

# Curriculum Vitae

## Dr. Emilio J. Cocinero

Physical Chemistry Department,  
Universidad del País Vasco (UPV/EHU)  
Instituto de Biofísica (CSIC-UPV/EHU)  
Barrio Sarriena s/n, 48940, Leioa, Spain  
ORCID ID: [orcid.org/0000-0001-7632-3728](http://orcid.org/0000-0001-7632-3728)  
[emiliojose.cocinero@ehu.es](mailto:emiliojose.cocinero@ehu.es)  
<http://www.grupodeespectroscopia.es/MW/>



### EDUCATION

- 2005      PhD in Chemistry, Molecular Spectroscopic Group (GEM), University of Valladolid (Spain)  
*Supervisors:* José L. Alonso and Alberto Lesarri  
*Remark:* Awarded *Extraordinary prize* to the best Ph. D. doctoral work conducted at the University of Valladolid.  
*Mark:* A, Cum Laude, 10.
- 2001      Bachelor in Chemistry  
University of Valladolid (Spain)

### CURRENT POSITION

- 2016 –      Permanent Researcher (equivalent to Tenured Professor)  
University of the Basque Country (UPV/EHU), Physical Chemistry Dept., Leioa, Spain
- 2009 – now      Group Leader. Spectroscopy Group  
University of the Basque Country (UPV/EHU), Physical Chemistry Dept., Leioa, Spain

### PREVIOUS POSITIONS

- 2006 – 2008      Postdoctoral Researcher  
Oxford University, Physical and Theoretical Chemistry Laboratory, United Kingdom.
- 2001 – 2005      Ph. D. Student  
University of Valladolid, Physical and Chemistry Dept., Spain.

### AWARDS

- 2018      *International Dr. Barbara Mez-Starck Prize*  
Barbara Mez-Starck Foundation.  
For his extensive investigations of conformational behaviours and precise molecular structures of amino acids, sugars, alkaloids, anaesthetics and nicotinoids.
- 2017      *Enrique Pérez-Payá*  
Spanish Biophysical Society.  
For his remarkable contributions in molecular spectroscopy.
- 2015      *Flygare Award*  
International Division on Molecular Spectroscopy, USA.  
For outstanding contributions in molecular spectroscopy by early career independent scientist.
- 2012      *Sigma-Aldrich Award*  
Spanish Royal Society of Chemistry, Spain  
For the best scientific career of a Spanish young researcher in any area of Chemistry.
- 2012      *Suschem-JIQ-Postdoc*  
FeiQue, JIQ and ANQUE Societies, Spain  
For the best scientific publication in 2011 conducted by a Spanish young researcher in any area of Chemistry. E. J. Cocinero et al. *Nature*, 69, 76-80 (2011).
- 2008      *Extraordinary Prize*  
University of Valladolid, Spain  
For the best Ph. D. work conducted at the University of Valladolid, Spain.

## FELLOWSHIPS

2010 – 2016	Ramón y Cajal Fellowship, Group Leader, Spanish Government, Spain.
2009 – 2010	Juan de la Cierva Fellowship, Group Leader, Spanish Government, Spain.
2008	Research Fellowship, Department Staff, Oxford University, United Kingdom.
2006 – 2008	Postdoctoral Fellowship, Spanish Government, Spain.
2003 – 2005	Ph. D Fellowship, Spanish Government, Spain.
2002	Ph. D Fellowship, University of Valladolid, Spain.
2001	Ph. D Fellowship, Ramón Areces Foundation, Spain.
2000 – 2001	Student Collaborator, University of Valladolid, Spain.

## INTERNATIONAL STAYS

2013, 2019	Università di Bologna, Italy.	3 weeks
2012	University of Virginia, USA.	3 weeks
2012	Institut des sciences moléculaires d'Orsay, France.	3 weeks
2007, 2010	FELIX, FOM – Institute for Plasma Physics, Netherland.	1 month & 1 week
2006 – 2010	Oxford University, United Kingdom.	2 years & 7 months
2006, 2018	Commissariat à l'Energie Atomique (CEA), France.	3 weeks
2005, 2011	Leibniz-Universität Hannover, Germany.	3 months & 2 weeks

## SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2009 – 2019	6 Postdocs, 5 Ph. D. Students, 4 Master Students, 7 Undergraduate Students University of Basque Country, Physical and Chemistry Dept., Spain.
2006 – 2008	1 Postdocs, 1 Undergraduate Students Oxford University, Physical and Theoretical Chemistry Laboratory, United Kingdom.

