



Dr. habil. Pablo Domínguez de María

Total citations: > 2900 | *h*-index: 29

http://scholar.google.es/citations?hl=en&user=TLV5YzIAAAAJ&view_op=list_works

Scientific Publications (Peer-reviewed) | (Updated January 2017)

(*): As corresponding Author

2017

102.- Guajardo, N., **Domínguez de María, P.**, Ahumada, K., Schrebler, R.A., Ramírez-Tagle, R., Crespo, F., Carlesi, C. "Water as cosolvent: Non-viscous Deep-Eutectic-Solvents for efficient lipase-catalyzed esterifications". *ChemCatChem*. **2017**. Accepted.

101.- Hernández, K., Bujons, J., Joglar, J., Charnock, S., **Domínguez de María, P.**, Fessner, W.D., Clapés, P. "Combining aldolases and transaminases for the synthesis of 2-amino-4-hydroxybutanoic acid". *ACS Catalysis*. **2017**, 7, 1707-1711.

100.- Domínguez de María, P.* "Ionic Liquids, switchable solvents and eutectic mixtures". In: "The application of green solvents in separation processes", F.J. Pena-Pereira, M. Tobiszewski (Eds). Elsevier, the Netherlands. **2017**. Accepted.





99.- Bracco, P., **Domínguez de María, P.*** “Organic carbonates: Promising reactive solvents for Biorefineries and Biotechnology”. In: “*Bio-based Solvents*”, F. Jerome, R. Luque (Eds). John Wiley & Sons, UK. **2017**. Accepted.

2016

98.- Weiz, G., Braun, L., López, R., **Domínguez de María, P.**, Breccia, J.D.. “Enzymatic deglycosylation of flavonoids in deep eutectic solvents – aqueous mixtures: Paving the way for sustainable flavonoid synthesis”. *Journal of Molecular Catalysis B: Enzymatic*. **2016**, 130, 70-73.

97.- Picart, P., Wiermans, L., Pérez-Sánchez, M., Grande, P.M., Schallmeyer, A.*, **Domínguez de María, P.*** “Assessing lignin types to screen novel biomass-degrading microbial strains: Synthetic lignin as useful carbon source”. *ACS Sust. Chem. & Eng.* **2016**, 4, 651-655.

96.- Guajardo, N., Müller, C.R., Schrebler, R., Carlesi, C., **Domínguez de María, P.*** “Deep-Eutectic-Solvents for organocatalysis, biotransformations and multi-step organocatalyst-enzyme combinations”. *ChemCatChem* **2016**, 8, 1020-1027.

2015

95.- **Domínguez de María, P.***, Hollmann, F.* “On the (un)greenness of biocatalysis: Some challenging figures and some promising options”. *Front. Microbiol.* **2015**, 6, 1257.

94.- **Domínguez de María, P.***, Grande, P.M., Leitner, W. “Current trends on pretreatment and fractionation of lignocellulose as reflected in industrial patent activities”. *Chemie Ing. Technik.* **2015**, 87, 1686-1695.

93.- Picart, P., **Domínguez de María, P.**, Schallmeyer, A. “From gene to biorefinery: Microbial β -etherases as promising biocatalysts for lignin valorization”. *Front. Microbiol.* **2015**, 6, 916.





92.- Picart, P., Sevenich, M., **Domínguez de María, P.**, Schallmeyer, A. "Exploring glutathione lyases as biocatalysts: paving the way for enzymatic lignin depolymerization and future stereoselective applications". *Green Chemistry*. **2015**, *17*, 4931-4940.

91.- Müller, C.R., Rosen, A., **Domínguez de María, P.*** "Multi-step enzyme-organocatalyst C-C bond forming reactions in Deep-Eutectic-Solvents: Towards improved performances by organocatalyst design". *Sustainable Chemical Processes*. **2015**, *3*, 12.

