **Duration:** 3 years
Total amount: 221.030 €
- 7** **Name of the project:** Systemic study of plasmon-driven photocatalysis through multiscale models
Entity where project took place: Institute of Fundamental and Frontier Sciences **Type of entity:** University Research Institute
City of entity: Chengdu, China
Name principal investigator (PI, Co-PI....): Lucas Vázquez Besteiro
Nº of researchers: 1
Funding entity or bodies:



National Natural Science Foundation of China (NSFC)

Start-End date: 01/01/2021 - 31/12/2021

Total amount: 25.000 €

8 Name of the project: Novel materials for plasmonic applications in metamaterials and solar energy harvesting

Entity where project took place: Institute of Fundamental and Frontier Sciences

Type of entity: University Research Institute

City of entity: Chengdu, China

Name principal investigator (PI, Co-PI....): Lucas Vázquez Besteiro

Nº of researchers: 1

Funding entity or bodies:

China Post-Doctoral Science Foundation

Type of entity: State agency

City funding entity: China

Start-End date: 01/09/2019 - 31/08/2020

Total amount: 23.000 €

9 Name of the project: Light-matter interaction in the nanoscale for solar energy harvesting and other applications

Entity where project took place: Institute of Fundamental and Frontier Sciences

Type of entity: University Research Institute

City of entity: Chengdu, China

Name principal investigator (PI, Co-PI....): Lucas Vázquez Besteiro

Nº of researchers: 1

Funding entity or bodies:

China Post-Doctoral Science Foundation

Type of entity: State agency

City funding entity: China

Start-End date: 01/01/2018 - 31/12/2018

Total amount: 6.400 €

Scientific and technological activities

Scientific production

H index: 36

Date of application: 12/10/2024

Source of H-Index: WOS

Publications, scientific and technical documents

1 Lin Nan; Jesús Giráldez Martínez; Andrei Stefanu; Li Zhu; Min Liu; Alexander Govorov; Lucas Vázquez Besteiro; Emiliano Cortés. Investigating Plasmonic Catalysis Kinetics on Hot-Spot Engineered Nanoantennae. Nano Letters. 23 - 7, pp. 2883 - 2889. American Chemical Society, 31/03/2023.

Type of production: Scientific paper

Format: Journal

Position of signature: 7

Total no. authors: 8

Corresponding author: No

Impact source: ISI



Impact index in year of publication: 12.262

Position of publication: 17

Source of citations: WOS

Relevant publication: Yes

Category: Science Edition - NANOSCIENCE & NANOTECHNOLOGY

Journal in the top 25%: Yes

Citations: 2

- 2** Lucas Vázquez Besteiro; Artur Movsesyan; Oscar Ávalos Ovando; Seunghoon Lee; Emiliano Cortés; Miguel Ángel Correa Duarte; Zhiming Wang; Alexander Govorov. Local Growth Mediated by Plasmonic Hot Carriers: Chirality from Achiral Nanocrystals Using Circularly Polarized Light. Nano Letters. 21 - 24, pp. 10315 - 10324. American Chemical Society, 03/12/2021.

Type of production: Scientific paper

Format: Journal

Position of signature: 1

Total no. authors: 8

Corresponding author: Yes

Impact source: ISI

Category: Science Edition - NANOSCIENCE & NANOTECHNOLOGY

Impact index in year of publication: 11.189

Journal in the top 25%: Yes

Position of publication: 15

Source of citations: WOS

Citations: 24

Relevant publication: Yes

- 3** Hui Zhang; Jiabin Liu; Lucas Vázquez Besteiro; Gurpreet Selopal; Zhenhuan Zhao; Federico Rosei. Advanced Interface Engineering in Gradient Core/Shell Quantum Dots Enables Efficient Photoelectrochemical Hydrogen Evolution. Small. 20 - 22, pp. 2306203. Wiley, 29/05/2024.

Type of production: Scientific paper

Format: Journal

Position of signature: 3

Total no. authors: 6

Corresponding author: No

Source of citations: WOS

- 4** Seunghoon Lee; Chenghao Fan; Artur Movsesyan; Johannes Bürger; Fedja Fedja; Leonardo Menezes; Stefan Maier; Haoran Ren; Tim Liedl; Lucas Vázquez Besteiro; Alexander Govorov; Emiliano Cortés. Unraveling the Chirality Transfer from Circularly Polarized Light to Single Plasmonic Nanoparticles. Angewandte Chemie. 136 - 11, pp. e202319920. Wiley, 11/03/2024.

Type of production: Scientific paper

Format: Journal

Position of signature: 10

Total no. authors: 12

Corresponding author: No

Source of citations: WOS

- 5** Elizabeth Cepero Rodríguez; Ana Sousa Castillo; Lucas Vázquez Besteiro; Begoña Puértolas; Margarita Vázquez González; Miguel Correa Duarte. Bifunctional Au@ UiO-67-bpy-Cu Plasmonic Nanostructures for the Solar-Driven CO₂ Reduction to Methanol. Advanced Energy Materials. 14 - 45, pp. 2401887 - 2401887. 2024.

Type of production: Scientific paper

Format: Journal

Position of signature: 3

Total no. authors: 6

Corresponding author: No

- 6** Monika Ghalawat; Daniel Feferman; Lucas Vázquez Besteiro; Wanting He; Artur Movsesyan; Alina Muravitskaya; Jesus Valdez; Audrey Moores; Zhiming Wang; Dongling Ma; Alexander Govorov; Gil Markovich. Chiral Symmetry Breaking in Colloidal Metal Nanoparticle Solutions by Circularly Polarized Light. ACS Nano. 18 - 41, pp. 28279 - 28291. American Chemical Society, 2024.



Type of production: Scientific paper

Position of signature: 3

Total no. authors: 12

Corresponding author: No

- 7** Tolga Zorlu; I Brian Becerril Castro; Ana Sousa Castillo; Begoña Puértolas; Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov; Miguel A. Correa Duarte; Ramon A. Alvarez Puebla. Metal–Organic Frameworks Photocatalyst Through Plasmon-Induced Hot-Electrons. *Advanced Functional Materials*. pp. 2300013. Wiley, 2024.

Type of production: Scientific paper

Format: Journal

Position of signature: 3

Total no. authors: 9

Corresponding author: No

Impact source: ISI

Category: Science Edition - OPTICS

Impact index in year of publication: 10.05

Journal in the top 25%: Yes

Position of publication: 9

No. of journals in the cat.: 101

Source of citations: WOS

Citations: 2

- 8** Yoel Negrín-Montecelo; Amir Elsaidy; Jesús Giráldez Martínez; Enrique Carbó Argibay; Zhiming Wang; Alexander Govorov; Ramon Alvarez Puebla; Miguel Correa Duarte; Lucas Vázquez Besteiro. Unveiling multimodal hot carrier excitation in plasmonic bimetallic Au@ Ag nanostars for photochemistry and SERS sensing. *Nano Research*. SciOpen, 2024. Available on-line at: <<https://doi.org/10.1021/acsphotonics.3c00733>>.

Type of production: Scientific paper

Format: Journal

Position of signature: 9

Total no. authors: 9

Corresponding author: Yes

- 9** Alina Muravitskaya; Artur Movsesyan; Oscar Ávalos Ovando; Verónica A. Bahamondes Lorca; Miguel Correa Duarte; Lucas Vázquez Besteiro; Tim Liedl; Peng Yu; Zhiming Wang; Gil Markovich; Alexander Govorov. Hot Electrons and Electromagnetic Effects in the Broadband Au, Ag, and Ag–Au Nanocrystals: The UV, visible, and NIR Plasmons. *ACS Photonics*. 11 - 1, pp. 68 - 84. American Chemical Society, 15/12/2023. Available on-line at: <<https://doi.org/10.1021/acsphotonics.3c00951>>.

