

Prof. Dr. Nuria Sotomayor

Departamento de Química Orgánica e Inorgánica

Facultad de Ciencia y Tecnología

Universidad del País Vasco/Euskal Herriko Unibertsitatea

Apdo. 644

Phone: 34 94 6015389

48080 BILBAO (Spain)

e-mail: nuria.sotomayor@ehu.es

Researcher ID: **A-3692-2015**

ORCID: orcid.org/0000-0003-3079-6380

Obtained her B. Sc. Degree in Chemistry, and her Ph.D. Degree (1993) at the University of the Basque Country on the synthesis of isoquinoline alkaloids (protoberberine and benzo[*c*]phenanthridines) under the supervision of Prof. E. Lete and E. Domínguez. After post-doctoral research at the University of Waterloo (Ontario, Canada) with Prof. Victor Snieckus (1994-1995), on directed *ortho*-metalation (DoM) and cross-coupling reactions, she returned to the Department of Organic Chemistry II of the University of the Basque Country in Bilbao (1995), contributing to the development of new research lines within the group led by prof. E. Lete. Then, she was promoted to Associate professor (Prof. Titular) in 1998, and to Full Professor (CU) in 2010. Together with Prof. E. Lete, she is now leading the group “Organometalicos en Síntesis” (organometalics in synthesis), recognized as Consolidated Research Group by the Basque Government since 2000. Currently, this group is part of the Consolidated Group “Metal Catalysis and Organocatalysis” led by Prof. E. Lete and Prof. J. L. Vicario (2022-2025). Her initial research lines on organolithium chemistry, including ligand-mediated enantioselective variants, have evolved to transition metal catalysis. The group has developed Pd(0) catalyzed alkenylation (MH-Type) and arylation reactions, including also cascade processes. Diastereo and enantioselective variants have also been developed. More recently her interests have moved to C-H activation mediated by Pd(II), studying the arylation and alkenylation of arenes and heteroarenes. Currently, the use of more abundant and less toxic 3d metals, such as Cobalt, is one of her research lines, in which the group has contributed studying intramolecular alkene hydroarylation reactions. As a summary, her current research interests are focused on the development of methodology based on organometallic chemistry and asymmetric catalysis, and applied to the synthesis of heterocyclic systems, potentially active compounds, natural products or drugs. She also participates in interdisciplinary projects that involve computational chemistry and machine learning (ML) tools for reactivity prediction, and for the design of biologically active molecules.

She has taken part of research projects with public funding since 1990 (9 national projects since 1996), and she is co-Principal Investigator (co-PI) of the last three projects (CTQ2016, PID2019, PID2022). She has also participated in contracts with chemical companies (MAXAM SA, Petronor), and also with multidisciplinary partners (Virtualware, HiB), being PI of two of these contracts. She has also been involved in an interdisciplinary network connecting several University and company research groups (ELKARTEK program, Basque Government). As a result, she has authored over 95 publications in indexed journals, book chapters and reviews, and > 90 communications to conferences. Training of researchers has also been a constant, and thus, she has supervised 19 PhD thesis and >50 Master/BSc students.

Besides, she is since 2012 she is Responsible for the Master program in Synthetic and Industrial Chemistry, a joint program offered by the University of the Basque Country with the University of Valladolid and the Public University of Navarra. Her more relevant contribution in University management has been the position as Director of the Postgraduate studies and Continuing

Education Section, from 2006 to 2010, when she was responsible for the implementation strategy of all Master and PhD programs at the UPV/EHU.

Publication List (January 2024)

