| CV Date | 13/09/2023 |
|---|---|

## Part A. PERSONAL INFORMATION

| | | | |
|---|---|---|---|
| First Name | Braulio | | |
| Family Name | García Cámara | | |
| Sex | Male | Date of Birth | [redacted] |
| ID number Social Security, Passport | [redacted] | | |
| URL Web | | | |
| Email Address | brgarcia@ing.uc3m.es | | |
| Open Researcher and Contributor ID (ORCID) | | | |

### A.1. Current position

| | | | |
|---|---|---|---|
| Job Title | Associate Professor | | |
| Starting date | [redacted] | | |
| Institution | Universidad Carlos III de Madrid | | |
| Department / Centre | Electronic Technology / Escuela Politécnica Superior | | |
| Country | | Phone Number | |
| Keywords | 220207 - Interaction of electromagnetic waveswith matter | | |

### A.3. Education

| Degree/Master/PhD | University / Country | Year |
|---|---|---|
| Science, Technology and Computation | Universidad de Cantabria | [redacted] |
| Master in Physics and Physical Technologies | Universidad de Cantabria | |
| Physics degree | Universidad de Cantabria | |

## Part B. CV SUMMARY

**Braulio García-Cámara**is Associate Professor since 2019 of the Department of Electronic Technology of Carlos III of Madrid. His scientific career is mainly focused on the field of photonics and, in particular, on the interaction of light with nanometric systems and assembles of them (e.g., metamaterials, metasurfaces), both metallic and semiconductor, with special emphasis on resonant and light-guiding effects. This work has led to the publication of 53 papers in scientific journals (45 in Q1 or Q2). It should be noted that some of the publications have been published in journal with a high reputation and a high impact index (e.g., Nature Communications). In addition, 5 publications have more than 30 citations, exceeding the average in this scientific field. Likewise, he has been co-editor of a book and co-author of 3 book chapters, some of them in publishers of recognized international prestige, such as Springer. He has participated as a researcher in the development of 10 competitive projects (co-PI in one of them) and a research contract, formalized as the Indra Chair in Accessible Technologies (ref. 2014/00271/001), as well as in a Cost Action of the European Union. His research activities have led to a h-index of 19 according to SCOPUS. He is co-author of a patent about an electromagnetic cloaking system and co-founder of a technological start-up. He is currently supervising two PhD students, close to defend their PhD. He is also teaching electronics and electro-optics due to his expertise. During the last years, he is involved in several programs of dissemination of the research to the society, including one of UC3M devoted to enhance the STEM callings in pupils at the secondary schools, with a special focus on girls as future researchers. Finally, he has been part of the organizational bodies of the University and international conferences. In particular, he have been member of the boards of the Department of Applied Physics of the University of Cantabria on behalf of non-doctoral professors and scholarship holders and of the Department of Electronic Technology of the Carlos III University of Madrid, member of the School Board of the School of Engineering of UC3M and member of the organizing committees of 3 international congresses, with different

degrees of responsibility (Special Session Chair, Publication Chair, Member of the Organization Committee).

## Part C. RELEVANT ACCOMPLISHMENTS

### C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. Mahmoud Elshorbagy; Eduardo Lopez-Fraguas; José Manuel Sánchez Pena; Braulio Garcia-Camara; Ricardo Vergaz. 2020. Boosting ultrathin aSi-H solar cells absorption through a nanoparticle cross-packed metasurface. Solar Energy. Pergamon. 202, pp.10-16.

2 **Scientific paper**. Mahmoud Elshorbagy; Eduardo López-Fraguas; Fateh Chaudhry; José Manuel Sánchez Pena; Ricardo Vergaz; Braulio García-Cámara. 2020. A monolithic nanostructured-perovskite/silicon tandem solar cell: feasibility of light management through geometry and materials selection. Scientific Reports. Nature. 10, pp.1-8.