Type of production: Scientific paper

Format: Journal

Position of signature: 6

Total no. authors: 11

Corresponding author: No

- 10** Yoel Negrín-Montecelo; Abdelrhman Hamdeldein Ahmed Geneidy; Alexander Govorov; Ramon Alvarez Puebla; Lucas Vázquez Besteiro; Miguel Correa Duarte. Balancing Near-Field Enhancement and Hot Carrier Injection: Plasmonic Photocatalysis in Energy-Transfer Cascade Assemblies. *ACS Photonics*. 10 - 9, pp. 3310 - 3320. American Chemical Society, 06/09/2023. Available on-line at: <<https://doi.org/10.1021/acsphotonics.3c00733>>.

Type of production: Scientific paper

Format: Journal

Position of signature: 5

Total no. authors: 6

Corresponding author: Yes

- 11** Sulin Jiao; Kun Dai; Lucas Vázquez Besteiro; Hongen Gao; Xuan Chen; Weichao Wang Duarte; Yuan Zhang; Chuntai Liu; Ignacio Pérez Juste; Jorge Pérez Juste; Isabel Pastoriza Santos. Differentiating Plasmon-Enhanced Chemical Reactions on AgPd Hollow Nanoplates through Surface-Enhanced Raman Spectroscopy. *ACS Catalysis*. 14 - 9, pp. 6799 - 6806. American Chemical Society, 06/09/2023. Available on-line at: <<https://doi.org/10.1021/acsphotonics.3c00733>>.

Type of production: Scientific paper

Format: Journal

Position of signature: 3

Total no. authors: 11

Corresponding author: No

- 12** Oscar Ávalos Ovando; Veronica Bahamondes Lorca; Lucas Vázquez Besteiro; Artur Movsesyan; Zhiming Wang; Gil Markovich; Alexander Govorov. Universal imprinting of chirality with chiral light by employing plasmonic metastructures. *Applied Physics Reviews*. 10 - 3, pp. 031412. AIP Publishing, 17/08/2023.



Type of production: Scientific paper

Position of signature: 3

Total no. authors: 7

Format: Journal

Corresponding author: No

- 13** Charlène Brissaud; Lucas Vázquez Besteiro; Jean-Yves Piquemal; Miguel Comesaña Hermo. Plasmonics: A Versatile Toolbox for Heterogeneous Photocatalysis. Solar RRL. 7 - 13, pp. 2300195. Wiley, 10/05/2023.

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 4

Format: Journal

Corresponding author: No

- 14** Yannan Liu; Cheng-Hao Liu; Tushar Debnath; Yong Wang; Darius Pohl; Lucas Vázquez Besteiro; Debora Motta Meira; Shungyun Huang; Fan Yang; Bernd Rellinghaus; Mohamed Chaker; Dmytro Perepichka; Dongling Ma. Silver nanoparticle enhanced metal-organic matrix with interface-engineering for efficient photocatalytic hydrogen evolution. Nature Communications. 14 - 1, pp. 541. Springer Nature, 01/02/2023.

Type of production: Scientific paper

Position of signature: 6

Total no. authors: 13

Source of citations: WOS

Format: Journal

Citations: 17

- 15** Artur Movsesyan; Alina Muravitskaya; Lucas Vázquez Besteiro; Eva Yazmin Santiago; Óscar Ávalos Ovando; Miguel A. Correa Duarte; Zhiming Wang; Gil Markovich; Alexander Govorov. Creating Chiral Plasmonic Nanostructures Using Chiral Light in a Solution and on a Substrate: The Near-Field and Hot-Electron Routes. Advanced Optical Materials. pp. 2300013. Wiley, 2023.

Type of production: Scientific paper

Position of signature: 3

Total no. authors: 9

Impact source: ISI

Impact index in year of publication: 10.05

Position of publication: 9

Source of citations: WOS

Format: Journal

Corresponding author: No

Category: Science Edition - OPTICS

Journal in the top 25%: Yes

No. of journals in the cat.: 101

Citations: 2

- 16** Baoqing Wang; Cuiping Ma; Peng Yu; Alexander Govorov; Hongxing Xu; Wenhao Wang; Lucas Vázquez Besteiro; Zhimin Jing; Peihang Li; Zhiming Wang. Ultra-broadband nanowire metamaterial absorber. Photonics Research. 10 - 12, pp. 2718 - 2727. 01/12/2022.

Type of production: Scientific paper

Format: Journal

- 17** Qingzhe Zhang; Amir Mirzaei; Yong Wang; Guolong Song; Chen Wang; Lucas Vázquez Besteiro; Alexander Govorov; Mohamed Chaker; Dongling Ma. Extracting hot holes from plasmonic semiconductors for photocatalysis. Applied Catalysis B: Environmental. 317, pp. 121792. Elsevier, 15/11/2022.

Type of production: Scientific paper

Position of signature: 6

Total no. authors: 9

Source of citations: WOS

Format: Journal

Corresponding author: Yes

Citations: 18

- 18** Peihang Li; Peng Yu; Jiachen Sun; Zhimin Jing; Jiang Wu; Lucas Vázquez Besteiro; Roberto Caputo; Arup Neogi; Hongxing Xu; Zhiming Wang. Directional radiation enhancement of nanowire quantum dots based on line-array plasmonic antenna coupling. Photonics Research. 10 - 9, pp. 2178 - 2190. OSA Publishing, 26/08/2022.

Type of production: Scientific paper

Position of signature: 6

Total no. authors: 10

Format: Journal

Corresponding author: No

**Source of citations:** WOS**Citations:** 1

- 19** Yoel Negrín Montecelo; Xiang-Tian Kong; Lucas Vázquez Besteiro; Enrique Carbó Argibay; Zhiming Wang; Moisés Pérez Lorenzo; Alexander Govorov; Miguel Comesaña Hermo; Miguel Correa Duarte. Synergistic Combination of Charge Carriers and Energy-Transfer Processes in Plasmonic Photocatalysis. *ACS Applied Materials & Interfaces*. 14 - 31, pp. 35734 - 35744. American Chemical Society, 01/08/2022.
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 9 **Corresponding author:** No
- 20** Artur Movsesyan; Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Alexander Govorov. Engineering Strongly Chiral Plasmonic Lattices with Achiral Unit Cells for Sensing and Photodetection. *Advanced Optical Materials*. 10 - 14, pp. 2101943. Wiley, 18/07/2022.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 5 **Corresponding author:** No
- 21** Artur Movsesyan; Eva Yazmin Santiago; Sven Burger; Miguel A. Correa Duarte; Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov. Plasmonic Nanocrystals with Complex Shapes for Photocatalysis and Growth: Contrasting Anisotropic Hot-Electron Generation with the Photothermal Effect. *Advanced Optical Materials*. pp. 2102663. Wiley, 27/03/2022.
Type of production: Scientific paper **Format:** Journal
Position of signature: 5 **Corresponding author:** No
Total no. authors: 7 **Citations:** 192
Source of citations: WOS
- 22** Artur Movsesyan; Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov. Mie Sensing with Neural Networks: Recognition of Nano-Object Parameters, the Invisibility Point, and Restricted Models. *Advanced Theory and Simulations*. 5 - 2, pp. 2100369. Wiley, 02/2022.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2 **Corresponding author:** No
Total no. authors: 4 **Citations:** 0
Source of citations: WOS
- 23** Riccardo Marin; Antonio Benayas Hernández; Nuria García Carillo; José Lifante; Jingke Yao; Diego Méndez González; Francisco Sanz Rodríguez; Jorge Rubio Retama; Lucas Vázquez Besteiro; Daniel Jaque García. Nanoprobes for Biomedical Imaging with Tunable Near-Infrared Optical Properties Obtained via Green Synthesis. *Advanced Photonics Research*. 3 - 1, pp. 2100260. Wiley, 01/2022.
Type of production: Scientific paper **Format:** Journal
Position of signature: 9 **Corresponding author:** No
Total no. authors: 10 **Citations:** 0
Source of citations: WOS
- 24** Jing-Yin Xu; Xin Tong; Lucas Vázquez Besteiro; Xin Li; Chenxia Hu; Ruitong Liu; Ali Imran Channa; Haiguang Zhao; Federico Rosei; Alexander Govorov; Qiang Wang; Zhiming Wang. Rational synthesis of novel "giant" CuInTeSe/CdS core/shell quantum dots for optoelectronics. *Nanoscale*. 13 - 36, pp. 15301 - 15310. Royal Society of Chemistry, 07/09/2021.
Type of production: Scientific paper **Format:** Journal
Position of signature: 3 **Corresponding author:** No
Total no. authors: 12 **Citations:** 0
Source of citations: WOS