99. Carracedo-Reboredo, P.; Aranzamendi, E.; He, S.; Arrasate, S.; Munteanu, C. R.; Fernandez-Lozano, C.; Sotomayor, N.; Lete, E.; González-Díaz, H. MATEO: InterMolecular α -Amidoalkylation Theoretical Enantioselectivity Optimization. Online Tool for Selection and Design of Chiral Catalysts and Products. *J. Cheminformatics*, **2024**, accepted.
98. Carral-Menoyo, A.; Barbolla, I.; Santiago, C.; Espinel, M.; Sotomayor, N.; Gómez Bengoa, E.; Lete, E. Directed C-H Allylation of Aromatic Carboxamides with Allyl Aryl Ethers under Cp*Co(III)-Catalysis. *Eur. J. Org. Chem.* **2024**, 27, e202301090.
97. Santiago, C.; Ortega-Tenezaca, B.; Barbolla, I.; Fundora-Ortiz, B.; Arrasate, S.; Dea-Ayuela, M. A.; González-Díaz, H.; Sotomayor, N.; Lete, E. Prediction of Antileishmanial Compounds: General Model, Preparation, and Evaluation of 2-Acylpyrrole Derivatives. *J. Chem. Inf. Model.*, **2022**, 62, 3928–3940.
96. Carral-Menoyo, A.; Sotomayor, N.; Lete, E. Palladium-Catalyzed Oxidative Arene C-H Alkenylation Reactions Involving Olefins. *Trends in Chemistry*, **2022**, 4, 495-511.
95. Santiago, C.; Jiménez-Aberasturi, X.; Leicea, E.; Lete, M. G.; Sotomayor, N.; Lete, E. Microwave-assisted Palladium catalysed C-H acylation with aldehydes. Synthesis and diversification of 3-acylthiophenes. *Org. Biomol. Chem.* **2022**, 20, 852-861.
94. Ortiz-de Elguea, V.; Carral-Menoyo, A.; Simón-Vidal, L.; Martínez-Nunes, M.; Barbolla, I.; Lete, M. G.; Sotomayor, N.; Lete, E. Pd(II)-Catalyzed Fujiwara–Moritani Reactions for the Synthesis and Functionalization of Substituted Coumarins. *ACS Omega*, **2021**, 6, 29483 – 29494.
93. Barbolla, I.; Hernández-Suárez, Quevedo-Tumaili, V.; Nocedo-Mena, D. Arrasate, S. Dea-Ayuela, M. A.; González-Díaz, H.; Sotomayor, N.; Lete, E. Palladium-mediated Synthesis and Biological Evaluation of C-10b substituted Dihydropyrrolo[1,2-*b*]isoquinolines as Antileishmanial Agents. *Eur. J. Med. Chem.* **2021**, 113458.
92. Nocedo-Mena, D.; Arrasate, S.; Garza-González, E.; Rivas-Galindo, M.V. M.; Romo-Mancillas, A.; Munteanu, C. R.; Sotomayor, N.; Lete, E.; Barbolla, I.; Martín, C. A.; Camacho-Corona, M. R. Molecular docking, SAR analysis and biophysical approaches in the study of the antibacterial activity of ceramides isolated from *Cissus incisa*. *Bioorg. Chem.*, **2021**, 109, 104745.
91. Carral-Menoyo, A.; Sotomayor, N.; Lete, E. Cp*Co(III)-Catalyzed C-H Hydroarylation of Alkynes and Alkenes and Beyond. A Versatile Synthetic Tool. *ACS Omega*, **2020**, 5, 24974-24993. (Invited Perspective article. Selected as Supplementary Journal Cover)
90. Carral-Menoyo, A.; Sotomayor, N.; Lete, E. Amide-Directed Intramolecular Co(III)-Catalyzed C-H Hydroarylation of Alkenes for the Synthesis of Dihydrobenzofurans with a Quaternary Center. *J. Org. Chem.* **2020**, 85, 10261–10270.
89. Santiago, C.; Sotomayor, N.; Lete, E. Pd(II)-catalyzed C-H Acylation of (hetero)arenes. Recent advances. In *Advances in Cross-Coupling Reactions*, Sarandeses, L.; Pérez-Sestelo, J., Eds; MDPI, Basel, 2020, p. 181-200. ISBN 978-3-03943-567-8. (This book is a printed edition of the Special Issue *Advances in Cross-Coupling Reactions* that was published in *Molecules*)

