



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

13/06/2022

First name	José Manuel		
Family name	Romero Enrique		
Gender (*)	Male	Birth date (dd/mm/yyyy)	07/12/1973
Social Security, Passport, ID number	28736058L		
e-mail	enrome@us.es	URL Web	https://personal.us.es/enrome
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-1509-5765		

(*) Mandatory

A.1. Current position

Position	Catedrático de Universidad (Full professor)		
Initial date	24/05/2019		
Institution	Universidad de Sevilla		
Department/Center	Física Atómica, Molecular y Nuclear	Facultad de Física	
Country	España	Teleph. number	954550942
Key words	Statistical physics, theoretical physics, soft matter physics, liquid crystals, interfaces, computer simulations		

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

Period	Position/Institution/Country/Interruption cause
13/02/2002 – 31/10/2004	Ayudante de Universidad/ Universidad de Sevilla/ Spain
01/06/2002-31/10/2004	Postdoctoral research associate (MEC/Marie Curie Fellowship)/Imperial College London/ United Kingdom
01/11/2004-31/10/2009	“Ramón y Cajal” research associate/ Universidad de Sevilla / Spain
01/11/2009-09/12/2009	Profesor contratado doctor/Universidad de Sevilla / Spain
10/12/2009-23/05/2019	Profesor Titular de Universidad/ Universidad de Sevilla / Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Physics	Universidad de Sevilla	2001
Licensed in Physics	Universidad de Sevilla	1996

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

Graduated in Physical Sciences from the University of Seville in 1996 ("San Alberto Magno", "Real Maestranza de Caballería de Sevilla" and "Ayuntamiento de Sevilla" awards for the best record of his class, and special mention in the national awards for completion of university studies), carried out his PhD studies in Physics at the University of Seville with a FPU scholarship from the Spanish Ministry of Education under the supervision of Prof. Luis F. Rull, which culminated in the defense of the Doctoral Thesis entitled "Effects of the association in the phase transitions of complex fluids" in 2001 (with a European doctorate mention and 2001



extraordinary doctorate award). He did a postdoctoral stay in the group of Prof. Andrew O. Parry at Imperial College London between 2002 and 2004, initially funded by a postdoctoral fellowship from the Ministry of Education and later with an EIF Marie Curie Fellowship from the European Commission. He returned to the University of Seville with a Ramón y Cajal contract (2004-2009), continuing as Associate Professor at said university and as University Professor in the area of Theoretical Physics since 2019. In 2007 he received the award for young researchers from the “Real Academia Sevillana de Ciencias”. He got positive evaluation in 4 research six-year periods (“sexenios de investigación”) from CNEAI (Spain), as well as in 4 teaching 5-year periods (“quinquenios de docencia”).

His research has focused on phase transitions and critical phenomena of simple and complex fluids, both in volume and in the presence of substrates, with special interest in confinement and wetting phenomena. These studies have been carried out within the framework of equilibrium statistical physics, using theoretical techniques such as density functional theory, renormalization group or exact solutions of simple models, and Monte Carlo simulation techniques and Molecular Dynamics. As a result, he has published 59 articles, of which 8 are Physical Review Letters, and the three most cited articles have 319, 121 and 112 citations. The total number of citations is 1309 (WoS), with an average of 22.6 citations per article, and an h-index of 17 (WoS). Likewise, these results have given rise to around 80 communications in national and international congresses. He has participated in 20 research projects, of which he has been the principal investigator of 5 of them. He has made short stays at various Spanish and foreign universities such as Imperial College London, Università di Camerino, University of Maryland, University of Patras, University of Sheffield and the University of Lisbon. In the educational aspect, he has supervised 7 master's degree projects or to obtain the “Diploma de Estudios Avanzados”, all of them with outstanding qualification, and he has supervised 3 Doctoral Theses with the highest qualification “apto cum laude por unanimidad”, one of them with a mention of European doctorate.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