- 25** Oscar Avalos Ovando; Lucas Vázquez Besteiro; Artur Movsesyan; Gil Markovich; Tim Liedl; Kevin Martens; Zhiming Wang; Miguel Ángel Correa Duarte; Alexander Govorov. Chiral Photomelting of DNA-Nanocrystal Assemblies Utilizing Plasmonic Photoheating. *Nano Letters*. 21 - 17, pp. 7298 - 7308. American Chemical Society, 24/08/2021.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 9 **Corresponding author:** No
Source of citations: WOS **Citations:** 15
- 26** Wenhao Wang; Lucas Vázquez Besteiro; Peng Yu; Feng Lin; Alexander Govorov; Hongxing Xu; Zhiming Wang. Plasmonic hot-electron photodetection with quasi-bound states in the continuum and guided resonances. *Nanophotonics*. 10 - 7, pp. 1911 - 1921. De Gruyter, 01/05/2021.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 7 **Corresponding author:** No
Source of citations: WOS **Citations:** 11
- 27** Xuemei Han; Lucas Vázquez Besteiro; Charlynn Sher Lin Koh; Hiang Kwee Lee; In Yee Phang; Gia Chuong Phan-Quang; Jing Yi Ng; Howard Yi Fan Sim; Chee Leng Lay; Alexander Govorov; Xing Yi Ling. Intensifying Heat Using MOF-Isolated Graphene for Solar-Driven Seawater Desalination at 98% Solar-to-Thermal Efficiency. *Advanced Functional Materials*. 31 - 13, pp. 2008904. Wiley, 24/03/2021.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 11 **Corresponding author:** No
Source of citations: WOS **Citations:** 5
- 28** Shobhana Panuganti; Lucas Vázquez Besteiro; Eugenia Vasileiadou; Justin Hoffman; Alexander Govorov; Stephen Gray; Mercouri Kanatzidis; Richard Schaller. Distance Dependence of Forster Resonance Energy Transfer Rates in 2D Perovskite Quantum Wells via Control of Organic Spacer Length. *Journal of the American Chemical Society*. 143 - 11, pp. 4244 - 4252. American Chemical Society, 10/03/2021.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 8 **Corresponding author:** No
Source of citations: WOS **Citations:** 9
- 29** Hui Zhang; Lucas Vázquez Besteiro; Jiabin Liu; Chao Wang; Gurpreet Selopal; Zhangsen Chen; David Barba; Zhiming Wang; Haiguang Zhao; Gregory Lopinski; Shuhui Sun; Federico Rosei. Efficient and stable photoelectrochemical hydrogen generation using optimized colloidal heterostructured quantum dots. *Nano Energy*. 79, pp. 105416. Elsevier, 01/2021.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 12 **Corresponding author:** No
Source of citations: WOS **Citations:** 36
- 30** Faying Li; Min Zhang; Daniele Benetti; Li Shi; Lucas Vázquez Besteiro; Hui Zhang; Jiabin Liu; Gurpreet Selopal; Shuhui Sun; Zhiming Wang; Qin Wei; Federico Rosei. "Green", gradient multi-shell CuInSe₂/(CuInSexS_{1-x})₅/CuInS₂ quantum dots for photo-electrochemical hydrogen generation. *Applied Catalysis B: Environmental*. 280, pp. 119402. Elsevier, 01/2021.
Type of production: Scientific paper **Format:** Journal
Position of signature: 5



Total no. authors: 12
Source of citations: WOS

Corresponding author: No
Citations: 9

- 31** Yong Wang; Qingzhe Zhang; Yongchen Wang; Lucas Vazquez Besteiro; Yannan Liu; Haiyan Tan; Zhiming Wang; Alexander Govorov; Jin Zhang; Jason Cooper; Jing Zhao; Guozhu Chen; Mohamed Chaker; Dongling Ma. Ultrastable Plasmonic Cu-Based Core–Shell Nanoparticles. *Chemistry of Materials*. American Chemical Society, 22/12/2020.

Type of production: Scientific paper
Position of signature: 4

Format: Journal

Total no. authors: 14
Source of citations: WOS

Citations: 2

- 32** Xiang-Tian Kong; Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov. Plasmonic chirality and circular dichroism in bioassembled and nonbiological systems: theoretical background and recent progress. *Advanced Materials*. 32 - 41, pp. 1801790. Wiley, 15/10/2020.

Type of production: Scientific paper
Position of signature: 2

Format: Journal

Total no. authors: 4
Source of citations: WOS

Corresponding author: No
Citations: 27

- 33** Gurpreet Selopal; Mahyar Mohammadnezhad; Lucas Vázquez Besteiro; Ozge Cavuslar; Jiabin Liu; Hui Zhang; Fabiola Navarro Pardo; Guiju Liu; Maorong Wang; Emek Durmusoglu; Havva Yagci Acar; Shuhui Sun; Haiguang Zhao; Zhiming Wang; Federico Rosei. Synergistic Effect of Plasmonic Gold Nanoparticles Decorated Carbon Nanotubes in Quantum Dots/TiO₂ for Optoelectronic Devices. *Advanced Science*. 7 - 20, pp. 2001864. Wiley, 01/10/2020.

Type of production: Scientific paper
Position of signature: 3

Format: Journal

Total no. authors: 15
Source of citations: WOS

Corresponding author: No
Citations: 7

- 34** Eva Yazmin Santiago; Lucas Vázquez Besteiro; Xiang-Tian Kong; Miguel Ángel Correa Duarte; Zhiming Wang; Alexander Govorov. Efficiency of Hot-Electron Generation in Plasmonic Nanocrystals with Complex Shapes: Surface-Induced Scattering, Hot Spots, and Interband Transitions. *ACS Photonics*. 7 - 10, pp. 2807 - 2824. American Chemical Society, 25/08/2020.

Type of production: Scientific paper
Position of signature: 2

Format: Journal

Total no. authors: 6
Source of citations: WOS

Corresponding author: No
Citations: 46

- 35** Oscar Ávalos Ovando; Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov. Temporal plasmonics: Fano and Rabi regimes in the time domain in metal nanostructures. *Nanophotonics*. 9 - 11, pp. 3587 - 3595. Degruyter, 18/08/2020.

Type of production: Scientific paper
Position of signature: 2

Format: Journal

Total no. authors: 4
Source of citations: WOS

Corresponding author: No
Citations: 5

- 36** Changmeng Wang; Xin Tong; Wenhao Wang; Jing-Yin Xu; Lucas Vázquez Besteiro; Ali Imran Channa; Feng Lin; Jiang Wu; Qiang Wang; Alexander Govorov; Alberto Vomiero; Zhiming Wang. Manipulating the Optoelectronic Properties of Quasi-type II CuInS₂/CdS Core/Shell Quantum Dots for Photoelectrochemical Cell Applications. *ACS Applied Materials & Interfaces*. 12 - 32, pp. 36277 - 36286. American Chemical Society, 31/07/2020.



Type of production: Scientific paper

Position of signature: 5

Total no. authors: 12

Source of citations: WOS

Format: Journal

Corresponding author: No

Citations: 8

- 37** Eric Ashalley; Kingston Acheampong; Lucas Vázquez Besteiro; Peng Yu; Arup Neogi; Alexander Govorov; Zhiming Wang. Multitask deep-learning-based design of chiral plasmonic metamaterials. *Photonics Research*. 8 - 7, pp. 1213 - 1225. OSA Publishing, 01/07/2020.