## ORGANISATION OF SCIENTIFIC MEETINGS

2018	Chairman, The 25 <sup>th</sup> International Conference on High Resolution Molecular Spectroscopy, Bilbao, Spain.
2018	Local committee, Spanish Drug Discovery Network meeting, Bilbao, Spain.
2017	Scientific committee, XIV Symposium of Young Investigators, Badajoz, Spain.
2017	International Advisory Committee, 72 <sup>nd</sup> International Symposium on Molecular Spectroscopy, Illinois, USA.
2016	Scientific committee, XIII Symposium of Young Investigators, Logroño, Spain.
2016	International Advisory Committee, 71 <sup>st</sup> International Symposium on Molecular Spectroscopy, Illinois, USA.
2015	Scientific committee, XII Symposium of Young Investigators, Barcelona, Spain.
2014	Chairman, XI Symposium of Young Investigators, Bilbao, Spain.

## INSTITUTIONAL RESPONSIBILITIES

2016 – now	Member of governing board of Territorial Section of the Basque Country of Spanish Royal Society of Chemistry.
2014 – 2017	President of Young Chemical Researchers of Spanish Royal Society of Chemistry. (755 members).
2014 – 2017	Member of governing board of Spanish Royal Society of Chemistry.
2012 – 2013	Member of governing board of Young Chemical Researchers of Spanish Royal Society of Chemistry.

## COMMISSIONS OF TRUST

2016, 2018	Flygare Award Committee, International Division on Molecular Spectroscopy
2014 – 2017	Evaluator, Young Chemical Researchers of Spanish Royal Society of Chemistry SusChem awards, travelling grants, fellowships for organising of scientific events.
2012	Panel Member and Evaluator, National Authority for Scientific Research
2010 – now	Panel Member and Evaluator, Spanish Evaluation National Agency National projects, Ramón y Cajal program, Postdoctoral Fellowships and Campus of international excellence of the Community of Madrid.
2009 – now	Regular Reviewer for most journals in my field, including journals of the American Chemical Society, Royal Society of Chemistry, Wiley, Elsevier.

## TEACHING ACTIVITIES

- 2014 – 2018 “Chemistry II”  
Physics and Geology Degree, University of Basque Country, Spain
- 2012 – 2015 “Experimentation in Physical Chemistry” and “Physical Chemistry II”  
Chemistry Degree, University of Basque Country, Spain
- 2010 – 2012 “Lasers and Applications in Chemistry” and “Fundamentals of Laser Spectroscopy”  
Master’s Degree, University of Basque Country, Spain
- 2004 – 2006 “Molecular Spectroscopy” and “Instrumental and laser techniques in Chemistry”  
Chemistry Degree, University of Valladolid, Spain

## BRIEF BIOGRAPHY

Emilio J. Cocinero (41 years-old) completed his Ph. D. in Physical Chemistry in 2005 at the University of Valladolid (Spain). In 2008, his thesis work, based on the study of the structure of amino acids by microwave spectroscopy, was recognized with a University prize to best Ph. D. doctoral work conducted at the University of Valladolid. In 2006 he moved to Oxford University and worked with Professor John P. Simons, to join the internationally leading research group studying carbohydrates in the gas phase. In January 2009 he joined the University of the Basque Country, where he leads research focused on solving various structural problems of chemistry at the molecular level, in particular, the study of biomolecules, including sugars, peptides and drugs, generated and stabilized in the gas phase. He has an excellent track record of publications (>100 papers). Several publications in the highest impact factor journals in his field including (1 *Nature*, 1 *Nat. Commun.*, 9 *J. Am. Chem. Soc.*, 10 *Angew. Chem. Int. Ed.*). His career has been recognized with several prizes. Finally, Emilio J. Cocinero was elected President of young chemical researchers (JIQ) of the Spanish Royal Society of Chemistry (RSEQ) in 2014-2017.