88. Santiago, C; Sotomayor, N.; Lete, E. Pd(II)-catalyzed C-H Acylation of (hetero)arenes. Recent advances. *Molecules*, **2020**, *25*, 3247. (Invited contribution to Special Issue Advances in Cross-Coupling Reactions. Sarandeses, L.; Pérez-Sestelo, J., Eds)
87. Barbolla, I.; Sotomayor, N.; Lete, E. Transition metal-guanidine complexes as catalysts in organic reactions. Recent developments. *Arkivoc*, **2020**, *vii*, 158-179. (Invited contribution to Special Issue dedicated to Professor Jan Bergman)
86. Carral-Menoyo, A.; Sotomayor, N.; Lete, E. Palladium-catalysed Heck-type alkenylation reactions in the synthesis of quinolines. Mechanistic insights and recent applications. *Catal. Sci. Technol.* **2020**, *10*, 5345–5361 (Selected as **Front Cover** of Number 16, Volume 10, 2020).
85. Santiago, C.; Rubio, I.; Sotomayor, N; Lete, E. **Front Cover**: Selective Pd(II)-catalyzed Acylation of Pyrrole with Aldehydes. Application to the Synthesis of Celastramycin analogues and Tolmetin. *Eur. J. Org. Chem.*, **2020**, <https://doi.org/10.1002/ejoc.202000949>
84. Santiago, C.; Rubio, I.; Sotomayor, N; Lete, E. Selective Pd(II)-catalyzed Acylation of Pyrrole with Aldehydes. Application to the Synthesis of Celastramycin analogues and Tolmetin. *Eur. J. Org. Chem.*, **2020**, 4284-4295. (Selected as Very Important Paper (VIP))
83. Carracedo-Reboredo, P.; Corona, R.; Martinez-Nunes, M.; Fernandez-Lozano, C.; Tsiliki, G.; Sarimveis, H.; Aranzamendi, E.; Arrasate, S.; Sotomayor, N.; Lete, E.; Munteanu, C. R.; González-Díaz, H. MCDCalc: Markov Chain Molecular Descriptors Calculator for Medicinal Chemistry. *Current Topics in Medicinal Chemistry*, **2020**, *20*, 305-317. .
82. Carral-Menoyo, Asier; Sotorríos, Lia; Ortiz-de-Elguea, Verónica; Diaz-Andrés, Aitor; Sotomayor, Nuria; Gómez-Bengoa, Enrique; Lete, Esther. Intramolecular Palladium(II)-catalyzed 6-*endo* C-H alkenylation directed by the remote *N*-protecting group. Mechanistic insight and application to the synthesis of dihydroquinolines, *The Journal of organic chemistry*, **2020**, *85*, 2486-2503.
81. Barbolla, Iratxe; Sotomayor, Nuria; Lete, Esther, Intramolecular Mizoroki-Heck reaction in the synthesis of heterocycles. Strategies for the generation of tertiary and quaternary stereocenters, *Targets in Heterocyclic Systems*, **2019**, *23*, 340-362.
80. Barbolla, Iratxe; Sotomayor, Nuria; Lete, Esther, Carbopalladation/Suzuki Coupling Cascade for the Generation of Quaternary Centers: Access to Pyrrolo[1,2-*b*]isoquinolines, *The Journal of organic chemistry*, **2019**, *84*, 10183-10196.
79. Carral-Menoyo, Asier; Misol, Alexander; Gomez Redondo, Marcos; Sotomayor, Nuria; Lete, Esther, Palladium(II)-Catalyzed Intramolecular C-H Alkenylation for the Synthesis of Chromanes, *The Journal of organic chemistry*, **2019**, *84*, 2048-2060.
78. Nocado-Mena, Deyani; Cornelio, Carlos; Arrasate, Sonia; Sotomayor, Nuria; Lete, Esther; Gonzalez-Diaz, Humbert; Camacho-Corona, Maria; Garza-Gonzalez, Elvira; Waksman, de T. N. Gonzalez-Diaz, Humbert, Modeling Antibacterial Activity with Machine Learning and Fusion of Chemical Structure Information with Microorganism Metabolic Networks, *Journal of chemical information and modeling*, **2019**, *59*, 1109-1120.
77. Simon-Vidal, Lorena; Garcia-Calvo, Oihane; Oteo, Uxue; Arrasate, Sonia; Lete, Esther; Sotomayor, Nuria; Gonzalez-Diaz, Humberto, Perturbation-Theory and Machine Learning (PTML) Model for High-Throughput Screening of Parham Reactions: Experimental and Theoretical Studies, *Journal of chemical information and modeling*, **2018**, *58*, 1384-1396.