Type of production: Scientific paper

Position of signature: 3

Total no. authors: 7

Source of citations: WOS

Format: Journal

Corresponding author: No

Citations: 13

- 38** Linh Nguyen; Mihir Dass; Martina Ober; Lucas Vázquez Besteiro; Zhiming Wang; Bert Nickel; Alexander Govorov; Tim Liedl; Amelie Heuer-Jungemann. Chiral Assembly of Gold–Silver Core–Shell Plasmonic Nanorods on DNA Origami with Strong Optical Activity. *ACS Nano*. 14 - 6, pp. 7454 - 7461. American Chemical Society, 27/05/2020.

Type of production: Scientific paper

Position of signature: 4

Total no. authors: 9

Source of citations: WOS

Format: Journal

Corresponding author: No

Citations: 52

- 39** Gianluca Galeotti; Federico De Marchi; E. Hamzehpo; Oliver O. MacLean; M. M. Rajeswara Rao³; Y. Chen; Lucas Vázquez Besteiro; D. Dettmann; L. Ferrari; F. Frezza; P. M. Sheverdyeva; R. Liu; A.K. Kundu; P. Moras; M. Ebrahimi; M. C. Gallagher; Federico Rosei; D.F. Perepichka; G. Contini. Synthesis of mesoscale ordered two-dimensional pi-conjugated polymers with semiconducting properties. *Nature Materials*. Springer Nature, 18/05/2020.

Type of production: Scientific paper

Position of signature: 7

Total no. authors: 19

Source of citations: WOS

Format: Journal

Corresponding author: No

Citations: 135

- 40** Junliang Dong; Holger Breitenborn; Riccardo Piccoli; Lucas Vázquez Besteiro; Pei You; Diego Caraffini; Zhiming Wang; Alexander Govorov; Rafik Naccache; Fiorenzo Vetrone; Luca Razzari; Roberto Morandotti. Terahertz three-dimensional monitoring of nanoparticle-assisted laser tissue soldering. *Biomedical Optics Express*. 11 - 4, pp. 2254 - 2267. OSA Publishing, 27/03/2020.

Type of production: Scientific paper

Position of signature: 4

Total no. authors: 12

Source of citations: WOS

Format: Journal

Corresponding author: No

Citations: 5

- 41** Larousse Khosravi Khorashad; Lucas Vázquez Besteiro; Miguel Correa Duarte; Sven Burger; Zhiming Wang; Alexander Govorov; Daniel Jaque. Hot Electrons Generated in Chiral Plasmonic Nanocrystals as a Mechanism for Surface Photochemistry and Chiral Growth. *Journal of the American Chemical Society*. 142 - 9, pp. 4193 - 4205. American Chemical Society, 06/02/2020.

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 7

Source of citations: WOS

Format: Journal

Corresponding author: No

Citations: 51



- 42** Riccardo Marin; José Lifante; Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov; Fernando Rivero; Fernando Alonso; Francisco Sanz Rodríguez; Daniel Jaque. Plasmonic copper sulfide nanoparticles enable dark contrast in optical coherence tomography. *Advanced Healthcare Materials*. 9 - 5, pp. 1901627. Wiley, 24/01/2020.
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 9 **Corresponding author:** No
Source of citations: WOS **Citations:** 7
- 43** Holger Breitenborn; Junliang Dong; Riccardo Piccoli; Andrew Bruhacs; Lucas Vázquez Besteiro; Artiom Skripka; Alexander Govorov; Fiorenzo Vetrone; Rafik Naccache; Roberto Morandotti. Quantifying the Photothermal Conversion Efficiency of Plasmonic Nanoparticles by means of Terahertz Radiation. *APL Photonics*. 4 - 12, pp. 126106. AIP Publishing, 17/12/2019.
Type of production: Scientific paper **Format:** Journal
Position of signature: 5
Total no. authors: 10 **Corresponding author:** No
Source of citations: WOS **Citations:** 11
- 44** Wenhao Wang; Lucas Vázquez Besteiro; Tianji Liu; Cuo Wu; Jiachen Sun; Peng Yu; Le Chang; Zhiming Wang; Alexander Govorov. Generation of Hot Electrons with Chiral Metamaterial Perfect Absorbers: Giant Optical Chirality for Polarization-Sensitive Photochemistry. *ACS Photonics*. 6 - 12, pp. 3241 - 3252. American Chemical Society, 31/10/2019.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 9 **Corresponding author:** No
Source of citations: WOS **Citations:** 53
- 45** Benjamin Klemmed; Lucas Vázquez Besteiro; Albrecht Benad; Maximilian Georgi; Zhiming Wang; Alexander Govorov. Hybrid Plasmonic-Aerogel Materials as Optical Superheaters with Engineered Resonances. *Angewandte Chemie*. 132 - 4, pp. 1713 - 1719. Wiley, 22/10/2019.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 6 **Corresponding author:** No
Source of citations: WOS **Citations:** 4
- 46** Jesus Valdez; Lucas Vázquez Besteiro; Zackaria Mahfoud; Tugrul Guner; Aycan Yurtsever. Optical resonances of hollow nanocubes controlled with sub-particle structural morphologies. *Nanoscale*. 11, pp. 13790 - 13799. Royal Society of Chemistry, 28/06/2019.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 5 **Corresponding author:** No
Source of citations: WOS **Citations:** 2
- 47** Gianluca Galeotti; Federico De Marchi; T. Taerum; Lucas Vázquez Besteiro; M. El Garah; J. Lipton-Duffin; E. Ebrahimi; D.F. Perepichka; Federico Rosei. Surface-mediated assembly, polymerization and degradation of thiophene-based monomers. *Chemical Science*. 10 - 19, pp. 5167 - 5175. Royal Society of Chemistry, 16/04/2019.
Type of production: Scientific paper **Format:** Journal
Position of signature: 4
Total no. authors: 9 **Corresponding author:** No
Source of citations: WOS **Citations:** 13



- 48** Tianju Liu; Lucas Vázquez Besteiro; Tim Liedl; Miguel Correa Duarte; Zhiming Wang; Alexander Govorov. Chiral Plasmonic Nanocrystals for Generation of Hot Electrons: Toward Polarization-Sensitive Photochemistry. *Nano Letters*. 19 - 2, pp. 1395 - 1407. American Chemistry Society, 25/01/2019.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 6 **Corresponding author:** No
Source of citations: WOS **Citations:** 77
- 49** Andrew Proppe; Madeline Elkins; Oleksandr Voznyy; Ryan Pensack; Felipe Zapata; Lucas Vázquez Besteiro; Li Na Quan; Rafael Quintero Bermudez; Petar Todorovic; Shana Kelley; Alexander Govorov; Stephen Gray; Ivan Infante; Edward Sargent; Gregory Scholes. Spectrally Resolved Ultrafast Exciton Transfer in Mixed Perovskite Quantum Wells. *Journal of Physical Chemistry Letters*. American Chemistry Society, 14/01/2019.
Type of production: Scientific paper **Format:** Journal
Position of signature: 6
Total no. authors: 15 **Corresponding author:** No
Source of citations: WOS **Citations:** 42
- 50** Tianji Liu; Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov. Generation of Hot Electrons in Nanostructures incorporating Conventional and Unconventional Plasmonic Materials. *Faraday Discuss. Royal Society of Chemistry*, 30/10/2018.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 4 **Corresponding author:** No
Source of citations: WOS **Citations:** 11
- 51** Riccardo Marin; Artiom Skripka; Lucas Vázquez Besteiro; Antonio Benayas; Zhiming Wang; Alexander Govorov; Patrizia Canton; Fiorenzo Vetrone. Highly Efficient Copper Sulfide-Based Near-Infrared Photothermal Agents: Exploring the Limits of Macroscopic Heat Conversion. *Small*. 14 - 49, pp. 1803282. Wiley, 17/10/2018.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 8 **Corresponding author:** No
Source of citations: WOS **Citations:** 25
- 52** Luisa Kneer; Eva-Maria Roller; Lucas Vázquez Besteiro; Richard Schreiber; Alexander Govorov; Tim Liedl. Circular Dichroism of Chiral Molecules in DNA-Assembled Plasmonic Hotspots. *ACS Nano*. 12 - 9, pp. 9110 - 9115. American Chemistry Society, 06/09/2018.
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 6 **Corresponding author:** No
Source of citations: WOS **Citations:** 52
- 53** Peng Yu; Lucas Vázquez Besteiro; Jiang Wu; Yongjun Huang; Yueqi Wang; Alexander Govorov; Zhiming Wang. Metamaterial perfect absorber with unabated size-independent absorption. *Optics Express*. 26 - 16, pp. 20471 - 20480. OSA Publishing, 06/08/2018.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 7 **Corresponding author:** No
Source of citations: WOS **Citations:** 35



