



CURRICULUM VITAE

Part A. PERSONAL INFORMATION

CV date

01/07/2025

First name	Enrique
Family name	Nácher González
Open Research and Contributor ID (ORCID)	0000-0002-2123-539X

A.1. Current position

Position	Tenured Scientist (Científico Titular)
Initial date	17/12/2017
Institution	Consejo Superior de Investigaciones Científicas
Departament/Center	Experimental Dept. / Instituto de Física Corpuscular
Country	Spain
Key words	Nuclear Structure, Nuclear Astrophysics, Beta decay, Gamma Spectroscopy, Nuclear Instrumentation, Medical Imaging

A.2. Previous positions (research activity interruptions, art. 45.2.c))

Period	Position/Institution/Country/Interruption cause
2010-2017	Titulado Superior Especializado/CSIC/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Nuclear Physics	Universidad de Valencia	2004

Part B. CV SUMMARY

1. Main Research Contributions

Three 6-year research periods approved by ANECA, of which the latest one I have focused my research on nuclear instrumentation with applications in basic science (nuclear structure and astrophysics), and societal challenges (medical, ecology). I am currently the Principal Investigator (PI) of two projects, one national on instrumentation for proton therapy, and another one regional on radiotracers for marine ecosystem studies. I was also PI of another national project on Nuclear Astrophysics and Applications, recently finished. These three main endeavors that I have led have been funded in public tender, amounting to almost 1 million euro, the full references are shown on part C.3. The outcomes of these projects are now being released in the form of publications (see part C.3) and conferences (see part C.2).

The main part of my work is experimental, working with big and complex machines in an international environment, and in collaboration by necessity. I have started and currently leading an international collaboration for TAS experiments at CERN (Switzerland), put on paper on a Letter of Intent of which I am spokesperson (9 countries, see <http://cds.cern.ch/record/2705974/files/INTC-I-210.pdf>).

Over the course of these projects, I have led different experiments at CERN and, as a result, I have been the Spanish representative of the ISOLDE Collaboration Committee at CERN from Nov-2021 to Nov-2023 (1 repres. per country, 17 countries, <http://isolde.cern/experiment-and-collaboration-committees>). During the second last meeting of the Nuclear Physics European Collaboration Committee (NuPECC), from the European Science Foundation (ESF) I was

invited to give an oral presentation on Applied Nuclear Physics in Spain. In 2023 I've been part of the board of NuPECC to define the Long-Range Plan for European Nuclear Physics starting in 2027.

2. Outreach

I am heavily involved in outreach activities, and since 2019 scientific coordinator of the outreach commission of IFIC (along with another researcher) and coordinator and co-founder of the Diversity and Equality Commission of IFIC. I have led an outreach project of FGCSIC coordinating the production of a YouTube video on the Atomic Nucleus, with more than 600000 views (<https://www.youtube.com/watch?v=6z5AIQ7AmK8>) and participated in another FECyT project, organizing different activities and materials, e.g., a workshop on Women in Nuclear and Particle Physics (<https://recordandoalisse.es/jornadas/>) and a contest for schools on Arts and Science (<https://recordandoalisse.es/eventos/concurso/>). I also participate regularly on radio programs and podcasts such as A Ciencia Cierta. I am currently leading a new FECYT project (FCT-21-16756) for the production of a Physics podcast. 45 programs have been produced with an average close to 10000 downloads each (<https://go.ivoox.com/sq/1799533>).

3. Training of young researchers / Evaluation

I have supervised 4 PhD works to date (José A. Briz, Guillermo Ribeiro, Irene Marroquín, Silvia Viñals-Onsés), 3 of them continued with a postdoc afterwards. I am currently supervising 2 more (Selene Parra, Carolina Fonseca). I have also supervised 5 Master theses (Alvaro Tolosa, Jorge Romero, Vicente García, Georgina Xifra and Lucía Sánchez), all of them doing currently a PhD.

I am referee of the following JCR journals: "Nuclear Engineering and Design" (Elsevier), "IEEE Access" (IEEE), "Nuclear Instruments and Methods A and B" (Elsevier) and "European Physical Journal A" (Springer). I am evaluator of research projects in different panels for Agencia Nacional de Evaluación y Prospectiva (ANEP, MICINN), Spanish National Research Agency (AEI, MICINN) and Agence Nationale de la Recherche (ANR).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications

Summary:

Publications (Scopus, excluding conf. proceedings): total/Q1/last 6 years: 124/65/90
Conference Proceedings: 37
h-index (Scopus): 20

- Most relevant regular articles (first, last or corresponding author)

1. E. Nacher et al., "Characterization of a novel proton-CT scanner based on Silicon and LaBr₃(Ce) detectors", **European Physical Journal Plus** (2024) 139. <https://doi.org/10.1140/epjp/s13360-024-05203-1>

2. J.A. Briz, ..., E. Nacher (last author), "Proton radiographs using position-sensitive silicon detectors and high-resolution scintillators", **IEEE Transactions on Nuclear Science** 69 (2022) <https://doi.org/10.1109/TNS.2022.3142618>

3. S. Viñals, E. Nacher (corresp. author), et al. "Calibration and response function of a compact silicon-detector set-up for charged-particle spectroscopy using GEANT4". **European Physics Journal A** 57 (2021) 49. <https://doi.org/10.1140/epja/s10050-021-00371-5>

4. G. Ribeiro, E. Nacher (corresp. author), et al. "Structure of Be-13 studied in proton knockout from B-14". **Physical Review C** 98 (2018) 024603.

<https://doi.org/10.1103/PhysRevC.98.024603>

5. E. Nacher, et al. "Observations of the Gamow-Teller resonance in the rare-earth nuclei above ^{146}Gd populated in beta decay". **Physical Review C** 93 (2016) 014308.