76. Aranzamendi, Eider; Sotomayor, Nuria; Lete, Esther. Phenolic Activation in Chiral Bronsted Acid-Catalyzed Intramolecular α -Amidoalkylation Reactions for the Synthesis of Fused Isoquinolines, *ACS omega*, **2017**, 2,2706-2718.
75. Azcargorta, Ane R.; Coya, Estibaliz; Panaite, Ana M.; Sotomayor, Nuria; Lete, Esther, Intramolecular Addition of Heteroaryllithium Compounds onto Activated Alkenes: Access to Heterofused Indolizines and Pyrroloazepines, *European Journal of Organic Chemistry*, **2017**, 2017,2462-2468.
74. Carral-Menoyo, Asier; Ortiz-de-Elguea, Veronica; Martinez-Nunes, Mikel; Sotomayor, Nuria; Lete, Esther, Palladium-Catalyzed Dehydrogenative Coupling: An Efficient Synthetic Strategy for the Construction of the Quinoline Core, *Marine drugs*, **2017**, 15, 276.
73. Blázquez-Barbadillo, C.; Aranzamendi, E.; Coya, E.; Lete, E.; Sotomayor, N.; González-Díaz, H. Perturbation Theory Model of Reactivity and Enantioselectivity of palladium-catalyzed Heck-Heck cascade reactions, *RSC Advances*, **2016**, 6, 38602-38610
72. Aranzamendi, Eider; Arrasate, Sonia; Sotomayor, Nuria; Lete, Esther; Gonzalez-Diaz, Humberto, Chiral Bronsted Acid-Catalyzed Enantioselective α -Amidoalkylation Reactions: A Joint Experimental and Predictive Study, *ChemistryOpen*, **2016**, 5,540-549.
71. Azcargorta, Ane R.; Coya, Estibaliz; Barbolla, Iratxe; Lete, Esther; Sotomayor, Nuria, Generation of Tertiary and Quaternary Stereocentres through Palladium-Catalysed Intramolecular Heck-Type Reactions for the Stereocontrolled Synthesis of Pyrrolo[1,2-b]isoquinolines, *European Journal of Organic Chemistry*, **2016**, 2016,2054-2063.
70. Coya, Estibaliz; Lete, Esther; Sotomayor, Nuria, Access to apoerysopine and pratosine skeletons via intramolecular carbolithiation and palladium-catalyzed alkenylation reactions, *Heterocycles*, **2016**, 93,114-126 (Commemorative Issue en honour of Prof. L. Tietze)
69. Coya, Estibaliz; Sotomayor, Nuria; Lete, Esther, Enantioselective Palladium-Catalyzed Heck-Heck Cascade Reactions: Ready Access to the Tetracyclic Core of Lycorane Alkaloids, *Advanced Synthesis & Catalysis*, **2015**, 357,3206-3214.
68. Ortiz-de-Elguea, Veronica; Sotomayor, Nuria; Lete, Esther, Two Consecutive Palladium(II)-Promoted C-H Alkenylation Reactions for the Synthesis of 3-Alkenylquinolones, *Advanced Synthesis & Catalysis*, **2015**, 357,463-473.
67. Arrasate, S.; Sotomayor, N.; Lete, E., Enantioselective synthesis in organic and medicinal chemistry (Editorial), *Current Topics in Medicinal Chemistry*, 2014, 14, 1209-1211. (Editorial for a thematic issue as Guest Editors)
66. Coya, Estibaliz; Sotomayor, Nuria; Lete, Esther, Intramolecular direct arylation and Heck reactions in the formation of medium-sized rings. Selective synthesis of fused indolizine, pyrroloazepine and pyrroloazocine systems, *Advanced Synthesis & Catalysis*, **2014**, 356,1853-1865.
65. Garcia-Calvo, Oihane; Martinez-Estibalez, Unai; Lete, Esther; Sotomayor, Nuria, Synthesis of tetrahydroquinolines through intramolecular carbolithiation reactions, *Heterocycles*, **2014**, 88,425-440. (Commemorative Issue in Honor of Prof. Victor Snieckus)

64. Gomez-SanJuan, Asier; Botija, Jose M.; Mendez, Almudena ;Sotomayor, Nuria; Lete, Esther., C-N bond forming reactions in the synthesis of substituted 2-aminoimidazole derivatives, *ARKIVOC*, **2014**, 44-56. (Commemorative Issue in Honor of Prof. Rosa Claramunt)
63. Gonzalez-Diaz, Humberto; Arrasate, Sonia; Gomez-SanJuan, Asier; Sotomayor, Nuria;Lete, Esther; Speck-Planche, Alejandro; Ruso, Juan M.; Luan, Feng Cordeiro, Maria N. D. S. , Matrix trace operators: from spectral moments of molecular graphs and complex networks to perturbations in synthetic reactions, micelle nanoparticles, and drug ADME processes, *Current Drug Metabolism*, **2014**, 15,470-88.
62. Garcia-Calvo, Oihane; Coya, Estibaliz; Lage, Sergio; Coldham, Iain; Sotomayor, Nuria; Lete,Esther, Intramolecular Carbolithiation Reactions in the Construction of Medium-Sized Rings. Synthesis of Pyrroloisoquinolines, Benzazepines, and Benzazocines, *European Journal of Organic Chemistry*, **2013**, 2013,1460-1470.
61. Gomez-Sanjuan, Asier; Sotomayor, Nuria; Lete, Esther, Inter- and intramolecular enantioselective carbolithiation reactions, *Beilstein journal of organic chemistry*, **2013**, 9,313-22.
60. Gomez-SanJuan, Asier;Sotomayor, Nuria; Lete, Esther. , RCM Approach to Complex Polycyclic α -Hydroxy γ -Lactams: Synthesis of Indolizinones and Pyrroloazepinones, *European Journal of Organic Chemistry*, **2013**, 2013,6722-6732.
59. Gonzalez-Diaz, Humberto; Arrasate, Sonia; Gomez-SanJuan, Asier; Sotomayor, Nuria; Lete, Esther; Besada-Porto, Lina; Ruso, Juan M. , General Theory for Multiple Input-Output Perturbations in Complex Molecular Systems. 1. Linear QSPR Electronegativity Models in Physical, Organic, and Medicinal Chemistry, *Current Topics in Medicinal Chemistry*, **2013**, 13,1713-1741.
58. Gonzalez-Diaz, Humberto; Arrasate, Sonia; Sotomayor, Nuria; Lete, Esther; Munteanu, Cristian R.; Pazos, Alejandro; Besada-Porto, Lina; Ruso, Juan M. , MIANN models in medicinal, physical and organic chemistry, *Current topics in medicinal chemistry*, **2013**, 13,619-41.
57. Martinez-Estibalez, Unai; Garcia-Calvo, Oihane; Ortiz-de-Elguea, Veronica; Sotomayor, Nuria;Lete, Esther, Intramolecular Mizoroki-Heck reaction in the regioselective synthesis of 4-alkylidene-tetrahydroquinolines, *European Journal of Organic Chemistry*, **2013**, 2013,3013-3022.
56. Aranzamendi, Eider; Sotomayor,Nuria; Lete, Esther, Bronsted acid catalyzed enantioselective α -amidoalkylation in the synthesis of isoindoloisoquinolines, *The Journal of organic chemistry*, **2012**, 77,2986-91.
55. Gomez-SanJuan, Asier; Sotomayor, Nuria; Lete, Esther, Enantioselective intramolecular α -amidoalkylation reaction in the synthesis of pyrrolo[2,1-*a*]isoquinolines, *Tetrahedron letters*, **2012**, 53,2157-2159.
54. E. Lete, N. Sotomayor, 8.1.30. Carbolithiation of C-C multiple bonds. In *Science of Synthesis. Knowledge Updates 2011/4* (ISBN978-3-13-164321-6), Thieme: Stuttgart, **2011**, 191-251.
53. Garcia-Calvo, Oihane; Sotomayor, Nuria; Lete, Esther; Coldham, Iain, Organolithium or Heck-type cyclization of N-ortho-iodobenzyl-2-alkenylpyrrolidines to give indolizidines, *ARKIVOC*, **2011**, 57-66. (Commemorative Issue in Honor of Prof. William F. Bailey)