- 54** Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Federico Rosei; Alexander Govorov. Plasmonic Glasses and Films Based on Alternative Inexpensive Materials for Blocking Infrared Radiation. *Nano Letters*. 18 - 5, pp. 3147 - 3156. American Chemistry Society, 09/05/2018.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 5 **Corresponding author:** No
Source of citations: WOS **Citations:** 38
- 55** Zhenhe Xu; Md Golam Kibria; Bandar AlOtaibi; Paul Duchesne; Lucas Vázquez Besteiro; Yu Gao; Qingzhe Zhang; Zetian Mi; Peng Zhang; Alexander Govorov; Liqiang Mai; Mohamed Chaker; Dongling Ma. Towards enhancing photocatalytic hydrogen generation: Which is more important, alloy synergistic effect or plasmonic effect?. *Applied Catalysis B: Environmental*. 221, pp. 77 - 85. Elsevier, 01/02/2018.
Type of production: Scientific paper **Format:** Journal
Position of signature: 5
Total no. authors: 13 **Corresponding author:** No
Source of citations: WOS **Citations:** 39
- 56** Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Gregory Hartland; Alexander Govorov. Understanding Hot-Electron Generation and Plasmon Relaxation in Metal Nanocrystals: Quantum and Classical Mechanisms. *ACS Photonics*. 4 - 11, pp. 2759 - 2781. American Chemistry Society, 15/11/2017.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 5 **Corresponding author:** No
Source of citations: WOS **Citations:** 205
- 57** Alberto Naldoni; Urcan Guler; Zhuoxian Wang; Marcello Marelli; Francesco Malara; Xiangeng Meng; Lucas Vázquez Besteiro; Alexander Govorov; Alexander Kildishev; Alexandra Boltasseva; Vladimir Shalaev. Broadband Hot Electron Collection for Solar Water Splitting with Plasmonic Titanium Nitride. *Advanced Optical Materials*. 5 - 15, pp. 1601031. Wiley, 02/08/2017.
Type of production: Scientific paper **Format:** Journal
Position of signature: 7
Total no. authors: 11 **Corresponding author:** No
Source of citations: WOS **Citations:** 289
- 58** Gregory Hartland; Lucas Vázquez Besteiro; Paul Johns; Alexander Govorov. What's so Hot about Electrons in Metal Nanoparticles?. *ACS Energy Letters*. 2 - 7, pp. 1641 - 1653. American Chemistry Society, 09/06/2017.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 4 **Corresponding author:** No
Source of citations: WOS **Citations:** 314
- 59** Eva-Maria Roller; Lucas Vázquez Besteiro; Claudia Pupp; Larousse Khosravi Khorashad; Alexander Govorov; Tim Liedl. Hotspot-mediated non-dissipative and ultrafast plasmon passage. *Nature Physics*. 13, pp. 761 - 765. Springer Nature, 15/05/2017.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 6 **Corresponding author:** No
Source of citations: WOS **Citations:** 90



- 60** Lucas Vázquez Besteiro; Hui Zhang; Jerome Plain; Gil Markovich; Zhiming Wang; Alexander Govorov. Aluminum Nanoparticles with Hot Spots for Plasmon-Induced Circular Dichroism of Chiral Molecules in the UV Spectral Interval. *Advanced Optical Material*. 5 - 16, pp. 1700069. Wiley, 20/04/2017.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 6 **Corresponding author:** Yes
Source of citations: WOS **Citations:** 51
- 61** Lucas Vázquez Besteiro; Kivanc Gungor; Hilmi Demir; Alexander Govorov. Simple and Complex Metafluids and Metastructures with Sharp Spectral Features in a Broad Extinction Spectrum: Particle–Particle Interactions and Testing the Limits of the Beer–Lambert Law. *Journal of Physical Chemistry C*. 121 - 5, pp. 2987 - 2997. American Chemistry Society, 09/02/2017.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 4 **Corresponding author:** Yes
Source of citations: WOS **Citations:** 8
- 62** Lucas Vázquez Besteiro; Alexander Govorov. Amplified Generation of Hot Electrons and Quantum Surface Effects in Nanoparticle Dimers with Plasmonic Hot Spots. *Journal of Physical Chemistry C*. 120 - 34, pp. 19329 - 19339. American Chemistry Society, 05/09/2016.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 2 **Corresponding author:** Yes
Source of citations: WOS **Citations:** 95
- 63** Hassan Hafez; Xin Chai; Lucas Vázquez Besteiro; Long Tan; Tsuneyuki Ozaki; Alexander Govorov; Ricardo Izquierdo; Dongling Ma. Covellite CuS nanocrystals: Realizing rapid microwave-assisted synthesis in air and unravelling the disappearance of their plasmon resonance after coupling with carbon nanotubes. *Nanoscale*. 8 - 26, pp. 12946 - 12957. Royal Society of Chemistry, 02/06/2016.
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 8 **Corresponding author:** No
Source of citations: WOS **Citations:** 12
- 64** Larousse Khosravi Khorashad; Lucas Vázquez Besteiro; Zhiming Wang; Jason Valentine; Alexander Govorov. Localization of Excess Temperature Using Plasmonic Hot Spots in Metal Nanostructures: Combining Nano-Optical Antennas with the Fano Effect. *Journal of Physical Chemistry C*. 120 - 24, pp. 13215 - 13226. American Chemistry Society, 10/05/2016.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 5 **Corresponding author:** No
Source of citations: WOS **Citations:** 45
- 65** Jihua Yang; Nicolaas Kramer; Katelyn Schramke; Lance Wheeler; Lucas Vázquez Besteiro; Christopher Hogan; Alexander Govorov; Uwe Kortshagen. Broadband Absorbing Exciton–Plasmon Metafluids with Narrow Transparency Windows. *Nano Letters*. 16 - 2, pp. 1472 - 1477. American Chemistry Society, 25/01/2016.
Type of production: Scientific paper **Format:** Journal
Position of signature: 5
Total no. authors: 8 **Corresponding author:** No
Source of citations: WOS **Citations:** 16



- 66** Wei Li; Zachary Coppens; Lucas Vázquez Besteiro; Wenyi Wang; Alexander Govorov; Jason Valentine. Circularly polarized light detection with hot electrons in chiral plasmonic metamaterials. *Nature Communications*. 6, pp. 8379. Springer Nature, 22/12/2015.
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 6 **Corresponding author:** No
Source of citations: WOS **Citations:** 299
- 67** Hayk Harutyunyan; Alex Martinson; Daniel Rosenmann; Larousse Khosravi Khorashad; Lucas Vázquez Besteiro; Alexander Govorov; Gary Wiederrecht. Anomalous ultrafast dynamics of hot plasmonic electrons in nanostructures with hot spots. *Nature Nanotechnology*. 10, pp. 770 - 774. Springer Nature, 03/08/2015.
Type of production: Scientific paper **Format:** Journal
Position of signature: 5
Total no. authors: 7 **Corresponding author:** No
Source of citations: WOS **Citations:** 238
- 68** Lucas Vázquez Besteiro; Luis Tortajada Lavín; Jaime Souto Casares; Luis Javier Gallego del Hoyo; James Chelikowsky; Manuel Maria Gonzalez Alemany. Doping efficiency in n-type InP nanowires. *Physical Review B*. 88, pp. 115310. American Physical Society, 20/09/2013.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 6 **Corresponding author:** No
Source of citations: WOS **Citations:** 3
- 69** Luis Tortajada Lavín; Lucas Vázquez Besteiro; Jaime Souto Casares; Luis Javier Gallego del Hoyo; James Chelikowsky; Manuel Maria Gonzalez Alemany. Multidimensional nanoscale materials from fused quantum dots. *Physical Review B*. 88, pp. 115310. American Physical Society, 20/09/2011.
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 6 **Corresponding author:** No
Source of citations: WOS **Citations:** 0
- 70** Lucas Vázquez Besteiro; Luis Tortajada Lavín; Murilo Tiago; Luis Javier Gallego del Hoyo; James Chelikowsky; Manuel Maria Gonzalez Alemany. N-type doping via avoiding the stabilization of DX centers in InP quantum dots. *Physical Review B*. 81, pp. 121307. American Physical Society, 23/03/2010.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 6 **Corresponding author:** No
Source of citations: WOS **Citations:** 4
- 71** Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Alexander Govorov. Theory of Plasmonic Excitations: Fundamentals and Applications in Photocatalysis. *Plasmonic Catalysis: From Fundamentals to Applications*. pp. 1 - 35. Wiley-VCH, 13/07/2021.
Type of production: Book chapter **Format:** Book
Position of signature: 1
Total no. authors: 4 **Corresponding author:** No
Source of citations: WOS **Citations:** 38



