MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date	14/01/2026

First name	Manuel		
Family name	Lozano		
Gender	Male	**Birth date (dd/mm/yyyy)**	11/01/1960
ID number	17,207,952-L		
e-mail	Manuel.lozano@csic.es	**URL Web**	
Open Researcher and Contributor ID (ORCID)		0000-0001-5826-5544	

A.1. Current position

Position	**CSIC Research Professor**		
Initial date	19/08/2008		
Institution	Consejo Superior de Investigaciones Científicas (CSIC)		
Department/Center	Instituto de Microelectrónica de Barcelona (IMB-CNM)		
Country	Spain	**Phone number**	+34 935 947 700
Key words	Microelectronics. Silicon technology. Solid state devices. Semiconductor devices. Particle detectors. Radiation detectors. Neutron Detectors. Radon. Big Science Technology		

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	**Position/Institution/Country/Interruption cause**
1990-2003	CSIC Tenured Scientist (Científico Titular)
2003-2008	CSIC Scientific Researcher (Investigador Científico)

A.3. Education

PhD, Licensed, Graduate	**University/Country**	**Year**
Licenciado Ciencias Físicas	Universidad de Zaragoza	1982
Doctor Ciencias Físicas	Universidad Autónoma de Barcelona	1989

Part B. CV SUMMARY (max. 5000 characters, including spaces)

Manuel Lozano was born in 1960 in Zaragoza (Spain). He graduated in Physics at Univ. of Zaragoza in 1982, worked in the metallurgical industry for 2 years and subsequently obtained a doctorate in Physics in 1989 at Autonomous University of Barcelona (UAB). Since 1990, he has been a staff scientist at the CSIC and since 2008, he has been the Research Professor at the National Microelectronics Centre (IMB-CNM) in Bellaterra (Barcelona) from CSIC.

Their subject matters are microelectronic fabrication (simulation, fabrication, and characterization), microsystems and radiation detectors made from silicon. His interest has focused on applied, market-oriented, research. He was the founder of the IMB-CNM Radiation Detectors Group, where he developed the first technology for the fabrication of them in Spain. Today these detectors have been supplied to CERN, where they are part of the ATLAS detector. He has also collaborated with other particle and nuclear physics groups, such as Brookhaven National Laboratory (NBL). His latest developments are detectors for neutrons,

for proton beam microdosimetry and for radon. From 1990 to 2003, he combined his research work with the teaching of electronics at the UAB.

He has been coordinator of the European project REWARD from the 7PM, director of 4 European projects, 4 national research projects and 2 industrial projects, 2 regional projects and more than 20 industrial contracts in the field of microelectronics technology, radiation detectors, radiation detector hardening and medical imaging; besides being a participant in many others.

Author or co-author of more than 200 papers in indexed magazines, and more than 150 international conferences. Author of 15 patents in the field of microelectronics, medical imaging, radiation detectors and smart sensors; two of them are licensed to companies in the sector. He is a co-founder of the spin-off company Alibava Systems, S.L., dedicated to test systems for particle detectors, which has already been operating for 10 years.

He has been Head of the Department of Micro and Nano Systems of the IMB-CNM, Head of the Group of Radiation Detectors, and Team Leader of the IMB-CNM at CERN.

From 2012 to 2016, he has been the Coordinator of the Area of Science and Physical Technologies of the CSIC, from where it coordinated the 21 CSIC institutes whose subject matter is physics, mathematics or information technologies. From 2016 to 2021 he has been the director of the IMB-CNM, an institute of 11 million euros of annual budget and about 190 workers, including the Micro and Nano Fabrication Clean Room, labelled as a Scientific and Technological Singular Facility (ICTS) by the Spanish Ministry of Science.

Finally, since 2014, he is director of D+T, A.I.E. (CIF nº V60878857) Economic Interest Grouping, whose majority partner is the CSIC and commercially operates the Clean Room of the IMB-CNM, with 20 employees and 1M€ annual budget.

Currently he is the CSIC Principal Investigator of the Industrial CDTI Project ARGUS and at the National Project MAKIT&FUTURE II.

The scientific contribution can be sumarized in the following table:

14 January 2026	**WoS**	**Scopus**
Papers	215	231
Citations	5,862	3,248
h-index:	25	27

Additionally he has the following research periods approved by the Science Ministry:

- Ordinary research periods (5 years): **6** (last 2016-2020)
- Extraordinary research periods (6 years): **6** (last 2016-2021) + **1 technological** (2001-2010)

His career can be considerd as technological development, with a double orientation: basic technology and market oriented, with high TRLs (from 5 to 9).

The main milestone in the first area is the development of the first microstrip radiation detector technology in Spain, which now has has reached the market and is produced routinely in the Clean Room of the institute.

In the second area, we can mention a new type of radiation dosimeter for high doses, radon detector, fish activity monitoring system, that are in the process of transfer to industry. And two different equipment for the analysis of radiation detector performance,, currently commercially exploited by a company. As an indicator of this activity, he has 15 patents, 4 of them tranferred to industry. He also created in 2011 an spin-off company Alibava System, S.L (https://alibavasystems.com/) fiscal number B65653677, which is succesfully operating since then.