90.- Müller, C.R., Lavandera, I.*, Gotor-Fernández, V.*, **Domínguez de María, P.*** "Performance of recombinant whole-cell-catalyzed reductions in deep eutectic solvents – aqueous mixtures". *ChemCatChem*. **2015**, *7*, 2654-2659.

89.- Grande, P.M., Viell, J., Theyssen, N., Marquardt, W., **Domínguez de María, P.***, Leitner, W.* "Fractionation of lignocellulosic biomass using the OrganoCat process". *Green Chemistry* **2015**, *17*, 3533-3539.

88.- Donnelly, J., Müller, C.R., Wiermans, L., Chuck, C.J.*, **Domínguez de María, P.*** "Upgrading biogenic furans: blended C₁₀-C₁₂ platform chemicals via lyase-catalyzed carboligations and formation of novel C₁₂ choline chloride-based deep eutectic solvents". *Green Chemistry*. **2015**, *17*, 2714-2718.

87.- Wiermans, L., Schumacher, H., Klaassen, C.M., **Domínguez de María, P.*** "Unprecedented catalyst-free lignin dearomatization with hydrogen peroxide and dimethyl carbonate". *RSC Advances*. **2015**, *5*, 4009-4018.

86.- Petrenz, A., **Domínguez de María, P.**, Ramanathan, A., Hanefeld, U., Ansorge-Schumacher, M.B., Kara, S. "Medium and reaction engineering for the establishment of a chemo-enzymatic dynamic kinetic resolution of rac-benzoin in batch and continuous mode". *Journal of Molecular Catalysis B: Enzymatic*. **2015**, *114*, 42-49.





2014

85.- Domínguez de María, P.* “Fermentations and sustainable technologies: From free enzymes to whole cells, from fine chemicals to bulk commodities”. In “*Chemical processes for a sustainable future*“ T. Letcher, J. Scott, D.A. Patterson (Eds), Royal Society of Chemistry (RSC), UK. **2014**, pp. 365-385.

84.- Yan, Q., Myazek, K., Grande, P., Domínguez de María, P., Leitner, W., Modigell, M. “Mechanical pretreatment in a screw press affecting chemical pulping of lignocellulosic biomass”. *Energy & Fuels*. **2014**, 28, 6981-6987.

83.- Domínguez de María, P.* “Deep Eutectic Solvents: Promising solvents and non-solvent solutions for biocatalysis”. In “*Environmentally friendly syntheses using ionic liquids*”. J. Dupont, T. Itoh, P. Lozano, S. Malhotra (Eds). CRC Press Taylor & Francis Group. **2014**, pp. 67-87.

82.- Müller, C. Meiners, I., Domínguez de María, P.* “Highly enantioselective tandem enzyme-organocatalyst crossed aldol reactions with acetaldehyde in deep eutectic solvents”. *RSC Advances*. **2014**, 4, 46097-46101.

81.- Picart, P., Müller, C., Mottweiler, J., Bolm, C., Domínguez de María, P., Schallmey, A. “From gene towards selective biomass valorization: Novel bacterial β -etherases with activity on lignin-like polymers”. *ChemSusChem* **2014**, 7, 3164-3171.

80.- Maugeri, Z., Domínguez de María, P.* “Benzaldehyde Lyase (BAL)-catalyzed enantioselective C-C bond carbonylation in deep eutectic solvents – buffer mixtures”. *Journal of Molecular Catalysis B: Enzymatic* **2014**, 107, 120-123.

79.- Gamemara, D.*, Domínguez de María, P.* “Enantioselective imine reduction catalyzed by imine reductases and artificial metalloenzymes”. *Organic & Biomolecular Chemistry* **2014**, 12, 2989-2992.





78.- Maugeri, Z., **Domínguez de María, P.*** "Whole-cell biocatalysis in deep-eutectic-solvents – aqueous mixtures". *ChemCatChem* **2014**, 6, 1535-1537.