- 72** Yongmin Liu; Hiromi Okamoto. Chirality of plasmonic structures and materials. *The Journal of Chemical Physics*. 161, pp. 180401. AIP Publishing, 2024.
Type of production: Scientific edition **Format:** Journal
Position of signature: 1
Total no. authors: 3 **Corresponding author:** Yes
- 73** Lucas Vázquez Besteiro; Emiliano Cortés; Satoshi Ishii; Prineha Narang; Rupert Oulton. Hot electron physics and applications. *Journal of Applied Physics*. 129 - 15, pp. 150401. AIP Publishing, 21/04/2021.
Type of production: Scientific edition **Format:** Journal
Position of signature: 1
Total no. authors: 5 **Corresponding author:** Yes
Source of citations: WOS **Citations:** 0
- 74** Andrei Stefanu; Javier Aizpurua; Ivano Alessandri; Ilko Bald; Jeremy J Baumberg; Lucas Vázquez Besteiro; Phillip Christopher; Miguel Correa-Duarte; Bart De Nijs; Angela Demetriadou; others. Impact of Surface Enhanced Raman Spectroscopy in Catalysis. *ACS nano*. 18 - 43, pp. 29337 - 29379. American Chemical Society, 2024.
Type of production: Review **Format:** Journal
Position of signature: 6
Total no. authors: 39 **Corresponding author:** No
- 75** Oscar Avalos Ovando; Eva Yazmin Santiago; Artur Movsesyan; Xiang-Tian Kong; Peng Yu; Lucas Vázquez Besteiro; Larousse Khosravi Khorashad; Hiromi Okamoto; Joseph M. Slocik; Miguel Ángel Correa Duarte; Miguel Comesaña Hermo; Tim Liedl; Zhiming Wang; Gil Markovich; Sven Burger; Alexander Govorov. Chiral Bioinspired Plasmonics: A Paradigm Shift for Optical Activity and Photochemistry. *ACS Photonics*. American Chemical Society, 07/06/2022.
Type of production: Review **Format:** Journal
Position of signature: 6
Total no. authors: 16 **Corresponding author:** No
Source of citations: WOS **Citations:** 14
- 76** Begoña Puértolas Lacambra; Miguel Comesaña Hermo; Lucas Vázquez Besteiro; Margarita Vázquez González; Miguel A. Correa Duarte. Challenges and Opportunities for Renewable Ammonia Production via Plasmon-Assisted Photocatalysis. *Advanced Energy Materials*. 12 - 18, pp. 2103909. Wiley, 05/2022.
Type of production: Review **Format:** Journal
Position of signature: 3
Total no. authors: 5 **Corresponding author:** No
Source of citations: WOS **Citations:** 14
- 77** Emiliano Cortés; Lucas Vázquez Besteiro; Alessandro Alabastri; Andrea Baldi; Giulia Tagliabue; Angela Demetriadou; Prineha Narang. Challenges in Plasmonic Catalysis. *ACS Nano*. 14 - 12, pp. 16202 - 16219. American Chemical Society, 14/12/2020.
Type of production: Review **Format:** Journal
Position of signature: 2
Total no. authors: 7 **Corresponding author:** No
Source of citations: WOS **Citations:** 172
- 78** Alexandra Gellé; Tony Jin; Luis de la Garza; Gareth Price; Lucas Vázquez Besteiro; Audrey Moores. Applications of Plasmon-Enhanced Nanocatalysis to Organic Transformations. *Chemical Reviews*. 120 - 2, pp. 986 - 1041. American Chemical Society, 14/11/2019.
Type of production: Review **Format:** Journal
Position of signature: 5



Total no. authors: 6
Source of citations: WOS

Corresponding author: No
Citations: 282

- 79** Le Chang; Lucas Vázquez Besteiro; Jiachen Sun; Eva Yazmin Santiago; Stephen Gray; Zhiming Wang; Alexander Govorov. Electronic Structure of the Plasmons in Metal Nanocrystals: Fundamental Limitations for the Energy Efficiency of Hot Electron Generation. ACS Energy Letters. 4 - 10, pp. 2552 - 2568. American Chemical Society, 16/09/2019.

Type of production: Review
Position of signature: 1
Total no. authors: 7
Source of citations: WOS

Format: Journal
Corresponding author: Yes
Citations: 85

- 80** Lucas Vázquez Besteiro; Peng Yu; Zhiming Wang; Alexander Holleitner; Gregory Hartland; Gary Wiederecht; Alexander Govorov. The fast and the furious: Ultrafast hot electrons in plasmonic metastructures. Size and structure matter. Nano Today. 27, pp. 120 - 145. Elsevier, 01/08/2019.

Type of production: Review
Position of signature: 1
Total no. authors: 7
Source of citations: WOS

Format: Journal
Corresponding author: No
Citations: 92

- 81** Peng Yu; Lucas Vázquez Besteiro; Yongjun Huang; Jiang Wu; Lan Fu; Hark Tan; Chennupati Jagadish; Gary Wiederrecht; Alexander Govorov; Zhiming Wang. Broadband Metamaterial Absorbers. Advanced Optical Materials. pp. 1800995. Wiley, 04/10/2018.

Type of production: Review
Position of signature: 2
Total no. authors: 10
Source of citations: WOS

Format: Journal
Corresponding author: No
Citations: 192

- 82** Alessandro Ceconello; Lucas Vázquez Besteiro; Alexander Govorov; Itamar Willner. Chiroplasmonic DNA-based nanostructures. Nature Reviews Materials. 2, pp. 17039. Springer Nature, 20/07/2017.

Type of production: Review
Position of signature: 2
Total no. authors: 4
Source of citations: WOS

Format: Journal
Corresponding author: No
Citations: 112

Works submitted to national or international conferences

- 1** **Name of the conference:** Conferencia Española de Nanofotónica 2025
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Madrid, Community of Madrid, Spain
Date of event: 10/06/2025
End date: 15/06/2025
Organising entity: Universidad Autónoma de Madrid **Type of entity:** University
Lucas Vázquez Besteiro.