## PRESENTATIONS

*Dr. Cocinero has contributed with >150 communications in national and international conferences, including 5 plenary lectures, 10 invited talks, >50 oral presentations. In addition, he has been invited to give >20 national and international lectures in top Universities and Research Institutes.*

1. *Plenary* 70<sup>th</sup> International Symposium on Molecular Spectroscopy, Champaign, Illinois, USA, 2015.
2. *Plenary* 24<sup>th</sup> Colloquium on High-Resolution Molecular Spectroscopy, Dijon, France, 2015.
3. *Plenary* Molecular Interactions from Biology to Astrochemistry, Newcastle, United Kingdom, 2019.
4. *Plenary* IX Young Investigators Meeting, RSEQ, Zaragoza, Spain, 2012.
5. *Plenary* 16<sup>th</sup> SBE Congress, Sevilla, Spain, 2017.
6. *Invited* Workshop on Mirror Images in Molecules, Bologna, Italy, 2016.
7. *Invited* XIII Iberian Meeting on Atomic and Molecular Physics, Aveiro, Portugal, 2015.
9. *Invited* XI Carbohydrate Symposium, Logroño, Spain, 2014.
9. *Invited* 2<sup>nd</sup> National conference on laboratory and molecular astrophysics, Sevilla, Spain, 2012.
10. *Invited* 26<sup>th</sup> International Carbohydrate Symposium (ICS 2012), Madrid, Spain, 2012.

## FUNDED PROJECTS

Dr. Cocinero has participated in 10 international, 10 national, 13 regional, 2 infrastructure and 2 private funded projects with a total budget of ~9 Million €. As PI, despite his youth, he has also an excellent track record of peer-reviewed funding and he has managed an overall budget of ~1000 k€ with 3 international, 5 national, 4 regional and 1 private funded projects.

## PUBLICATIONS

Dr. Cocinero has an excellent track record of publications: a book chapter and 108 papers, 43 in the last five years (2014-2019). Several publications in the highest impact factor journals in his field including 1 *Nature*, 1 *Nature Commun.*, 9 *J. Am. Chem. Soc.*, 10 *Angew. Chem. Int. Ed.*, among others. 63 articles (58%) have an IF > 4.4. The IF average is 6.120. His work has received >2100 citations. H index = 28, (ISI Web of Knowledge, April 2019).

## FULL LIST OF PUBLICATIONS

### Book Chapter

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- 109 E. J. Cocinero and P. Çarçabal  
*Carbohydrates*  
Gas-Phase IR Spectroscopy and Structure of Biological Molecules.  
**Springer**, 299-333 (2015)

2019

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- 108 E. J. Juárez-Perez, L. K. Ono, I. Uriarte, E. J. Cocinero and Y. Qi  
*Degradation Mechanism and Relative Stability of Methylammonium Halide Based Perovskites Analyzed on the Basis of Acid–Base Theory*  
**ACS Appl. Mater. Interfaces**, 11, 12586-12593 (2019)
- 107 L. Spada, I. Uriarte, W. Li, L. Evangelisti, E. J. Cocinero and W. Caminati  
*Interactions between azines and alcohols: a rotational study of pyridine–tert-butyl alcohol*  
**Phys. Chem. Chem. Phys.**, 21, 3545-3549 (2019)