1. A. Squarcini, J. M. Romero Enrique and A. O. Parry, Casimir Contribution to the Interfacial Hamiltonian for 3D Wetting, *Physical Review Letters* 2022. Vol. 128. Núm. 19. Pag. 195701-1-195701-5. <https://doi.org/http://dx.doi.org/10.1103/PhysRevLett.128.195701> .
2. O. A. Rojas Gómez, M. M. Telo da Gama and J. M. Romero Enrique, Wetting of Nematic Liquid Crystals on Crenellated Substrates: A Frank-Oseen Approach. *Crystals*. 2019. Vol. 9. Núm. 8. Pag. 430-1-430-18. <https://doi.org/10.3390/cryst9080430>
3. J. M. Romero Enrique, A. Squarcini, A. O. Parry y P. M. Goldbart: Non-local interfacial model for short-ranged forces revisited. *Physical Review E*. 2018. Vol. 97, Pag. 062804-1-062804-28. <https://doi.org/10.1103/PhysRevE.97.062804>
4. Vicent Luna, José Manuel, Romero Enrique, Jose Manuel, Calero Diaz, Sofia, Juan A. Anta: Micelle Formation in Aqueous Solutions of Room Temperature Ionic Liquids: A Molecular Dynamics Study. *The Journal of Physical Chemistry B*. 2017. Vol. 121. Núm. 35. Pag. 8348-8358. <http://dx.doi.org/10.1021/acs.jpcc.7b05552>
5. Rull Fernández, Luis Felipe, Romero Enrique, Jose Manuel: Nanodrops of Discotic Liquid Crystals: A Monte Carlo Study. *Langmuir*. 2017. Vol. 33. Núm. 42. Pag. 11779-11787. <http://dx.doi.org/10.1021/acs.langmuir.7b02347>
6. Silvestre, Nuno M., Romero Enrique, Jose Manuel, Telo da Gama, Margarida M.: Nematic liquid crystals on sinusoidal channels: the zigzag instability. *Journal of Physics: Condensed Matter*. 2017. Vol. 29. Núm. 1. Pag. 014004-1-014004-6. <http://dx.doi.org/10.1088/0953-8984/29/1/014004>
7. Rojas Gómez, Óscar Alan, Romero Enrique, Jose Manuel, Silvestre, Nuno M, Telo da Gama, Margarida M: Pattern-induced anchoring transitions in nematic liquid crystals. *Journal of Physics: Condensed Matter*. 2017. Vol. 29. Núm. 6. Pag. 064002-1-064002-14. <http://dx.doi.org/10.1088/1361-648X/29/6/064002>



- Rodríguez Rivas, Álvaro, Galván Moreno, José Antonio, Romero Enrique, Jose Manuel: Filling and wetting transitions on sinusoidal substrates: a mean-field study of the Landau-Ginzburg model. *Journal of Physics: Condensed Matter*. 2015. Vol. 27. Núm. 3. Pag. 035101-1-035101-21. <http://dx.doi.org/10.1088/0953-8984/27/3/035101>
- Romero Enrique, Jose Manuel, Rodríguez Rivas, Álvaro, Rull Fernández, Luis Felipe, Parry, Andrew: A finite-size scaling study of wedge filling transitions in the 3D Ising model. *Soft Matter*. 2013. Vol. 9. Núm. 29. Pag. 7069-7075. <http://dx.doi.org/10.1039/C3SM50207D>
- Rull Fernández, Luis Felipe, Romero Enrique, Jose Manuel, Fernandez de las Nieves, Alberto: Computer simulations of nematic drops: Coupling between drop shape and nematic order. *The Journal of Chemical Physics*. 2012. Vol. 137. Núm. 3. Pag. 034505-1-034505-7. <http://dx.doi.org/10.1063/1.4733974>