3 **Scientific paper**. Marzal, Vicente; Cano-Garcia, Manuel; Torres, Juan Carlos; Quintana, Xabier; Perez, Isabel; Garcia-Camara, Braulio. 2020. Electrical Behavior of Liquid Crystal Devices with Dielectric Nanoparticles. JOURNAL OF NANOMATERIALS. 2020. ISSN 1687-4110. https://doi.org/10.1155/2020/4515432

4 **Scientific paper**. Dimitrios Zografopoulos; Antonio Ferraro; José F. Algorri; et al; Romeo Beccherelli. 2019. All-Dielectric Silicon Metasurface with Strong Subterahertz Toroidal Dipole Resonance. Advanced Optical Materials. Wiley. 7-19, pp.1900777.

5 **Scientific paper**. Kaleem Ullah; Muhammad Habib; Lujun Huang; Braulio García Cámara. 2019. Analysis of the Substrate Effect on the Zero-Backward Scattering Condition of a Cu2O Nanoparticle under Non-Normal Illumination. Nanomaterials. MDPI. 9, pp.536.

6 **Scientific paper**. José F. Algorri; Dimitrios C. Zografopoulos; Antonio Ferraro; Braulio García Cámara; Ricardo Vergaz; Romeo Beccherelli; José Manuel Sánchez Pena. 2019. Anapole modes in hollow nanocuboid dielectric metasurfaces for refractometric sensing. Nanomaterials. MDPI. 9, pp.1-30.

7 **Scientific paper**. Mahmoud Elshorbagy; Braulio García Cámara; Eduardo López Fraguas; Ricardo Vergaz. 2019. Efficient light management in a monolithic tandem perovskite/silicon solar cell by using a hybrid metasurface. Nanomaterials. MDPI. 9-5, pp.791.

8 **Scientific paper**. Dimitrios Zografopoulos; José F. Algorri; Antonio Ferraro; Braulio García Cámara; José Manuel Sánchez Pena; Romero Beccherelli. 2019. Toroidal metasurface resonances in microwave waveguides. Scientific Reports. Nature Publishing Group. 9-1, pp.1-11.

9 **Scientific paper**. José F. Algorri; Dimitrios Zografopoulos; Antonio Ferraro; Braulio García Cámara; Romeo Beccherelli; José Manuel Sánchez Pena. 2019. Ultrahigh-quality factor resonant dielectric metasurfaces based on hollow nanocuboids. Optics Express. OSA. 27, pp.6320-6330.

10 **Scientific paper**. Kaleem Ullah; Braulio Garcia-Camara; Muhammad Habib; N.P. Yadav; Xuefeng Liu. 2018. An indirect method of imaging the Stokes parameters of a submicron particle with sub-diffraction scattering. Journal of Quantitative Spectroscopy and Radiative Transfer. Elsevier. 213, pp.35-40.

11 **Scientific paper**. Kaleem Ullah; Dr.; Muhammad Habib; Xuefeng Liu; Alex Krasnok; Sergey Lepeshov; Jigjing Hao; NP Yadav. 2018. Chiral all-dielectric trimmer nanoantenna. Journal of Quantitative Spectroscopy and Radiative Transfer. 208, pp.71-77.

12 **Scientific paper**. Kaleem Ullah; Xuefeng Liu; Lujun Huang; Umair Farooq; Muhammad F. Iqbal; Braulio García Cámara. 2018. Imaging the scattering field of a single GaN nanowire. Journal of Optics. IOP Publishing. 20-10, pp.105608.

13 **Scientific paper**. Kaleem Ullah; Xuefeng Liu; Alex Krasnok; Muhammad Habib; Braulio Garcia-Camara. 2018. Resolving the multipolar scattering modes of a submicron particle using parametric indirect microscopic imaging. Photonics and Nanostructures-Fundamentals and Applications. Elsevier. 30, pp.7-13.