52. Martinez-Estibalez, Unai; Gomez-SanJuan, Asier; Garcia-Calvo, Oihane; Aranzamendi, Eider; Lete, Esther; Sotomayor, Nuria. Strategies Based on Aryllithium and N-Acyliminium Ion Cyclizations for the Stereocontrolled Synthesis of Alkaloids and Related Systems, *European Journal of Organic Chemistry*, **2011**, 2011,3610-3633.

51. Munteanu, C. R.; Dorado, J.; Pazos-Sierra, A.; Prado-Prado, F.; Perez-Montoto, L. G.; Vilar, S.; Ubeira, F. M.; Sanchez-Gonzalez, A.; Cruz-Monteagudo, M.; Arrasate, S.; Sotomayor, N.; Lete, E.; Duardo-Sanchez, A.; Diaz-Lopez, A.; Patlewicz, G.; Gonzalez-Diaz, H.; Dehmer, M; EmmertStreib, F; Mehler, A, Markov Entropy Centrality: Chemical, Biological, Crime, and Legislative Networks. In Towards an Information Theory of Complex Networks (978-0-8176-4903-6), Springer, **2011**, 199-258.

50. S. Arrasate, N. Sotomayor, E. Lete, E. Uriarte, H. González-Díaz, QSRR construction of an Enantioselectivity Complex Networks for chirality inversion reactions. In Topological Indices for Medicinal Chemistry, Biology, Parasitology, Neurological and Social Networks (ISBN: 978-81-7895-489-9), Transworld Research Network: Trivandrum, **2010**, 53-68

49. Camarero, Cristina;Arrasate,Sonia;Sotomayor,NuriaLete,Esther, A DITOX derived α -sulfinyl carbanion as nucleophile in conjugate addition reactions to pyrrolo[2,1-a]isoquinolones, *ARKIVOC*, **2010**, 45-55. (Commemorative Issue in Honor of Prof. Benito Alcaide)

48. Martinez-Estibalez, Unai; Gomez-Sanjuan, Asier; Garcia-Calvo, Oihane; Arrasate, Sonia; Sotomayor, Nuria; Lete, Esther, Intramolecular carbolithiation reaction of aryllithiums in the synthesis of carbocyclic and heterocyclic compounds, *Targets in Heterocyclic Systems*, **2010**, 14,124-149. .

47. Camarero, Cristina; Gonzalez-Temprano, Ines; Gomez-SanJuan,Asier; Arrasate, Sonia; Lete, Esther; Sotomayor, Nuria, Stereocontrolled conjugate additions to dihydroindolizinone systems. Synthesis of enantiopure polysubstituted tetrahydropyrrolo[2,1-a]isoquinolones, *Tetrahedron*, **2009**, 65,5787-5798.

46. Lage, Sergio; Martinez-Estibalez,Unai; Sotomayor, Nuria; Lete, Esther, Intramolecular palladium-catalyzed direct arylation vs. Heck reactions: synthesis of pyrroloisoquinolines and isoindoles, *Advanced Synthesis & Catalysis*, **2009**, 351,2460-2468.