77.- Fernández-Álvaro, E., Esquivias, J., Pérez-Sánchez, M., **Domínguez de María, P.**, Remuiñan-Blanco, M. "Assessing biocatalysis for the synthesis of optically active tetrahydropyrazolo[1,5-a] pyrimidines (THPPs) as novel therapeutic agents". *Journal of Molecular Catalysis B: Enzymatic* **2014**, 100, 1-6.

76.- **Domínguez de María, P.*** "Recent trends in (ligno)cellulose dissolution using neoteric solvents: Switchable, distillable and bio-based ionic liquids". *Journal of Chemical Technology and Biotechnology* **2014**, 89, 11-18.

75.- Kayser, H., Pienkoß, F., **Domínguez de María, P.*** "Chitosan-catalyzed biodiesel synthesis: Proof-of-concept and limitations". *Fuel*. **2014**, 116, 267-272.

2013

74.- Wiermans, L., Hofzumahaus, S., Schotten, C., Weigand, L., Schallmey, M., Schallmey, A., **Domínguez de María, P.*** "Transesterifications and peracid-assisted oxidations in aqueous media catalysed by *Mycobacterium smegmatis* acyl transferase". *ChemCatChem* **2014**, 12, 3719-3724.

73.- Schallmey, A., **Domínguez de María, P.**, Bracco, P. "Biocatalytic asymmetric oxidations in stereoselective synthesis". In "*Stereoselective synthesis of drugs & natural products*". V. Andrushko, N. Andrushko (Eds). Wiley-Blackwell. John Wiley & Sons Inc. **2013**, pp. 1089-1114.

72.- Pérez-Sánchez, M., **Domínguez de María, P.*** "Synthesis of natural fragrance jasminaldehyde using silica-immobilized piperazine as organocatalyst". *Catalysis Science & Technology*. **2013**, 3, 2732-2736.

71.- Maugeri, Z., Leitner, W. **Domínguez de María, P.*** "Chymotrypsin-catalyzed peptide synthesis in Deep-Eutectic-Solvents". *European Journal of Organic Chemistry*. **2013**, 4223-4228.





70.- Kayser, H., Rodríguez-Ropero, F., Leitner, W., Fioroni, M.*, **Domínguez de María, P.*** "Mechanistic comparison of saccharide depolymerization catalyzed by dicarboxylic acids and glycosidases". *RSC Advances*. **2013**, 3, 9273-9278.

69.- Sibilla, F., **Domínguez de María, P.*** "Integrating White Biotechnology in lignocellulosic biomass transformations: From enzyme-catalysis to metabolic engineering". In: "*The role of catalysis for the sustainable production of bio-fuels and bio-chemicals*". A. Lappas, M. Stöcker, K. Triantafyllidis (Eds). Elsevier. **2013**, pp. 445-466.

68.- Pérez-Sánchez, M., Müller, C.R., **Domínguez de María, P.*** "Multi-step oxidase-lyase reactions: Synthesis of optically active 2-hydroxy-ketones using bio-based aliphatic alcohols". *ChemCatChem*. **2013**, 5, 2512-2516.

67.- Fernández-Álvaro, E., **Domínguez de María, P.*** "Reductases: From natural diversity to established biocatalysis and to emerging enzymatic activities". In "*Synthetic methods for biologically active molecules: Exploring the potential of bioreductions*". (Ed. E. Brenna). Wiley, Weinheim. **2013**, pp. 22-47.

66.- Krystof, M., Pérez-Sánchez, M., **Domínguez de María, P.*** "Lipase-mediated selective oxidation of furfural and 5-Hydroxymethylfurfural". *ChemSusChem*. **2013**, 6, 826-830.

65.- **Domínguez de María, P.*** "On the use of seawater as reaction media for large-scale applications in biorefineries". *ChemCatChem*. **2013**, 5, 1643-1648.