<https://doi.org/10.1103/PhysRevC.93.014308>

6. E. Nacher, et al. "Proton response of CEPA4: A novel LaBr₃(Ce)–LaCl₃(Ce) phoswich array for high-energy gamma and proton spectroscopy". **Nuclear Instruments and Methods in Physics Research A** 769 (2015) 105. <https://doi.org/10.1016/j.nima.2014.09.067>

7. E. Nacher, et al. "Deformation of the N=Z Nucleus ^{76}Sr using Beta-Decay Studies". **Physical Review Letters** 92 (2004) 232501.

<https://doi.org/10.1103/PhysRevLett.92.232501>

8. E. Nacher, et al. "Total absorption spectroscopy of ^{76}Sr with the Lucrecia spectrometer at ISOLDE". **Nuclear Physics A** 734 (2004) E84.

<https://doi.org/10.1103/PhysRevLett.92.232501>

- Conference Proceedings as first author:

1. E. Nacher, et al. "Radiotracers for the study of Marine and Oceanic Ecosystems", EPJ Web of Conferences 290 (2023) 08007

2. E. Nacher, et al. "Beta decay along the N=Z line and its relevance in rp-process and X-Ray bursts", EPJ Web of Conferences 279 (2023) 12004

3. E. Nacher, et al. "Beta-delayed alpha emission from the neutron-deficient rare-earth isotopes ^{152}Tm and ^{150}Ho ". AIP Conf. Proc. 1409 (2011) 181

Book chapters:

1. Co-author of Chapter/Challenge 7: "Advanced therapies" and Chapter/Challenge 8: "New methods for diagnostic tools and prevention" of the **"White Books of CSIC, Scientific Challenges 2030"**, Volume 4: "Challenges in Biomedicine and Health".

<https://desafios2030.csic.es/biomedicina-y-salud/>

C.2. Conferences: invited oral contributions last 6 years

- VIIth Topical Workshops on Modern Aspects of Nuclear Structure. Feb-2025, Bormio, Italy. Invited speaker: "Recent TAS results for fundamental nuclear physics and applications"

- EURORIB-2024, Jun-2024, Lommel, Belgium. Invited speaker: "Ocean acidification and nuclear techniques: the REMO and ClimOcean projects"

- Nuclear Physics in Astrophysics X, Sep-2022, Geneva, Switzerland. Invited speaker: "Beta-decay along the N=Z line and its relevance in rp-process and X-Ray bursts"

- NuPECC Meeting and Physics Mini-Workshop 2020, Valencia, Spain. Invited speaker: "Applied Nuclear Physics in Spain".

- ISTROS Conference 2019, Bratislava, Slovakia. Invited lecturer. "Total Absorption Spectroscopy along the N=Z line: Nuclear shapes and astrophysical interest"

- Tastes of Nuclear Physics Conference 2019, Zululand, South Africa,
Invited lecturer. "Beta decay along the $N=Z$ line: nuclear shapes and the rp process".

- Nuclear Spectroscopy Instrumentation (NUSPIN). Convener of the working group and corresponding sessions of "High-Efficiency and Fast-timing scintillator detectors". NUSPIN2017 (Darmstadt), NUSPIN2018 (Valencia), NUSPIN2019 (Orsay).

C.3. Research projects

Participation in more than 10 projects funded with public funds. List of projects led as Principal Investigator:

1 GVA-THINKINAZUL/2021/036, **Radiotracers for the study of Marine and Oceanic Ecosystems (REMO)**. Proyecto de la Generalitat Valenciana, programa ThinkInAzul. PI: Enrique Nácher González. (Consejo Superior de Investigaciones Científicas). 01/01/2022-31/12/2024. 210 k€. **Principal Investigator**.

2 PDC2022-133382-I00, **Proton Range and Imaging DEvice for protontherapy (PRIDE)**. Proyecto de Prueba de Concepto de la Agencia Estatal de Investigación (AEI, MICIN). IP: Enrique Nácher González. (Consejo Superior de Investigaciones Científicas). 01/12/2022 - 30/11/2024. 180 k€. **Principal Investigator**

3 PID2019-104714GB-C21, **Nuclear Structure Astrophysics and Applications (NUSTASAP)**. Proyecto del plan nacional (FPN), Agencia Estatal de Investigación (AEI, MICIN). PI: Enrique Nácher González. (Consejo Superior de Investigaciones Científicas). 01/06/2020 - 31/05/2023. 507 k€. **Principal Investigator**.

4 B2017/BMD-3888, **Protontherapy and Nuclear Techniques for Oncology (PRONTO)**. Comunidad de Madrid. Actividades de I+D entre grupos de investigación de la Comunidad de Madrid en Biomedicina. PI: Enrique Nácher González. (Consejo Superior de Investigaciones Científicas). 01/01/2018 - 01/01/2022. 188 k€. **Principal Investigator**.

C.4. Scientific stays in foreign institutions (last 6 years)

- Several stays ranging from 5 days to 1 month in different Nuclear Physics facilities. Listed here only the most relevant:

2019: 35 days at RIKEN Nishina Center, Tokyo (Japan), for experimental campaign
15 days at GSI/FAIR, Darmstadt (Germany), for experimental campaign

2022: 16 days at GSI/FAIR, Darmstadt (Germany), for experimental campaign
10 days at University of Costa Rica, San José (Costa Rica), as invited professor
35 days at CERN, Geneva (Switzerland), coordinator of experiments

2023: 26 days at CERN, Geneva (Switzerland), coordinator of experiments

2025: 25 days at CERN, Geneva (Switzerland), coordinator of experiments