- 2** **Name of the conference:** Gold 2025
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: San Sebastián, Basque Country, Spain
Date of event: 11/05/2025
End date: 14/04/2025
Lucas Vázquez Besteiro.
- 3** **Title of the work:** Discussion Leader in session: Materials for Greener Processes
Name of the conference: Gordon Research Conference - Green Chemistry
Type of event: Conference
Type of participation: Participatory - others
City of event: Castelldefels, Catalonia, Spain
Date of event: 28/07/2024
End date: 02/08/2024
Organising entity: Gordon Research Conferences
Lucas Vázquez Besteiro.
- 4** **Title of the work:** Unveiling the Multimodal Plasmonic Behaviour of Bimetallic Au@Ag Nanostars as Photocatalysts
Name of the conference: Gordon Research Conference - Green Chemistry
Type of event: Conference
Type of participation: Participatory - poster
Corresponding author: Yes
City of event: Castelldefels, Catalonia, Spain
Date of event: 28/07/2024
End date: 02/08/2024
Organising entity: Gordon Research Conferences
Jesús Giráldez Martínez; Lucas Vázquez Besteiro.
- 5** **Title of the work:** Plasmonic photocatalysis: Overview of energy-transfer mechanisms and applications exploring chirality in the nanoscale
Name of the conference: 2024 Light-nanoMatter Interaction Summer School (LnMI 2024)
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Madrid, Community of Madrid, Spain
Date of event: 30/06/2024
End date: 04/07/2024
Organising entity: Universidad Autónoma de Madrid **Type of entity:** University
City organizing entity: Madrid, Community of Madrid, Spain
Lucas Vázquez Besteiro.
- 6** **Title of the work:** Chiral photogrowth of non-chiral plasmonic nanocrystals: modelling the potential of different physical mechanisms
Name of the conference: Shimmer Talks
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Chengdu, China
Date of event: 30/03/2024
Organising entity: University of Electronic Science and Technology of China



City organizing entity: Chengdu, China
Lucas Vázquez Besteiro.

7 Title of the work: Plasmonic photocatalysis and the different energy-transfer mechanisms behind it.
Nanophotonics Workshop

Name of the conference: Nanophotonics Workshop

Type of event: Workshop

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

City of event: Troyes, France

Date of event: 19/02/2024

End date: 22/02/2024

Organising entity: Université de Technologie de Troyes **Type of entity:** University

City organizing entity: Troyes, France
Lucas Vázquez Besteiro.

8 Title of the work: Theoretical models for chiral photogrowth in plasmonic nanocrystals

Name of the conference: META

Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk

Corresponding author: Yes

City of event: Paris, France

Date of event: 17/07/2023

End date: 22/07/2022

Organising entity: Hospital Universitario Vall d'Hebron
Lucas Vázquez Besteiro; Miguel Correa Duarte; Zhiming Wang; Alexander Govorov.

9 Title of the work: Models for the excitation of plasmonic hot carriers and their role in chiral crystal growth

Name of the conference: Ohio-Vigo-Troyes Workshop, Nano-Phot Graduate School

Type of event: Workshop

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

City of event: Troyes, France

Date of event: 21/02/2023

End date: 22/02/2023

Organising entity: Université de Technologie de Troyes **Type of entity:** University

City organizing entity: Troyes, France
Lucas Vázquez Besteiro.

10 Title of the work: Plasmonic Photocatalysis and the different energy-transfer mechanisms behind it

Name of the conference: Nanophotonics Workshop, Nano-Phot Graduate School

Type of event: Workshop

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

City of event: Troyes, France

Date of event: 19/02/2023

End date: 22/02/2023

Organising entity: Université de Technologie de Troyes **Type of entity:** University



City organizing entity: Troyes, France
Lucas Vázquez Besteiro.

11 Title of the work: Chiral Growth of Achiral Plasmonic Nanocrystals under Circularly Polarized Light

Name of the conference: META

Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk

Corresponding author: Yes

City of event: Torremolinos, Andalusia, Spain

Date of event: 19/07/2022

End date: 22/07/2022

Organising entity: Hospital Universitario Vall d'Hebron

Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov.

12 Title of the work: Plasmonic Hot Carrier Excitation: Connecting Quantum and Semiclassical Models

Name of the conference: CECAM - Light-matter interaction and ultrafast nonequilibrium dynamics in plasmonic materials

Type of event: Workshop

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

City of event: Coventry, West Midlands, United Kingdom

Date of event: 18/07/2022

End date: 21/07/2022

Organising entity: University of Warwick

Type of entity: University

City organizing entity: Coventry, West Midlands, United Kingdom

Lucas Vázquez Besteiro.

13 Title of the work: A Theoretical Perspective on the Connection Between Chirality and Photocatalysis in Plasmonic Nanocrystals

Name of the conference: The Thinking Institute

Type of event: Conference

Type of participation: Participatory - invited/keynote talk

Corresponding author: Yes

City of event: Vigo, Galicia, Spain

Date of event: 04/07/2022

End date: 05/07/2022

Organising entity: CINBIO

Type of entity: R&D Centre

City organizing entity: Vigo, Galicia, Spain

Lucas Vázquez Besteiro.

14 Title of the work: Modeling plasmonic hot-electron generation and their role in photocatalysis

Name of the conference: META

Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk

City of event: Warsaw, Poland

Date of event: 20/07/2021

End date: 23/07/2021

Organising entity: Hospital Universitario Vall d'Hebron

Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov.



- 15** **Title of the work:** Chiral Plasmonic Photocatalysis
Name of the conference: Annual Meeting CINBIO
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Vigo, Galicia, Spain
Date of event: 01/07/2021
End date: 02/07/2021
Organising entity: CINBIO **Type of entity:** R&D Centre
City organizing entity: vIGO, Galicia, Spain
Lucas Vázquez Besteiro.
- 16** **Title of the work:** Theoretical Perspective on the Generation of Plasmonic Hot Carriers
Name of the conference: METANANO
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Tbilisi (Online), Georgia
Date of event: 14/09/2020
End date: 18/09/2020
Organising entity: ITMO University
Lucas Vázquez Besteiro; Zhiming Wang; Alexander Govorov.
- 17** **Title of the work:** Understanding Hot Electron Generation in Plasmonic Nanocrystals and Delineating New Research Avenues
Name of the conference: META
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Lisbon, Portugal
Date of event: 23/07/2019
End date: 26/07/2019
Organising entity: Hospital Universitario Vall d'Hebron
Lucas Vázquez Besteiro; Tianju Liu; Zhiming Wang; Alexander Govorov.
- 18** **Title of the work:** Designing Energy-Saving Glasses with Embedded Plasmonic Nanoparticles
Name of the conference: Workshop on Luminescence & Magnetism in Molecules & Materials (LM3)
City of event: Ottawa, ON, Canada
Date of event: 11/03/2019
End date: 11/03/2019
Organising entity: Department of Chemistry and Biomolecular Sciences –University of Ottawa
City organizing entity: Ottawa, ON, Canada
Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Federico Rosei; Alexander Govorov.
- 19** **Title of the work:** Energy-Saving Meta-Glasses with Embedded Plasmonic Nanoparticles
Name of the conference: APS March Meeting
City of event: Boston, MA, United States of America
Date of event: 04/03/2019
End date: 08/03/2019
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Federico Rosei; Alexander Govorov.



- 20** **Title of the work:** Hot-Electron Generation and Energy Transfer in Plasmonic Metastructures with Hot Spots: Quantum and Classical Mechanisms
Name of the conference: APS March Meeting
City of event: Boston, MA, United States of America
Date of event: 04/03/2019
End date: 08/03/2019
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Alexander Govorov; Lucas Vázquez Besteiro; Zhiming Wang.
- 21** **Title of the work:** Plasmonic Nanoparticles in Near-Field Interaction: Energy Conversion and Coherent Plasmon Transfer
Name of the conference: Single Nanostructures, Nanomaterials, Aerogels and their Interactions: Combining Quantum Physics and Chemistry
City of event: Dresden, Germany
Date of event: 23/08/2018
End date: 31/08/2018
Organising entity: Max-Planck-Institut für Physik **Type of entity:** University Research Institute Komplexer Systeme
City organizing entity: Dresden, Germany
Lucas Vázquez Besteiro; Xiang-Tian Kong; Alexander Govorov.
- 22** **Title of the work:** Hot Electron Generation for Solar Energy Conversion: Phenomenological Theoretical Framework and Practical Design Insights
Name of the conference: MRS-SMM International Material Research Congress
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Cancun, Mexico
Date of event: 19/08/2018
End date: 24/08/2018
Organising entity: MRS **Type of entity:** Associations and Groups
City organizing entity: Warrendale, PA, United States of America
Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Alexander Govorov.
- 23** **Title of the work:** Quantum and classical phenomena in bio-plasmonic nanostructures and assemblies
Name of the conference: SPIE Nanoscience + Engineering
City of event: San Diego, CA, United States of America
Date of event: 19/08/2018
End date: 23/08/2018
Organising entity: SPIE **Type of entity:** Associations and Groups
City organizing entity: SPIE, United States of America
Alexander Govorov; Lucas Vázquez Besteiro.
- 24** **Title of the work:** Plasmonic Nanomaterials as Infrared-Blocking Radiation Filters and Energy-Saving Glasses
Name of the conference: META
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Marseille, France
Date of event: 24/06/2018
End date: 01/07/2018
Organising entity: Hospital Universitario Vall d'Hebron



Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Federico Rosei; Alexander Govorov.