Finally, he has suppervised 6 PhD students sucessfully contributing to their professional career: four of them are tenured scientists at CSIC, another is Senior Engineer at Intel (Ireland), and another Senior Engineer at D+T Microelectrónica.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications

Amat, E.; Martínez-Domingo, C.; Fleta, C.; Mas-Torrent, M.; Lozano, M.
Exploration of alternative gate dielectric materials for RADFET sensors
Nuc. Inst. & Methods B, 2025. DOI: 10.1016/j.nimb.2025.165775

Sampaio, M.F., Marinho, P.R.B., Cabruja, E., Lozano, M., Lima Jr, H.P. & De Campos, J.B.
SU-8 processing improvement and simulating studies for a Micromegas detector fabrication.
Journal of Instrumentation, 2021, vol. 16, num. 8. DOI: 10.1088/1748-0221/16/08/P08022

Martos-Sitcha, J.A., Sosa, J., Ramos-Valido, D., …, Pérez-Sánchez, J.
Ultra-low power sensor devices for monitoring physical activity and respiratory frequency in farmed fish
Frontiers in Physiology, 2019, 10 (May), 667

Zaffino, R.L., Seimetz, M., Ruiz, A., ...Lozano, M., Pellegrini, G.
Wafer-scale fabrication of target arrays for stable generation of proton beams by laser-plasma interaction.
Journal of Physics: Conference Series, 2018, 1079(1), 012007

Guardiola, C.Quirion, D.Pellegrini, G.Fleta, C.Esteban, S.Cortés-Giraldo, M.A.Gómez, F.Solberg, T.Carabe, A., Lozano, M.Silicon-based three-dimensional microstructures for radiation dosimetry in hadrontherapy
Applied Physics Letters, Vol.107 (2015)

C.2. Congress

C.3. Research projects

Title: ARGUS: Plataforma sensórica avanzada portable, interoperable y de alta sensibilidad para la detección temprana, monitorización y respuesta ante amenazas CBRNe
Project: MIG-20251215
Funding: CDTI "Programa Misiones de Ciencia e Innovación"
Dates: Jan 2026 - Dec 2029
Budget: Total Project 5.145.989€. IMB-CNM: 323.000€

Title: NEST: An Interoperable Multidomain CBRN System
Project: Grant agreement no: 101018596
Funding: SU-DRS04-2020
Dates: May 2021 - Apr 2024
Budget: Total Project 3.473.703€. IMB-CNM: 424.783€
Link: https://cordis.europa.eu/project/id/101018596/
https://nest-h2020.eu/

Title: REWARD: Real time Wide Area Radiation surveillance system.
Coordinator: **Manuel Lozano**
Project: Grant agreement no: 284845
Funding: FP7-SECURITY-2011
Dates: Dec 2011 - Nov 2014
Budget: Total Project 3.020.795 €. IMB-CNM: 661.013€
Link: https://cordis.europa.eu/project/id/284845/es

Title: MAKIT&FUTURE II: Construcción de los sensores de strip del ITK de ATLAS y desarrollo de las tecnologías para los sensores de los futuros experimentos
Project: Project de investigación nacional. MINECO Programa FPA.
Participants: CNM-IMB (CSIC), IFIC (CSIC-UV).
Reference: PID2024-156645NB-C22
Dates: Sep 2025 - Aug 2028

Budget: 143.000 €
PI: Miguel Ullán y Manuel Lozano (SubProject CNM)

Title: MAKIT&FUTURE: Construcción de los sensores de strip del ITK de ATLAS y desarrollo de las tecnologías para los sensores de los futuros experimentos
Project: Project de investigación nacional. MINECO Programa FPA.
Participants: CNM-IMB (CSIC), IFIC (CSIC-UV).
Reference: PID2021-126327OB-C22
Dates: Sep 2022 - Aug 2025
Budget: 336 300 €
PI: Miguel Ullán y Manuel Lozano (SubProject CNM)

Title: CARE: Desarrollo de un sistema de control automático de la concentración de radón en edificios.
Project: RTC-2016-5627-1
Participants: Alibava Systems, S.L., Sensing&Control, S.L., IMB–CNM (CSIC), Univ. Santiago de Compostela, ATI Sistemas, S.L., Radiansa Consulting, S.L.
Funding: Plan Nacional, Projects Retos-Colaboración
Dates: Jan 2016 - Dec 2019
Budget: 114.065 €

Title: Contribución al desarrollo y fabricación del trazador de strips de ATLAS para el HL-LHC (ATLAS7bis).
Project: Projects de I+D+i Retos Investigación. MCIU (Programa FPN)
Participants: CNM-IMB (CSIC), IFIC (CSIC-UV).
Reference: PID2019-110189RB-C22
Dates: Junio 2020 a Mayo 2022
Budget: 107 690 €
PI: Miguel Ullán y Manuel Lozano (SubProject CNM)

C.4. Contracts, technological or transfer merits

Title: 4 quadrant detectors for solar elevation sensors for satellites. 4,000 units
Company: SolarMems, for OneWeb satellite constellation.
Dates: Year 2016 to 2018
Budget: 350,000€

Title: U3Dthin silicon radiation detector processing
Company: Innovative Physics Ltd (UK)
Dates: 2018
Budget: 20,000€

Title: An Array of Sensors
Company: Louisiana State University (USA)
Dates: 2018
Budget: 57,058€

Inventors: M. Lozano, C. Fleta, S. Hidalgo, J. Herranz, Á. Vizcaino, J. Benlliure, M. D. Cortina, J. J. Llerena
Patent title: Dispositivo y procedimiento de monitorización de radón en aire en tiempo real
Fecha solicitud: 18 jul 2022
Número: P202230660

Inventors: E. Cabruja, M. Lozano, J. Pérez, J. Calduch, J.A. Martos, J. Sosa, M.A. Ferrer, J.A. Montiel, J.M. Afonso
Patent title: Dispositivo y método de monitorización de actividad en peces
Date: 28 mar 2018
Number: P201830305