2018

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- 106 I. A. Bermejo, I. Usabiaga, I. Compañón, J. Castro-López, A. Insausti, J. A. Fernández, A. Avenoza, J. H. Busto, J. Jiménez-Barbero, J. L. Asensio, J. M. Peregrina, G. Jiménez-Osés, R. Hurtado-Guerrero, E. J. Cocinero, and Francisco Corzana  
*Water Sculpts the Distinctive Shapes and Dynamics of the Tumor-Associated Carbohydrate Tn Antigens: Implications for Their Molecular Recognition*  
**J. Am. Chem. Soc.**, 31, 9952-9960 (2018)  
Paper **Spotlight** by the Journal.
- 105 I. Uriarte, A. Insausti, A. Jabri, H. Mouhib, I. Alkorta, I. Kleiner and E. J. Cocinero  
*Competing Dispersive Interactions: From Small Energy Differences to Large Structural Effects in Methyl Jasmonate and Zingerone*  
**J. Phys. Chem. Lett.**, 9, 5906-5914 (2018)
- 104 Z. Kisiel, L. Pszczółkowski, E. Białkowska-Jaworska, M. Jaworski, I. Uriarte, F. J. Basterretxea, E. J. Cocinero  
*Rotational spectroscopy update for the newly identified atmospheric ozone depleter CF<sub>3</sub>CCl<sub>3</sub>*  
**J. Mol. Spectrosc.**, 352, 1-9 (2018)
- 103 I. Uriarte, S. Melandri, A. Maris, C. Calabrese and E. J. Cocinero  
*Shapes, Dynamics, and Stability of  $\beta$ -Ionone and Its Two Mutants Evidenced by High-Resolution Spectroscopy in the Gas Phase*  
**J. Phys. Chem. Lett.**, 9, 1497-1502 (2018)
- 102 I. Uriarte, P. Écija, R. Lozada-García, P. Çarçabal, E. J. Cocinero  
*Investigating the Conformation of the Bridged Monosaccharide Levoglucosan*  
**ChemPhysChem** 19, 766-773 (2018)
- 101 I. Usabiaga, A. Camiruaga, A. Insausti, P. Çarçabal, E. J. Cocinero, I. León and J. A. Fernández  
*Phenyl- $\beta$ -D-glucopyranoside and Phenyl- $\beta$ -D-galactopyranoside Dimers: Small Structural Differences but Very Different Interactions*  
**Front. Phys.** 19, 766-773 (2018)

2017

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- 100 M. Carini, M. P. Ruiz, I. Usabiaga, J. A. Fernández, E. J. Cocinero, M. Melle-Franco, I. Diez-Perez, and A. Mateo-Alonso  
*Exceptionally High Conductances in  $\pi$ -Folded Molecular Junctions*  
**Nature Commun.**, 8, 15195-15204 (2017).

- 99 M. Vallejo-López, P. Écija, N. Vogt, J. Demaison, A. Lesarri, F. J. Basterretxea, E. J. Cocinero  
*N-Methyl Inversion and Accurate Equilibrium Structures in Alkaloids: Pseudopelletierine*  
**Chem. – Eur. J.**, 23, 16491-16496 (2017).  
Paper qualified as **Hot paper** by the Journal.  
**Journal cover.**
- 98 A. Camiruaga, I. Usabiaga, A. Insausti, E. J. Cocinero, I. León and J. A. Fernández  
*Understanding the Role of Tyrosine in Glycogenin*  
**Mol. BioSyst.**, 13, 1709-1712 (2017).
- 97 I. Usabiaga, J. González, I. León, P. F. Arnaiz, E. J. Cocinero and J. A. Fernández  
*Influence of the Anomeric Conformation in the Intermolecular Interactions of Glucose*  
**J. Phys. Chem. Lett.**, 8, 1147-1151 (2017).
- 96 I. Uriarte, C. Pérez, E. Caballero-Mancebo, F. J. Basterretxea, A. Lesari, J. A. Fernández and Emilio J. Cocinero  
*Structural Studies of Nicotinoids: Cotinine vs. Nicotine*  
**Chem. – Eur. J.**, 23, 7238-7244 (2017).  
Paper qualified as **Hot paper** by the Journal.  
**Journal cover.**
- 95 I. Uriarte, Z. Kisiel, E. Białkowska-Jaworska, L. Pszczółkowski, P. Ecija, F. J. Basterretxea and E. J. Cocinero  
*Comprehensive rotational spectroscopy of the newly identified atmospheric ozone depleter CF<sub>3</sub>CH<sub>2</sub>Cl*  
**J. Mol. Spectrosc.**, 337, 37-45 (2017).
- 94 C. Calabrese, A. Maris, I. Uriarte, E. J. Cocinero, S. Melandri  
*Effects of Chlorination on the Tautomeric Equilibrium of 2-Hydroxypyridine: Experiment and Theory*  
**Chem. – Eur. J.**, 23, 3595-3604 (2017).  
Paper qualified as **Hot paper** by the Journal.  
**Journal cover.**