C.3. Research projects

- US-1380729. Fases fluidas en confinamiento extremo. Proyectos de I+D+i Programa Operativo FEDER 2014-2020 (Junta de Andalucía), 2020. IP: Álvaro Domínguez Álvarez y José Manuel Romero Enrique (Universidad de Sevilla). 2021-2022. 80000 EUR.
- RED2018-102593-T. Red de Simulación Molecular. Acciones de Dinamización "Redes de Investigación", 2018 (Ministerio de Ciencia, Innovación y Universidades), 2018. IP: Felipe Jiménez Blas (Universidad de Huelva). 2020-2021. 15000 EUR.
- FIS2017-87117-P. Fundamentación Microscópica de la Hidrostática e Hidrodinámica de Fluidos Complejos y Confinados. Proyecto del Plan Nacional de Investigación, 2017 (Ministerio de Economía y Competitividad). IP: María José Ruiz Montero y José Javier Brey Ábalo (Universidad de Sevilla). 2017-2019. 42350 EUR.
- FIS2015-71749-REDT. Red de Simulación Molecular. Red Temática 2015 (Ministerio de Economía y Competitividad). IP: Jiménez-Blas, Felipe (Universidad de Huelva). 2015-2017. 30000 EUR.
- EXCL/FIS-NAN/0083/2012. Self-assembly of the Lisbon model of patchy colloids at patterned surfaces and more. Proyectos de investigación FCT (Portugal), 2012. IP: Telo da Gama, Margarida M. (Universidad de Lisboa). 2013-2016. 324929 EUR.
- FIS2012-32455. Transiciones de Fase y Fluctuaciones en la Adsorción de Fluidos Simples y Complejos sobre Sustratos Microestructurados. Proyecto del Plan Nacional de Investigación, 2012 (Ministerio de Economía y Competitividad). IP: Romero-Enrique, José Manuel (Universidad de Sevilla). 2013-2015. 26910 EUR.

C.4. Contracts, technological or transfer merits

- Aplicación de la Mecánica Estadística al estudio de las Historias de Salud (AMEHS). IP: Romero-Enrique, Jose Manuel (Universidad de Sevilla). 2016-2018. 14520 EUR. Investigador principal.

C.5. PhD Theses.

PhD student: Óscar Alan Rojas Gómez

Supervisor: José Manuel Romero Enrique

Thesis title: Comportamiento interfacial de cristales líquidos nemáticos en contacto con sustratos microestructurados.

Defense date: 17/07/2017

Qualification: Sobresaliente cum laude.

PhD program: Biotecnología y tecnología química (RD 1393/07)

University: Universidad Pablo de Olavide



PhD student: Álvaro Rodríguez Rivas
Supervisor: José Manuel Romero Enrique
Thesis title: Estudio mesoscópico de la adsorción de fluidos simples sobre sustratos microestructurados.
Defense date: 15/01/2016
Qualification: Sobresaliente cum laude. Doctorado europeo
PhD program: Ciencia y tecnología de Coloides e Interfases, 7ª edición (RD 778/1998)
University: Universidad Pablo de Olavide

PhD student: Emilio González Galindo
Supervisors: María Jesús Ariza Camacho and José Manuel Romero Enrique
Thesis title: Estudio de la dinámica de líquidos iónicos confinados en medios nanoporosos mediante experimentos y simulaciones: aplicación a las células solares de colorante.
Defense date: 10/04/2015
Qualification: Sobresaliente cum laude
PhD program: Ciencias Aplicadas y Medioambientales (RD 1393/07)
University: Universidad de Almería.

C6. Referee activities

1. Referee of research projects from Plan Nacional de Investigación (ANEP, Spain), Research Council KU Leuven (Belgium), FONCYT (Argentina), Deutsche Forschungsgemeinschaft (Germany) y Czech Science Foundation (Czech Republic).
2. Referee for the journals "Physical Review Letters", "Physical Review E", "Physical Review Research", "Journal of Chemical Physics", "Molecular Simulation", "Journal of Physics: Condensed Matter", "European Physical Journal E", "Fluid Phase Equilibria", "Microfluidics and Nanofluidics", "Physical Chemistry Chemical Physics", "Journal of Molecular Liquids", "Molecular Physics", "Annual Conference on Magnetism and Magnetic Materials", "Soft Materials", "Journal of Low Temperature Physics", "Liquid Crystals", "Carbon", "Nanomaterials", "Biomolecules", "Molecules" and "Physica A".

C7. Scientific committees.

1. Member of the scientific committee for the FisEs'18 conference.
2. Member of the scientific committee for the FisEs'17 conference.
3. Member of the scientific committee for the FisEs'15 conference.

C8. Administrative activities.

1. Coordinator of the organizing committee for the conference "XXI Congreso de Física Estadística FisEs'17."
2. Member of the organizing committee for the conference "Thermodynamics 2019".
3. Administrator of the cluster ionlikix.cica.es (2007-nowdays).

C9. Awards.

1. Premio "Real Academia Sevillana de Ciencias" para jóvenes investigadores 2007 (17/12/2007).