64.- Krystof, M., Pérez-Sánchez, M., **Domínguez de María, P.*** "Lipase-catalyzed (trans)esterification of 5-hydroxymethylfurfural and separation of HMF-esters using deep-eutectic-solvents". *ChemSusChem*. **2013**, 6, 630-634.

63.- Pérez-Sánchez, M., Sandoval, M., Hernáiz, M.J.*, **Domínguez de María, P.*** "Biocatalysis in biomass-derived solvents: The quest for fully sustainable chemical processes". *Current Organic Chemistry*, **2013**, 17, 1188-1199.





62.- Wiermans, L, Pérez-Sánchez, M., **Domínguez de María, P.*** "Lipase-mediated oxidative delignification in non-aqueous media: Formation of de-aromatized lignin-oil and cellulase accessible polysaccharides". *ChemSusChem*. **2013**, 6, 251-255.

61.- Müller, C.R., Pérez-Sánchez, M., **Domínguez de María, P.*** "Benzaldehyde-lyase-catalyzed diastereoselective C-C bond formation by simultaneous carbonylation and kinetic resolution". *Organic & Biomolecular Chemistry*. **2013**, 11, 2000-2004.

2012

60.- Maugeri, Z., Leitner, W., **Domínguez de María, P.*** "Practical separation of alcohol-ester mixtures using deep-eutectic-solvents". *Tetrahedron Letters* **2012**, 53, 6968-6971.

59.- Shanmuganathan, S., Natalia, D., Greiner, L., **Domínguez de María, P.** "On the use of 2-methyltetrahydrofuran (2-MeTHF) as bio-based (co)solvent in biotransformations". In: "*Practical methods in biocatalysis and biotransformations*". P. Sutton, J. Whittall (Eds). Wiley-VCH, Weinheim. **2012**, Vol II, 263-295.

58.- Palazzolo, M.A., Pérez-Sánchez, M., Iribarren, A.M., Lewkowicz, E.S.*, **Domínguez de María, P.*** "Organocatalytic synthesis of novel purine and pyrimidine acyclic nucleosides". *Tetrahedron Letters*. **2012**, 53, 6797-6800.

57.- Kayser, H., Müller, C.R., García-González, C., Smirnova, I., Leitner, W., **Domínguez de María, P.*** "Dried chitosan-gels as organocatalysts for the production of biomass-derived platform chemicals". *Applied Catalysis A: General*. **2012**. 445-446, 180-186.

56.- Lehmann, C., Sibilla, F., Maugeri, Z., Streit, W.R., **Domínguez de María, P.**, Martínez, R., Schwaneberg, U. "Reengineering CelA2 cellulase for hydrolysis in aqueous solutions of deep-eutectic-solvents and concentrated seawater". *Green Chemistry*, **2012**, 14, 2719-2726.





55.- Fernández-Álvaro, E., **Domínguez de María, P.*** “Ionic Liquids in biocatalytic oxidations: From non-conventional media to non-solvent applications”. *Current Organic Chemistry*, **2012**, 16, 2492-2507.

54.- **Domínguez de María, P.**, Kohlmann, C. “Non-solvent applications of ionic liquids in biotransformations”. In *"Ionic Liquids in Biotransformations & Organocatalysis: Solvents and Beyond"*. P. Domínguez de María (Ed). John Wiley & Sons Inc., Hoboken, (NJ, USA). **2012**, Chapter 8, pp. 315-329.

53.- Gaménara, D., Sáenz-Méndez, P., Seoane, G. **Domínguez de María, P.** “Ionic liquids as (co-)solvents for non-hydrolytic enzymes”. In *"Ionic Liquids in Biotransformations & Organocatalysis: Solvents and Beyond"*. P. Domínguez de María (Ed). John Wiley & Sons Inc., Hoboken, (NJ, USA). **2012**, Chapter 6, pp. 229-259.