## 2016

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- 93 P. Écija, M. Vallejo-López, I. Uriarte, F. J. Basterretxea, A. Lesarri, J. A. Fernández and E. J. Cocinero  
*Scopine Isolated in the Gas Phase*  
**ChemPhysChem**, 15, 918-923 (2016).  
Paper qualified as **VIP (Very Important paper)** by the Journal.
- 92 Q. Gou, L. Spada, M. Vallejo-López, S. Melandri, A. Lesarri, E. J. Cocinero, W. Caminati  
*Intermolecular Hydrogen Bonding in 2-Fluoropyridine-Water*  
**ChemistrySelect**, 6, 1273-1277 (2016).
- 91 N. Vogt, J. Demaison, E. J. Cocinero, P. Écija, A. Lesarri, H. D. Rudolph and J. Vogt  
*The equilibrium molecular structures of 2-deoxyribose and fructose by the semiexperimental mixed estimation method and coupled-cluster computations*  
**Phys. Chem. Chem. Phys.**, 18, 15555-15563 (2016).
- 90 C. Pérez, E. Caballero-Mancebo, A. Lesarri, E. J. Cocinero, I. Alkorta, R. D. Suenram, J.-U. Grabow, B. H. Pate  
*The Conformational Map of Volatile Anesthetics: Enflurane Revisited*  
**Chem - Eur. J.**, 22, 9804-9811 (2016).
- 89 L. B. Favero, I. Uriarte, L. Spada, P. Écija, C. Calabrese, W. Caminati and E. J. Cocinero  
*Solving the Tautomeric Equilibrium of Purine through Analysis of the Complex Hyperfine Structure of the Four <sup>14</sup>N Nuclei*  
**J. Phys. Chem. Lett.**, 7, 1187-1191 (2016).

- 88 P. Écija, I. Uriarte, L. Spada, B. G. Davis, W. Caminati, F. J. Basterretxea, A. Lesarri, E. J. Cocinero  
*Furanosic forms of sugars: Conformational equilibrium of methyl  $\beta$ -D-ribofuranoside*  
**Chem. Commun.**, 52, 6241-6244 (2016).
- 87 I. Usabiaga, J. González, P. F. Arnáiz, I. León, E. J. Cocinero and José A. Fernández  
*Amino Acid-Sugar Interaction in Jets: Phenol-Glucopyranose Derivatives*  
**Phys. Chem. Chem. Phys.**, 18, 12457-12465 (2016).
- 86 J. González, I. Baños, I. León, J. Contreras-García, E. J. Cocinero, A. Lesarri, J. A. Fernández and J. Millán  
*Unravelling Protein–DNA Interactions at Molecular Level: A DFT and NCI Study*  
**J. Chem. Theory Comput.**, 12, 523-534 (2016).
- 85 I. Uriarte, P. Écija, L. Spada, E. Zabalza, A. Lesarri, F. J. Basterretxea, J. A. Fernández, W. Caminati and E. J. Cocinero  
*Potential energy surface of fluoroxene: experiment and theory*  
**Phys. Chem. Chem. Phys.**, 18, 3966-3974 (2016).

## 2015

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- 84 M. M. Deshmukh, S. R. Gadre and E. J. Cocinero  
*Stability of conformationally locked free fructose: theoretical and computational insights*  
**New J. Chem.**, 39, 9006-9018 (2015).
- 83 P. Écija, I. Uriarte, F. J. Basterretxea, J. Millán, A. Lesarri, J. A. Fernández and E. J. Cocinero  
*Structural distortion of the epoxy groups in norbornanes: A rotational study of *exo*-2,3-epoxynorbornane*  
**ChemPhysChem**, 16, 2609-1614 (2015).
- 82 N. A. Seifert, C. Pérez, J. L. Neil, B. H. Pate, M. Vallejo-López, A. Lesarri, E. J. Cocinero and F. Castaño  
*Chiral recognition and atropisomerism in the sevoflurane dimer*  
**Phys. Chem. Chem. Phys.**, 17, 18282-18287 (2015).  
**Journal cover.**
- 81 M. K. Jahn, E. Méndez, K. P. R. Nair, P. D. Godfrey, D. McNaughton, P. Écija, F. Basterretxea, E. J. Cocinero and J.-U. Grabow  
*Conformational steering in dicarboxy acids: the native structure of succinic acid*  
**Phys. Chem. Chem. Phys.**, 17, 19726-19734 (2015).  
**Journal cover.**
- 80 Q. Gou, G. Feng, L. Evangelisti, M. Vallejo-López, L. Spada, A. Lesarri, E. J. Cocinero, W. Caminati  
*Internal Dynamics in Halogen-Bonded Adducts: A Rotational Study of Chlorotrifluoromethane-Formaldehyde*  
**Chem - Eur. J.**, 21, 4148-4152 (2015).
- 79 J. Demaison, N. C. Craig, P. Groner, P. Écija, E. J. Cocinero, A. Lesarri and H. D. Rudolph  
*Accurate Equilibrium Structures for Piperidine and Cyclohexane*  
**J. Phys. Chem. A**, 119, 1486-1493 (2015).