14 **Scientific paper**. Juan Carlos Torres; Braulio García Cámara; Isabel Pérez; Virginia Urruchi; José Manuel Sánchez Pena. 2018. Wireless Temperature Sensor Based on a Nematic Liquid Crystal Cell as Variable Capacitance. Sensors. MDPI. 18-10, pp.3436.

15 Escandell, Lorena; Alvarez-Rodriguez, Carlos; Barreda, Angela; Zaera, Ramon; Garcia-Camara, Braulio. 2022. All-Optical Nanosensor for Displacement Detection in Mechanical Applications. NANOMATERIALS. 12. https://doi.org/10.3390/nano12224107

16 Chaudhry, Fateh A.; Escandell, Lorena; Lopez-Fraguas, Eduardo; Vergaz, Ricardo; Manuel Sanchez-Pena, Jose; Garcia-Camara, Braulio. 2022. Light absorption enhancement in thin film GaAs solar cells using dielectric nanoparticles. SCIENTIFIC REPORTS. 12. ISSN 2045-2322. WOS (1) https://doi.org/10.1038/s41598-022-13418-4

17 Lopez-Fraguas, Eduardo; Binkowski, Felix; Burger, Sven; Hagedorn, Sylvia; Garcia-Camara, Braulio; Vergaz, Ricardo; Becker, Christiane; Manley, Phillip. 2022. Tripling the light extraction efficiency of a deep ultraviolet LED using a nanostructured p-contact. SCIENTIFIC REPORTS. 12. ISSN 2045-2322. https://doi.org/10.1038/s41598-022-15499-7

18 Fresno-Hernandez, Alicia; Garcia-Camara, Braulio; Torres, Juan Carlos; Sanchez-Pena, Jose Manuel. 2021. Design and Experimental Implementation of a Multi-Cloak Paraxial Optical System. PHOTONICS. 8. https://doi.org/10.3390/photonics8090358

19 Hamdy Elshorbagy, Mahmoud; Cuadrado, Alexander; Garcia-Camara, Braulio; Vergaz, Ricardo; Antonio Gomez-Pedrero, Jose; Alda, Javier. 2020. Ultra-Narrow Spectral Response of a Hybrid Plasmonic-Grating Sensor. IEEE SENSORS JOURNAL. 20. ISSN 1530-437X. https://doi.org/10.1109/JSEN.2019.2960556

**C.3. Research projects and contracts**

1 **Project**. LC-LENS - Lentes sintonizables de cristal líquido. AGENCIA ESTATAL DE INVESTIGACION (AEI). Sanchez Pena Proffessor. (Universidad Carlos III de Madrid). 01/12/2021-30/11/2023. 46.230 €.

2 **Project**. Materiales nanoensamblados para sensado y manipulación de luz en amplio rango espectral (I): Dispositivos de fase adaptativos y metasuperfícies. Agencia Estatal de Investigación. Sanchez Pena Professor. (Universidad Carlos III de Madrid). 01/06/2020-31/05/2023. 137.940 €.

3 **Project**. Telealimentación Fotovoltaica por fibra Óptica para medida y control en entornos extremos.. Vazquez Garcia Professor. (Universidad Carlos III de Madrid). 01/01/2019-20/06/2022. 371.214,45 €.

4 **Project**. Mejora de la eficiencia de células solares de capa delgada mediante el uso de nanoestructuras. (Universidad Carlos III de Madrid). 01/01/2019-31/12/2019. 25.000 €.

5 **Project**. Estructuras subwavelength de capa delgada para circuitos fotónicos. Ministerio de Economía y Competitividad. José Manuel Sánchez Pena. (Universidad Carlos III de Madrid). 30/12/2016-29/12/2019. 257.730 €.

6 **Contract**. Cátedra Indra-Fundación Adecco de tecnología accesible José Manuel Sánchez Pena. 08/05/2014-08/05/2017. 9.000 €.