52.- **Domínguez de María, P.** “Ionic liquids: Definition, applications and context for biotransformations and organocatalysis”. In *"Ionic Liquids in Biotransformations & Organocatalysis: Solvents and Beyond"*. P. Domínguez de María (Ed). John Wiley & Sons Inc., Hoboken, (NJ, USA). **2012**, Chapter 1, pp. 3-14.

51.- Grande, P.M., Bergs, C., **Domínguez de María, P.***, “Chemo-enzymatic conversion of glucose into 5-Hydroxymethylfurfural in seawater”. *ChemSusChem*. **2012**, 5, 1203-1206.

50.- Pérez-Sánchez, M., **Domínguez de María, P.***, “Lipase-catalyzed *in situ* production of acetaldehyde: A controllable and mild strategy for multi-step reactions”. *ChemCatChem*, **2012**, 4, 617-619.

49.- Klement, T., Milker, S., Jäger, G., Grande, P.M., **Domínguez de María, P.**, Büchs, J. “Biomass pretreatment affects *Ustilago maydis* in producing itaconic acid”. *Microbial Cell Factories*, **2012**, 11, 43.

48.- Pace, V.*, Hoyos, P., Castoldi, L., **Domínguez de María, P.***, Alcántara, A.R.* “2-Methyl-tetrahydrofuran (2-MeTHF): A biomass-derived solvent with broad application in organic chemistry”. *ChemSusChem*. **2012**, 5, 1369-1379.





47.- Shanmuganathan, S., Natalia, D., Greiner, L.*; **Domínguez de María, P.*** “Oxidation-Hydroxymethylation-Reduction: A one-pot three-step biocatalytic synthesis of optically active α -aryl vicinal diols”. *Green Chemistry*. **2012**, 14, 94-97.

46.- Maugeri, Z., **Domínguez de María, P.*** “Novel choline-chloride-based deep-eutectic-solvents with renewable hydrogen bond donors: Levulinic acid and sugar-based polyols”. *RSC Advances*. **2012**, 2, 421-425.

45.- Grande, P.M., **Domínguez de María, P.*** “Enzymatic hydrolysis of microcrystalline cellulose in concentrated seawater”. *Bioresource Technology*, **2012**, 104, 799-802.

2011

44.- Jakoblinnert, A., Mladenov, R., Paul, A., Sibilla, F., Schwaneberg, U., Ansorge-Schumacher, M.B.*; **Domínguez de María, P.*** “Asymmetric reduction of ketones with recombinant *E. coli* whole cells in neat substrates”. *Chemical Communications*, **2011**, 47, 12230-12232.

43.- vom Stein, T., Grande, P.M., Leitner, W.*; **Domínguez de María, P.*** “Iron-catalyzed furfural production in bio-based biphasic systems: From pure sugars to direct use of crude xylose effluents as feedstock”. *ChemSusChem*. **2011**, 4, 1592-1594.

42.- Medici, R., **Domínguez de María, P.**, Otten, L.G., Straathof, A. “A high-throughput screening assay for amino acid decarboxylase activity”. *Advanced Synthesis & Catalysis*. **2011**, 353, 2369-2376.

41.- **Domínguez de María, P.*** “Nitrile reductases: A forthcoming wave in biocatalysis?”. *ChemCatChem*. **2011**, 3, 1683-1685.

40.- Kourist, R., **Domínguez de María, P.**, Miyamoto, K. “Biocatalytic strategies for the asymmetric synthesis of profens – recent trends and developments”. *Green Chemistry*. **2011**, 13, 2607-2618.





39.- vom Stein, T., Grande, P.M., Kayser, H., Sibilla, F., Leitner, W.*, **Domínguez de María, P.*** "From biomass to feedstock: One-step fractionation of lignocellulose components by selective organic-acid catalyzed depolymerization of hemicellulose in a biphasic system". *Green Chemistry*. **2011**, 13, 1772-1777.