## 2014

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- 78 I. León, J. Millán, E. J. Cocinero, A. Lesarri and J. A. Fernández  
*Molecular hydration of propofol dimers in supersonic expansions: formation of active centre-like structures*  
**Phys. Chem. Chem. Phys.**, 16, 23301-23307 (2014).

- 77 M. K. Jahn, D. A. Dewald, M. Vallejo-López, E. J. Cocinero, A. Lesarri, W. Zou, D. Cremer and J.-U. Grabow  
*Pseudorotational Landscape of Seven-Membered Rings: The Most Stable Chair and Twist-Boat Conformers of  $\epsilon$ -Caprolactone*  
**Chem. Eur. J.**, 43, 14084-14089 (2014).
- 76 I. León, J. Millán, E. J. Cocinero, A. Lesarri and J. A. Fernández  
*Water encapsulation by nanomicelles*  
**Angew. Chem. Int. Ed.**, 53, 12480-12483 (2014).
- 75 I. León, I. Usabiaga, J. Millán, E. J. Cocinero, A. Lesarri and J. A. Fernández  
*Mimicking Anesthetic-Receptor Interactions in Jets: The Propofol-Isopropanol Cluster*  
**Phys. Chem. Chem. Phys.**, 16, 16968-16975 (2014).
- 74 Q. Gou, L. Spada, E. J. Cocinero and W. Caminati  
*Halogen-halogen links and Internal dynamics in adducts of freons*  
**J. Phys. Chem. Lett.**, 5, 1591-1595 (2014).
- 73 I. Algorta, C. Cancedda, E. J. Cocinero, J. Z. Dávalos, P. Écija, J. Elguero, J. González, A. Lesarri, R. Ramos, F. Reviriego, C. Roussel, I. Uriarte and N. Vanthuyne  
*Static and dynamic properties of Binol and its conjugated acids and bases*  
**Chem – Eur. J.**, 20, 14816-14825 (2014).
- 72 P. Écija, L. Evangelisti, M. Vallejo, F. J. Basterretxea, A. Lesarri, F. Castaño, W. Caminati, E. J. Cocinero  
*The Conformational Flexibility of Mephesisin*  
**J. Phys. Chem. B**, 118, 5357-5364 (2014).
- 71 G. Feng, Q. Gou, L. Evangelisti, M. Vallejo-López, A. Lesarri, E. J. Cocinero, W. Caminati  
*Competition between weak hydrogen bonds: C-H $\cdots$ Cl is preferred to C-H $\cdots$ F in CH<sub>2</sub>ClF-H<sub>2</sub>CO, as revealed by rotational spectroscopy*  
**Phys. Chem. Chem. Phys.**, 16, 12261-12265 (2014).
- 70 Q. Gou, L. Spada, M. Vallejo-López, A. Lesarri, E. J. Cocinero, W. Caminati  
*Interactions between alkanes and aromatic molecules: a rotational study of pyridine-methane*  
**Phys. Chem. Chem. Phys.**, 16, 13041-13046 (2014).  
**Journal front cover.**
- 69 P. Écija, M. Vallejo-López, L. Evangelisti, J. A. Fernández, A. Lesarri, W. Caminati and E. J. Cocinero  
*O-H $\cdots$ N and C-H $\cdots$ O hydrogen bonds control hydration of pivotal tropane alkaloids: Tropinone $\cdots$ H<sub>2</sub>O complex*  
**ChemPhysChem.**, 15, 918-923 (2014).  
Paper qualified as **VIP** (Very Important Paper) by the Journal.
- 68 N. A. Seifert, D. P. Zaleski, C. Pérez, J. L. Neill, B. H. Pate, M. Vallejo-López, A. Lesarri, E. J. Cocinero, F. Castaño, I. Kleiner  
*Probing the C-H $\cdots$  $\pi$  Weak Hydrogen Bond in Anesthetic Binding: The Gas-phase Molecular Structure of the Sevoflurane-Benzene Cluster*  
**Angew. Chem. Int. Ed.**, 53, 3210-3213 (2014).
- 67 Q. Gou, G. Feng, L. Evangelisti, M. Vallejo-López, L. Spada, A. Lesarri, E. J. Cocinero, W. Caminati  
*How water interacts with anesthetics: the rotational spectrum of isoflurane-water*  
**Chem – Eur. J.**, 20, 1980-1984 (2014).
- 66 L. Spada, Q. Gou, M. Vallejo-López, A. Lesarri, E. J. Cocinero and W. Caminati  
*Weak C-H $\cdots$ N and C-H $\cdots$ F hydrogen bonds and internal rotation in pyridine-CH<sub>3</sub>F*  
**Phys. Chem. Chem. Phys.**, 16, 2149-2153 (2014).