- 25 Title of the work:** Hot-electron generation in plasmonic nanostructures with hot spots: Quantum mechanisms
Name of the conference: APS March Meeting
City of event: Los Angeles, CA, United States of America
Date of event: 05/03/2018
End date: 05/03/2018
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Alexander Govorov; Lucas Vázquez Besteiro; Xiang-Tian Kong; Zhiming Wang; Gary Wiederrecht.
- 26 Title of the work:** Plasmonic Heating: Efficient and Controlled Heating at the Nanoscale
Name of the conference: APS March Meeting
City of event: Los Angeles, CA, United States of America
Date of event: 05/03/2018
End date: 05/03/2018
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Larousse Khosravi Khorashad; Lucas Vázquez Besteiro; Alexander Govorov.
- 27 Title of the work:** Ultra-Fast Light Energy Transfer with Suppressed Losses Through Hot-Spots in Heterogeneous Plasmonic Arrays
Name of the conference: APS March Meeting
City of event: Los Angeles, CA, United States of America
Date of event: 05/03/2018
End date: 05/03/2018
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Lucas Vázquez Besteiro; Eva-Maria Roller; Larousse Khosravi Khorashad; Tim Liedl; Alexander Govorov.
- 28 Title of the work:** Chiral Nanocrystal Bio-Assemblies with Plasmonic and Excitonic Resonances
Name of the conference: Ohio University Postdoctoral Symposium
City of event: Athens, OH, United States of America
Date of event: 26/04/2017
End date: 26/04/2017
Organising entity: Ohio University **Type of entity:** University
City organizing entity: Athens, OH, United States of America
Lucas Vázquez Besteiro; Larousse Khosravi Khorashad; Na Liu; Anton Kuzyk; Eva-Maria Roller; Tim Liedl; Alexander Govorov.
- 29 Title of the work:** Plasmonics: Fundamentals and Applications
Name of the conference: Ohio University Postdoctoral Symposium
City of event: Athens, OH, United States of America
Date of event: 26/04/2017
End date: 26/04/2017
Organising entity: Ohio University **Type of entity:** University
City organizing entity: Athens, OH, United States of America
Lucas Vázquez Besteiro; Larousse Khosravi Khorashad; Xiang-Tian Kong; Alexander Govorov.



- 30** **Title of the work:** Modeling the generation of hot plasmonic electrons in metal nanocrystals with hot spots.
A quantum model
Name of the conference: APS March Meeting
City of event: New Orleans, LA, United States of America
Date of event: 13/03/2017
End date: 17/03/2017
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Lucas Vázquez Besteiro; Xiang-Tian Kong; Alexander Govorov.
- 31** **Title of the work:** Photothermal Plasmonic Effects and Localization of Excess Temperature Using Metal Nanostructures
Name of the conference: APS March Meeting
City of event: New Orleans, LA, United States of America
Date of event: 13/03/2017
End date: 17/03/2017
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Larousse Khosravi Khorashad; Lucas Vázquez Besteiro; Alexander Govorov.
- 32** **Title of the work:** Quantum and Classical Plasmonic Phenomena in Nanoparticle Arrays
Name of the conference: APS March Meeting
City of event: New Orleans, LA, United States of America
Date of event: 13/03/2017
End date: 17/03/2017
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Alexander Govorov; Lucas Vázquez Besteiro; Larousse Khosravi Khorashad; Xiang-Tian Kong; Eva-Maria Roller; Tim Liedl.
- 33** **Title of the work:** Chiral Nanocrystal Bio-Assemblies with Plasmonic and Excitonic Resonances
Name of the conference: Statussymposium on Functional Macroscopic Systems
City of event: Hannover, Germany
Date of event: 02/05/2016
End date: 04/05/2016
Organising entity: Volkswagen Stiftung **Type of entity:** Foundation
City organizing entity: Hannover, Germany
Alexander Govorov; Lucas Vázquez Besteiro; Larousse Khosravi Khorashad; Na Liu; Anton Kuzyk; Eva-Maria Roller; Tim Liedl.
- 34** **Title of the work:** Kinetic Density Functional Theory for Plasmonic Nanostructures
Name of the conference: APS March Meeting
City of event: Baltimore, MD, United States of America
Date of event: 14/03/2016
End date: 18/03/2016
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Lucas Vázquez Besteiro; Hui Zhang; Alexander Govorov.



- 35** **Title of the work:** Kinetic density functional theory for plasmonic nanostructures. Theoretical overview and applications
Name of the conference: Nanoscale Assemblies of Semiconductor Nanocrystals, Metal Nanoparticles and Single Molecules: Theory, Experiment and Application
City of event: Dresden, Germany
Date of event: 24/08/2015
End date: 28/08/2015
Organising entity: Max-Planck-Institut für Physik **Type of entity:** University Research Institute Komplexer Systeme
City organizing entity: Dresden, Germany
Lucas Vázquez Besteiro; Hui Zhang; Alexander Govorov.
- 36** **Title of the work:** Plasmonic metastructures exhibiting a narrow transparency window within a broad extinction spectrum
Name of the conference: APS March Meeting
City of event: San Antonio, TX, United States of America
Date of event: 02/03/2015
End date: 06/03/2015
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Lucas Vázquez Besteiro; Hui Zhang; Kivanc Gungor; Hilmi Volkan Demir; Alexander Govorov.
- 37** **Title of the work:** DX-like Defect Formation in Zinc-Blende III-IV Semiconductor Nanowires
Name of the conference: ANM - International Conference on Advanced Nano Materials
City of event: Aveiro, Portugal
Date of event: 02/07/2014
End date: 04/07/2014
Organising entity: Universidade de Aveiro **Type of entity:** University
City organizing entity: Aveiro, Portugal
Lucas Vázquez Besteiro; Luis Javier Gallego del Hoyo; Manuel María González Alemany.
- 38** **Title of the work:** Efficient n-type doping of zinc-blende III-V semiconductor nanowires
Name of the conference: APS March Meeting
City of event: Denver, CO, United States of America
Date of event: 03/03/2014
End date: 07/03/2014
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Lucas Vázquez Besteiro; Luis Tortajada Lavín; Jaime Souto Casares; Luis Javier Gallego del Hoyo; James Chelikowsky; Manuel María González Alemany.
- 39** **Title of the work:** Efficient n-type doping of zinc-blende III-V semiconductor quantum dots
Name of the conference: APS March Meeting
City of event: Portland, OR, United States of America
Date of event: 15/03/2010
End date: 15/03/2010
Organising entity: American Physical Society **Type of entity:** Associations and Groups
City organizing entity: College Park, MD, United States of America
Lucas Vázquez Besteiro; Luis Tortajada Lavín; Murilo Tiago; Luis Javier Gallego del Hoyo; James Chelikowsky; Manuel María González Alemany.



R&D management and participation in scientific committees

Organization of R&D activities

Title of the activity: Annual Meeting CINBIO

Type of activity: Conference

City of event: Vigo, Galicia, Spain

Convening entity: CINBIO

City convening entity: Vigo, Galicia, Spain

Type of participation: Organiser

Nº assistants: 150

Start-End date: 28/07/2022 - 29/07/2022

Geographical area: National

Type of entity: R&D Centre

Duration: 4 months