38.- **Domínguez de María, P.** "Procesos industriales biocatalizados". In "*Fundamentos de Biocatálisis. Nuevos enfoques en Ciencia y Tecnología*". ISBN 978-987-558-221-7. E. Lewkowicz (Ed). Universidad Nacional de Quilmes (UNQ). Argentina. **2011**, pp. 191-213. (in Spanish).

37.- **Domínguez de María, P.***, Shanmuganathan, S. "Umpolung catalysis in Benzoin-type and Stetter-type reactions: From enzymatic performances to bio-mimetic organocatalytic concepts". *Current Organic Chemistry*. **2011**, 15, 2083-2087.

36.- **Domínguez de María, P.***. "Recent developments in the biotechnological production of hydrocarbons: Paving the way for bio-based platform chemicals". *ChemSusChem*. **2011**, 4, 327-329.

35.- **Domínguez de María, P.***, Maugeri, Z. "Ionic Liquids in Biotransformations: From proof-of-concept to emerging deep-eutectic-solvents". *Current Opinion in Chemical Biology*. **2011**, 15, 220-225.

34.- **Domínguez de María, P.***, Bracco, P., Castelhana, L.F., Bargeman, G. "Influence of the organocatalyst in the aldol / Mannich-type product selectivities in C-C bond forming reactions". *ACS Catalysis*. **2011**, 1, 70-75.

2010

33.- Shanmuganathan, S., Natalia, D., van den Wittenboer, A., Kohlmann, C., Greiner, L.*, **Domínguez de María, P.*** "Enzyme-catalyzed C-C bond formation using 2-methyltetrahydrofuran (2-MTHF) as (co)solvent: Efficient and bio-based alternative to DMSO and MTBE". *Green Chemistry*. **2010**, 12, 2240-2245.





32.- Shanmuganathan, S, Greiner, L., **Domínguez de María, P.*** "Silica-immobilized piperazine: A sustainable organocatalyst for aldol and Knoevenagel reactions". *Tetrahedron Letters*. **2010**, 51, 6670-6672.

31.- vom Stein, T., Grande, P.M., Sibilla, F., Commandeur, U., Fischer, R., Leitner, W., **Domínguez de María, P.*** "Salt-assisted organic acid-catalyzed depolymerization of cellulose". *Green Chemistry*. **2010**, 12, 1844-1849.

30.- **Domínguez de María, P.*** "Minimal Hydrolases: Organocatalytic ring-opening polymerizations catalyzed by naturally-occurring carboxylic acids". *ChemCatChem*. **2010**, 2, 487-492.

29.- **Domínguez de María, P.***, van Gemert, R.W., Straathof, A.J.J., Hanefeld, U*. "Biosynthesis of ethers: Unusual or common natural events?". *Natural Products Reports*. **2010**, 27, 370-392.

28.- Hoyos, P., Sinisterra, J.V., Molinari, F., Alcántara, A.R.*, **Domínguez de María, P.***. "Biocatalytic strategies for the asymmetric synthesis of α -Hydroxy Ketones". *Accounts of Chemical Research*. **2010**, 43, 288-299.

2009

27.- Hoyos, P., Sinisterra, J.V., **Domínguez de María, P.**, Alcántara, A.R. "Hydrolase-based synthesis of enantiopure α -hydroxy-ketones: From racemic resolutions to chemo-enzymatic dynamic kinetic resolutions". In "*Biotechnology: Research, Technology and Applications*". Nova Science Publishers, Inc. NY, USA. **2009**, pp 97-119 (Chapter 4).

26.- **Domínguez de María, P.***, Martinsson, A. "Ionic Liquid-based method to determine the degree of esterification in cellulose fibers". *The Analyst*, **2009**, 134, 493-496.

25.- Gamenara, D.*, **Domínguez de María, P.*** "*Candida* spp. redox machineries: An ample biocatalytic platform for practical applications and academic insights". *Biotechnology Advances*, **2009**, 27, 278-285.