45. Martinez-Estibalez, Unai; Sotomayor, Nuria; Lete, Esther, Intramolecular carbolithiation reactions for the synthesis of 2,4-disubstituted tetrahydro-quinolines: evaluation of TMEDA and (-)-sparteine as ligands in the stereoselectivity, *Organic letters*, **2009**, 11,1237-40.

44. Abdullah, Media N.; Arrasate, Sonia; Lete, Esther; Sotomayor, Nuria, Stereoselective synthesis of thiaerythrinanes based on an α -amidoalkylation/RCM approach, *Tetrahedron*, **2008**, 64,1323-1332.

43. Lage, Sergio; Villaluenga, Irune; Sotomayor, Nuria; Lete, Esther, Synthesis of pyrrolo[1,2-b]isoquinolines through mesityllithium-mediated intramolecular carbolithiation, *Synlett*, **2008**, 3188-3192.

42. Camarero, Cristina; Gonzalez-Temprano, Ines; Lete, Esther; Sotomayor, Nuria, Stereoselective conjugate additions to γ -lactams: synthesis of polysubstituted benzo-fused indolizidine systems, *Synlett*, **2007**, 1101-1105.

41. Martinez-Estibalez, Unai; Sotomayor, Nuria; Lete, Esther, Pd-catalyzed arylation/ring-closing metathesis approach to aza bicycles, *Tetrahedron letters*, **2007**, 48, 2919-2922.

40. Osante, Inaki; Abdullah, Media N.; Arrasate, Sonia; Sotomayor, Nuria; Lete, Esther, C-10b Functionalized 5,6-dihydropyrrolo[2,1-a]isoquinolines as intermediates in the synthesis of erythrinane systems. Intra- vs. intermolecular conjugate addition based strategies, *ARKIVOC*, **2007**, 206-219. (Commemorative Issue in Honor of Prof. Joan Bosch)
39. Garcia, Eva; Lete, Esther; Sotomayor, Nuria. , Conjugate additions of sulfur-stabilized anions to unsaturated lactams. Synthesis of polyfunctionalized benzo[a]quinolizinone systems, *The Journal of organic chemistry*, **2006**, 71,6776-84.
38. Ruiz, Javier; Lete, Esther; Sotomayor, Nuria, Intramolecular cyclization of functionalized heteroaryllithiums. Synthesis of novel indolizinone-based compounds, *Tetrahedron*, **2006**, 62, 6182-6189.
37. Garcia, Eva; Arrasate, Sonia; Lete, Esther; Sotomayor, Nuria, Diastereoselective intramolecular alpha-amidoalkylation reactions of L-DOPA derivatives. Asymmetric synthesis of pyrrolo[2,1-a]isoquinolines, *The Journal of organic chemistry*, **2005**, 70,10368-74.
36. Arrasate, Sonia; Lete, Esther; Sotomayor, Nuria, Metalation and alpha-amidoalkylation reactions in the stereocontrolled synthesis of fused isoquinoline systems. In New methods for the asymmetric synthesis of nitrogen heterocycles, Research Signpost (India), **2005**, 223-248.
35. Ruiz, Javier; Ardeo, Ainhoa; Ignacio, Roberto; Sotomayor, Nuria; Lete, Esther, An efficient entry to pyrrolo[1,2-b]isoquinolines and related systems through Parham cyclization, *Tetrahedron*, **2005**, 61,3311-3324.
34. Gonzalez-Temprano, Ines; Osante, Inaki; Lete, Esther; Sotomayor, Nuria, Enantiodivergent synthesis of pyrrolo[2,1-a]isoquinolines based on diastereoselective Parham cyclization and alpha-amidoalkylation reactions, *The Journal of organic chemistry*, **2004**, 69,3875-85.
33. Osante, Inaki; Lete, Esther; Sotomayor, Nuria, Tandem Parham cyclisation- α -amidoalkylation reaction in the synthesis of the isoindolo[1,2-a]isoquinoline skeleton of neevamine-type alkaloids, *Tetrahedron letters*, **2004**, 45,1253-1256.
32. Osante, Inaki; Sotomayor, Nuria; Lete, Esther, A direct route to erythrinanes via α -amidoalkylation, conjugate addition and ring-closing metathesis reactions, *Letters in Organic Chemistry*, **2004**, 1,323-325.
31. Ardeo, Ainhoa; Garcia, Eva; Arrasate, Sonia; Lete, Esther; Sotomayor, Nuria, A practical approach to the fused β -carboline system. Asymmetric synthesis of indolo[2,3-a]indolizidinones via a diastereoselective intramolecular α -amidoalkylation reaction, *Tetrahedron letters*, **2003**, 44,8445-8448.
30. Ruiz, Javier; Sotomayor, Nuria; Lete, Esther, Parham-Type Cyclacylation with Weinreb Amides. Application to the Synthesis of Fused Indolizinone Systems, *Organic letters*, **2003**, 5,1115-1117.
29. Sotomayor, Nuria; Lete, Esther, Aryl and Heteroaryllithium Compounds by Metal-Halogen Exchange. Synthesis of Carbocyclic and Heterocyclic Systems, *Current Organic Chemistry*, **2003**, 7, 275-300
28. Arrasate, Sonia; Lete, Esther; Sotomayor, Nuria, Synthesis of enantiomerically enriched β -amino alcohol derivatives via asymmetric lithiation of O-benzyl carbamates-imine addition using (-)-sparteine complexes, *Tetrahedron: Asymmetry*, **2002**, 13,311-316.