- 65 E. J. Cocinero and A. Lesarri  
*¡Disolvente fuera!: azúcares en fase gas*  
**An. Quím.**, 109, 258-267 (2013).
- 64 M. Vallejo-López, L. Spada, Q. Gou, A. Lesarri, E. J. Cocinero and W. Caminati  
*Interactions between freons and aromatic molecules: The rotational spectrum of pyridine-difluormethane*  
**Chem. Phys. Lett.**, 591, 216-219 (2013).
- 63 E. J. Cocinero, A. Lesarri, P. Écija, A. Cimas, B. G. Davis, F. J. Basterretxea, J. A. Fernández, and F. Castaño  
*Naked' and Hydrated Conformers of the Conserved Core Pentasaccharide of N-linked Glycoproteins and Its Building Blocks.*  
**J. Am. Chem. Soc.**, 135, 16895-16903 (2013).
- 62 E. Aguado, I León, J. Millán, E. J. Cocinero, S. Jaqx, A. Rijs, A. Lesarri and J. Fernández  
*Unraveling the Benzocaine-Receptor Interaction at Molecular Level Using Mass-Resolved Spectroscopy*  
**J. Phys. Chem. B**, 117, 13472-13480 (2013).
- 61 M. K. Jahn, D. Dewald, M. Vallejo-López, E. J. Cocinero, A. Lesarri and J. -U. Grabow  
*Rotational Spectra of Bicyclic Decanes: The Trans Conformation of (-)-Lupinine*  
**J. Phys. Chem. A**, 117, 13673-13679 (2013).
- 60 I. Peña, E. J. Cocinero, C. Cabezas, A. Lesarri, S. Mata, P. Écija, A. M. Daly, Á. Cimas, C. Bermúdez, F. J. Basterretxea, S. Blanco, J. A. Fernández, J. C. López, F. Castaño and J. L. Alonso  
*Six Pyranoside Forms of free 2-Deoxy-D-Ribose*  
**Angew. Chem. Int. Ed.**, 52, 11840-11845 (2013).
- 59 I. Haykal, L. Margulès, R. Motiyenko, T. R. Huet, P. Écija, E. J. Cocinero, F. Basterretxea, J. A. Fernández, F. Castaño, A. Lesarri, J.-C. Guillemin, B. Tercero and J. Cernicharo  
*The cm-, mm- and submm-wave spectrum of allyl isocyanide and radioastronomical observations in Orion KL and the PRIMOS line survey*  
**Astrophys. J.**, 777, 120 (2013).
- 58 E. C. Stanka-Kaposta, P. Çarçal, E. J. Cocinero, P. Hurtado and J. P. Simons  
*Carbohydrate-Aromatic Interactions: Vibrational Spectroscopy and Structural Assgnment of Isolated Monosaccharide Complexes with p-Hydroxy Toluene and N-Acetyl L-Tyrosine Methylamide.*  
**J. Phys. Chem. B**, 117, 8135-8142 (2013).
- 57 I. León, J. Millán, E. J. Cocinero, A. Lesarri and J. A. Fernández  
*Shaping Micelles: The Interplay Between Hydrogen Bonds and Dispersive Interactions*  
**Angew. Chem. Int. Ed.**, 52, 7772-7775 (2013).  
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