Ana Pallarés Vilar

Date of birth: 20/03/1998 | **Nationality:** Spanish | **Gender:** Female | **Phone number:**

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Address: Calle Vicente Blasco Ibáñez, 5, 12527, Artana, Spain (Home) |

Address: Calle del Divino Redentor, 32, 28029, Madrid, Spain (Current working address (until 30 June))

ABOUT ME

I graduated in Physics from the University of Valencia and obtained a Master's in Advanced Materials, Nanotechnology, and Photonics from the Universidad Autónoma de Madrid. My recent professional experience involved working as a researcher at the Universidad Politécnica de Madrid, where I gained extensive experience in experimental research.

I am a co-author of two scientific articles, one published in Physical Review Letters and the other submitted to Sensors and Actuators, awaiting publication. Both works are within my area of expertise, demonstrating my ability to contribute to experimental science.

I consider myself a hardworking, responsible, and disciplined individual, enabling me to execute tasks effectively and rigorously. I enjoy both teamwork and autonomous work, adapting to the needs of the work environment to achieve common goals.

My curiosity and passion for expanding knowledge drive me to pursue a career in experimental research. I am particularly fascinated by the fields of nanotechnology and biotechnology, as well as the characterization and study of new materials—areas in which I have specialized and wish to continue developing professionally.

I am committed to innovation and scientific advancement, always seeking new opportunities to contribute to the understanding and development of emerging technologies.

EDUCATION AND TRAINING

05/09/2021 – 30/06/2022 Madrid, Spain
MASTER IN ADVANCED MATERIALS, NANOTECHNOLOGY AND PHOTONICS. Universidad Autónoma de Madrid

Address Ciudad Universitaria de Cantoblanco, C. Francisco Tomás y Valiente, 7, 28049 , Madrid, Spain | **Website** uam.es

11/09/2016 – 13/07/2021 Burjassot, Spain
DEGREE IN PHYSICS Universitat de València

Address Carrer del Dr. Moliner, 50, 46100, Burjassot, Spain |

Website https://www.uv.es/uvweb/fisica/ca/facultat-fisica-1285850062061.html

LANGUAGE SKILLS

Mother tongue(s): **SPANISH** | **CATALAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B1	B1	B1	B1	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

WORK EXPERIENCE

01/10/2022 – 30/06/2024 Madrid, Spain
RESEARCHER UNIVERSIDAD POLITÉCNICA DE MADRID

- Study, design, simulate, manufacture and characterise high-frequency devices based on planar technology (Microstrip/CPW), applying them as sensors for agri-food and bio-health fields.
- Participation in preparing scientific articles to disseminate the advances achieved.
- Collaboration in three different projects with the Autonomous University of Barcelona.
- Participation as a teaching collaborator on the Telecommunications Engineering degree.
- Courses and seminars offered by Universidad Politécnica de Madrid related to the topics of this research.

Business or Sector Education │ **Department** Ingeniería Audiovisual y de Comunicaciones (IAC) │

Website https://www.etsist.upm.es/

PROJECTS

01/09/2023 – 30/06/2024
High-performance microwave sensors for industrial applications, biosensors and structural damage monitoring

Team member.

01/10/2023 – 30/06/2024
Intelligent system for the control and improvement of performance in industrial processes of bottling and production of wines and wine products (SMART-CELLAR).

Team member.

01/10/2022 – 30/06/2024
WISE SYSTEM (WINE SENSOR SYSTEM)

Team member.

PUBLICATIONS

2023
Monolayer-to-Mesoscale Modulation of the Optical Properties in 2D CrI_3 Mapped by Hyperspectral Microscopy

Using wide-field hyperspectral imaging at room temperature, a non-monotonic thickness dependence of the complex optical dielectric function in the archetypal magnetic 2D material CrI_3 is obtained.

Physical Review Letters. 130 - 176901, pp. 176901-1 - 176901-7. 28/04/2023.

Non-invasive and enzyme-free porous silicon based-sensor for dual voltammetric and luminescence sensing of D-glucose. (Submitted)

Use of $NaGdF_4$: 20% Yb^{3+} , 2% Er^{3+} nanoparticles for non-invasive, enzyme-free detection of D-glucose. Analysis of changes in the current reaching the sensor or changes in the luminescence of the nanoparticles.

Sensors and Actuators: A. Physical

DIGITAL SKILLS

Personal Competences

Hard-Working │ Self-Motivated and Self-Learning │ Self-disciplined │ Capacity for Teamwork

Skills

Problem Analysis & Problem Solving │ Synthesis and characterisation of materials │ Nanotechnology │ Biotechnology

Digital capabilities

Basic Knowledge of MatLab │ Basic knowledge of C, C++, C# │ Basic knowledge of COMSOL │ Basic knowledge of Labview │ Knowledge of ImageJ │ Knowledge of Advanced Design System │ Knowledge of ANSYS HFSS

- ## CONFERENCES AND SEMINARS

07/07/2019 – 12/07/2019 Palacio de Congresos de Valencia
GR 22 - AMALDI 13

I participated together with other students of the Physics degree helping in the organisation of the congress. At the same time I was also able to attend different lectures on gravitational waves.

Link https://www.gr22amaldi13.com/

- ## HONOURS AND AWARDS

03/05/2018
Idees MOTIVEM – ADEIT, Universitat de València with the Generalitat Valenciana and the Obra Social "la Caixa" – Universitat de València

I was a finalist with my team in the Idees MOTIVEM competition. This competition rewarded transgressive ideas that help to improve the society in which we live.

Link https://www.adeituv.es/ideasmotivem/