27. Gonzalez-Temprano, Ines; Sotomayor, Nuria; Lete, Esther, Highly diastereoselective intramolecular α -amidoalkylation reactions of hydroxylactams derived from *N*-phenethylimides. Enantioselective synthesis of dihydropyrrolo[2,1-*a*] isoquinolones, *Synlett*, **2002**, 593-597.
26. Osante, Inaki; Garcia, Eva; Ardeo, Ainhoa; Arrasate, Sonia; Lete, Esther; Sotomayor, Nuria, Stereocontrolled *N*-acyliminium ion and Parham cyclization in the synthesis of isoquinoline alkaloids, *Recent Research Developments in Organic Chemistry*, **2002**, 6,103-111.
25. Arrasate, S.; Lete, E.; Sotomayor, N. Synthesis of enantiomerically enriched amines by chiral ligand mediated addition of organolithium reagents to imines, *Tetrahedron: Asymmetry*, **2001**, 12, 2077-2082.
24. García, E.; Arrasate, S.; Ardeo, A.; Lete, E.; Sotomayor, N. Enantioselective synthesis of pyrrolo[2,1-*a*]isoquinolones via stereocontrolled *N*-acyliminium ion cyclisation, *Tetrahedron Letters*, **2001**, 42, 1511-1513.
23. Ardeo, Ainhoa; Collado, Maria I.; Osante, Inaki; Ruiz, Javier; Sotomayor, Nuria; Lete, Esther, Recent advances in the Parham cyclization for the synthesis of heterocyclic systems, *Targets in Heterocyclic Systems*, **2001**, 5,393-418.
22. Osante, Inaki; Collado, M. I.; Lete, Esther; Sotomayor, Nuria, Stereodivergent synthesis of hetero-fused isoquinolines by acyliminium and metallation methods, *European Journal of Organic Chemistry*, **2001**, 1267-1277.
21. Ardeo, A.; Lete, E.; Sotomayor, N. Metalation-cyclisation sequence on *N*-(*o*-halobenzyl)pyrroles. Synthesis of pyrrolo[1,2-*b*]isoquinolones, *Tetrahedron Letters*, **2000**, 41, 5211-5214.
20. Osante, Inaki; Collado, M. I.; Lete, Esther; Sotomayor, Nuria. Diastereodivergent approaches to thiazolo[4,3-*a*]isoquinoline systems via Parham-type and *N*-acyliminium ion cyclizations, *Synlett*, **2000**, 101-103.
19. Collado, M. I.; Lete, Esther; Sotomayor, Nuria, Synthetic entries to the isoquinoline nucleus via lithiation - cyclization and nucleophilic addition - *N*-acyliminium ion cyclization sequences, *Recent Research Developments in Organic Chemistry*, **1999**, 3,465-481.
18. Etxarri, Begoña; Gonzalez-Temprano, Ines; Manteca, Izaskun; Sotomayor, Nuria; Lete, Esther, Diastereoselective conjugate addition of α -lithio dithioacetals to the α,β -unsaturated lactam unit of 5,6-dihydropyrrolo[2,1-*a*]isoquinolinones, *Synlett*, **1999**, 1486-1488.
17. Manteca, Izaskun; Etxarri, Begoña; Ardeo, Ainhoa; Arrasate, Sonia; Osante, Inaki; Sotomayor, Nuria; Lete, Esther, Functionalized organolithium compounds: generation via reductive lithiation and nucleophilic addition to *N*-phenethylimides. Access to functionalized dihydropyrrolo[2,1-*a*]isoquinolinones, *Tetrahedron*, **1998**, 54,12361-12378.
16. Collado, M. I.; Manteca, Izaskun; Sotomayor, Nuria; Villa, Maria-Jesus; Lete, Esther, Metalation vs Nucleophilic Addition in the Reactions of *N*-Phenethylimides with Organolithium Reagents. Ready Access to Isoquinoline Derivatives via *N*-Acyliminium Ions and Parham-Type Cyclizations, *The Journal of organic chemistry*, **1997**, 62,2080-2092.
15. Collado, M. I.; Sotomayor, Nuria; Villa, Maria-Jesus; Lete, Esther, Parham-type cyclization and nucleophilic addition - *N*-acyliminium ion cyclization sequences for the construction of the isoquinoline nucleus, *Tetrahedron letters*, **1996**, 37,6193-6196.