24.- Domínguez de María, P.*, Fernández-Álvaro, E., ten Kate, A., Bargeman, G. "Role of apparent pK_a of carboxylic acids in lipase-catalyzed esterifications in biphasic systems". *Journal of Molecular Catalysis B: Enzymatic*. **2009**, 59, 220-224.

2008

23.- Domínguez de María, P.* "Nonsolvent applications of Ionic Liquids (RTILs) in Biotransformations and Organocatalysis". *Angewandte Chemie International Edition*. **2008**, 47, 6960-6968; "Nonsolvents - Anwendungen von ionischen Flüssigkeiten bei Biotransformationen und in der Organokatalyse". *Angewandte Chemie*, **2008**, 120, 7066-7075.

22.- Beloqui, A., **Domínguez de María, P.**, Golyshin, P., Ferrer, M. "Recent trends in industrial microbiology". *Current Opinion in Microbiology*, **2008**, 11, 240-248.

21.- Zoumpantioti, M., Parmaklis, P., **Domínguez de María, P.**, Stamatis, H., Sinisterra, J.V., Xenakis, A. "Esterification and reactions catalyzed by lipases immobilized in organogels. Effect of temperature and substrate diffusion". *Biotechnology Letters*, **2008**, 30, 1627-1631.

20.- Kourist, R., **Domínguez de María, P.**, Bornscheuer, U.T. "Enzymatic synthesis of optically active tertiary alcohols: Expanding the biocatalysis toolbox". *ChemBioChem*, **2008**, 9, 491-498.

19.- Domínguez de María, P., Stillger, T., Pohl, M., Kiessel, M., Liese, A., Gröger, H., Trauthwein, H. "Enantioselective C-C bond ligation using recombinant *E. coli* Whole Cell biocatalysts". *Advanced Synthesis & Catalysis*, **2008**, 350, 165-173.





2007

18.- Domínguez de María, P.*, García-Burgos, C.A., Bargeman, G., van Gemert, R.W. "Pig Liver Esterase (PLE) as biocatalyst in organic synthesis: From nature to cloning and to practical applications". *Synthesis*, **2007**, 10, 1439-1452.

17.- Domínguez de María, P., Pohl, M., Gocke, D., Gröger, H., Trauthwein, H., Stillger, T., Wallter, L., Müller, M. "Asymmetric synthesis of aliphatic 2-hydroxy-ketones by enzymatic carbonylation of aldehydes". *European Journal of Organic Chemistry*, **2007**, 18, 2940-2944.

2006

16.- Carboni-Oerlemans, C.*, Domínguez de María, P.*, Tuin, B., Bargeman, G., van der Meer, A.B., van Gemert, R.W. "Hydrolase-catalysed synthesis of peroxycarboxylic acids: biocatalytic promiscuity for practical applications". *Journal of Biotechnology*, **2006**, 126, 140-151.

15.- Domínguez de María, P., Sinisterra, J.V., Tsai, S.W., Alcántara, A.R. "*Carica papaya* lipase: an emerging and versatile biocatalyst". *Biotechnology Advances*, **2006**, 24, 493-499.

14.- Domínguez de María, P., Alcántara, A.R., Carballeira, J.D., de la Casa, R.M., García-Burgos, C.A., Hernáiz, M.J., Sánchez-Montero, J.M., Sinisterra, J.V. "*Candida rugosa* lipase: A traditional and complex biocatalyst". *Current Organic Chemistry*, **2006**, 10, 1053-1066.

13.- Domínguez de María, P., Sinisterra, J.V., Sánchez-Montero, J.M., Lotti, M., Valero, F., Alcántara, A.R. "Acyl transfer strategy for the biocatalytical characterisation of *Candida rugosa* lipases in organic solvents". *Enzyme and Microbial Technology*, **2006**, 38, 199-208.