14. Manteca, Izaskun; Sotomayor, Nuria; Villa, Maria-Jesus; Lete, Ester, Tandem carbophilic addition - N-acyliminium ion cyclization for the synthesis of functionalized pyrrolo2,1-a]isoquinolones: key intermediates for the preparation of Erythrina-type alkaloids, *Tetrahedron letters*, **1996**, 37,7841-7844.
13. Sotomayor, Nuria; Dominguez, Esther; Lete, Esther, Bischler-Napieralski Cyclization-N/C-Alkylation Sequences for the Construction of Isoquinoline Alkaloids. Synthesis of Protoberberines and Benzoc]phenanthridines via C-2'-Functionalized 3-Arylisoquinolines, *The Journal of organic chemistry*, **1996**, 61,4062-4072.
12. Superchi, Stefano; Sotomayor, Nuria; Miao, Guobin; Joseph, Babu; Campbell, Michael G.; Snieckus, Victor, α -Aryl O-vinyl carbamates. Tandem carbolithiation- α -alkylation and -1,2]-Wittig rearrangement reactions, *Tetrahedron letters*, **1996**, 37,6061-6064.
11. Superchi, Stefano; Sotomayor, Nuria; Miao, Guobin; Joseph, Babu; Snieckus, Victor. , α -Zinc O-vinyl carbamates as anionic Friedel-Crafts equivalents. Cross coupling reactions with aryl and heteroaryl halides and triflates, *Tetrahedron letters*, **1996**, 37,6057-6060.
10. Collado, M. I.; Lete, Esther; Sotomayor, Nuria; Villa, Maria-Jesus, Synthesis of 5-arylpyrrolo2,1-a]isoquinolin-3(2H)-ones from N-phenethylsuccinimides and organolithium reagents, *Tetrahedron*, **1995**, 51,4701-10.
9. Lete, Ester; Collado, Isabel; Sotomayor, Nuria; Vicente, Teresa; Villa, Maria-Jesus, Application of the ortho-lithiation-cyclization strategy to N-benzyl- and N-phenethylamine derivatives, *Journal of Heterocyclic Chemistry*, **1995**, 32,1751-8.
8. Sotomayor, Nuria; Dominguez, Esther; Lete, Esther, Oxidation reactions of 2'-functionalized 3-aryltetrahydro- and 3,4-dihydroisoquinolines, *Tetrahedron*, **1995**, 51,12721-30.
7. Sotomayor, Nuria; Dominguez, Esther; Lete, Esther, Isoquinoline formation via iminium ions cyclization: a direct approach to C-2' functionalized 3-aryltetrahydroisoquinolines, *Tetrahedron*, **1995**, 51,12159-68.
6. Sotomayor, Nuria; Dominguez, Esther; Lete, Esther, A convenient approach to the synthesis of benzoc]phenanthridines via intramolecular cyclization of enamides, *Tetrahedron letters*, **1994**, 35,2973-6.
5. Sotomayor, Nuria; Vicente, Teresa; Dominguez, Esther; Lete, Esther; Villa, Maria J., An improved method for the generation of imines and enamides. Application to the synthesis of 3-arylisoquinoline derivatives, *Tetrahedron*, **1994**, 50, 2207-18.
4. Sotomayor, N.; Dominguez, E.; Lete E., Bischler-Napieralski reaction of C2' functionalized 1,2-diarylethylamides. A general approach to the synthesis of protoberberines, *Synlett*, **1993**, 431-433
3. Lete, Esther; Egiarte, Amagoia; Sotomayor, Nuria; Vicente, Teresa; Villa, Maria J. Synthesis of pyrroloisoquinolones via organolithium additions to N-phenethylsuccinimides, *Synlett*, **1993**, 41-2.
2. Arriortua, M. I.; Vía, J.; Urtiaga, M. K.; Domínguez, E.; Igartua, A.; Sotomayor, N., Synthesis and crystal structure determination of 3,4-dimethoxybenzyl 2,3,4-trimethoxyphenyl ketone, *Bull. Soc. Chim. Belg.* **1992**, 361-265.

1. Dominguez, Esther; Lete, Esther; Villa, Maria J.; Igartua, Amaia; Sotomayor, Nuria; Arrieta, Juan M.; Berisa, Agustin; Labeaga, Luis; Orjales, Aurelio et.al., Synthesis, crystal structure determination, and pharmacological activity of 7,8,3',4'-tetramethoxyisoflavone, *Journal of Heterocyclic Chemistry*, **1991**, 28,1885-9.