12.- Domínguez de María, P., Stillger, T., Wallert, S., Pohl, M., Gröger, H., Drauz, K.H., Trauthwein, H., Liese, A. "Preparative enantioselective synthesis of benzoin and (*R*)-2-hydroxy-1-phenylpropanone by using benzaldehyde lyase". *Journal of Molecular Catalysis B: Enzymatic*, **2006**, 38, 43-47.

11.- Domínguez de María, P., Sánchez-Montero, J.M., Sinisterra, J.V., Alcántara, A.R. "Understanding *Candida rugosa* lipases: an overview". *Biotechnology Advances*, **2006**, 24, 180-196.

2005

10.- Domínguez de María, P.*, Carboni-Oerlemans, C.*, Tuin, B., Bargeman, G., van der Meer, A.B., van Gemert, R.W. "Biotechnological applications of *Candida antarctica* lipase A: State-of-the-art". *Journal of Molecular Catalysis B: Enzymatic*, **2005**, 37, 36-46.

9.- Wallert, S., Drauz, K., Grayson, I., Gröger, H., Domínguez de María, P., Bolm, C. "Ionic liquids as additives in the pig liver esterase (PLE) catalysed synthesis of chiral disubstituted malonates". *Green Chemistry*, **2005**, 7, 602-605.

8.- Domínguez de María, P., Kossmann, B., Potgrave, N., Buchholz, S., Trauthwein, H., May, O., Gröger, H. "Improved process for the enantioselective hydrolysis of prochiral diethyl malonates catalyzed by Pig Liver Esterase". *Synlett*, **2005**, 11, 1746-1748.

7.- Domínguez de María, P., Sánchez-Montero, J.M., Alcántara, A.R., Valero, F., Sinisterra, J.V. "Rational strategy for the production of new crude lipases from *Candida rugosa*". *Biotechnology Letters*, **2005**, 27, 499-503.





2004

6.- Alcántara, A.R., **Domínguez de María, P.**, Fernández, M., Hernáiz, M.J., Sánchez-Montero, J.M., Sinisterra, J.V. "Resolution of racemic acids, esters and amines by *Candida rugosa* lipase in slightly hydrated organic media". *Food Technology Biotechnology*, **2004**, 42, 343-354.

5.- **Domínguez de María, P.**, Xenakis, A., Stamatis, H., Sinisterra, J.V. "Unexpected reaction profile observed in the synthesis of propyl laurate when using *Candida rugosa* lipases immobilized in microemulsions based organogels". *Biotechnology Letters*, **2004**, 26, 1517-1520.

4.- **Domínguez de María, P.**, Xenakis, A., Stamatis, H., Sinisterra, J.V. "Lipase Factor (LF) as a characterization parameter to explain the catalytic activity of crude lipases from *Candida rugosa*, free or immobilised in microemulsion-based organogels". *Enzyme and Microbial Technology*, **2004**, 35, 277-283.

1999-2003

3.- **Domínguez de María, P.**, Martínez-Alzamora, F., Pérez Moreno, S., Valero, F., Rúa, M.L., Sánchez-Montero, J.M., Sinisterra, J.V., Alcántara, A.R. "Heptyl oleate synthesis as useful tool to discriminate between lipases, proteases and other hydrolases in crude preparations". *Enzyme and Microbial Technology*, **2002**, 31, 283-288.

2.- de Castro, M.S., **Domínguez de María, P.**, Sinisterra, J.V. "Enzymatic amidation and alkoxyacylation of amines using native and immobilised lipases with different origins: a comparative study". *Tetrahedron*, **2000**, 56, 1387-1391.

1.- **Domínguez de María, P.**, Sinisterra, J.V. "Causes of unreproducibility of *C. rugosa* lipase-catalyzed reactions in slightly hydrated organic media". *Tetrahedron*, **1999**, 55, 8555-8566.

