



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA



GRUPO DE INVESTIGACIÓN EN POLÍMEROS
Y COMPUESTOS ECOLÓGICOS

GiPC-Eco

PUBLICACIONES

2020

- [1] S. Montava-Jorda, D. Lascano, L. Quiles-Carrillo, N. Montanes, T. Boronat, A.V. Martinez-Sanz, S. Ferrandiz-Bou, S. Torres-Giner "Mechanical Recycling of Partially Bio-Based and Recycled Polyethylene Terephthalate Blends by Reactive Extrusion with Poly(styrene-co-glycidyl methacrylate)", *Polymers* (2020) **12**,
- [2] D. Lascano, J. Valcarcel, R. Balart, L. Quiles-Carrillo, T. Boronat "MANUFACTURING OF COMPOSITE MATERIALS WITH HIGH ENVIRONMENTAL EFFICIENCY USING EPOXY RESIN OF RENEWABLE ORIGIN AND PERMEABLE LIGHT CORES FOR VACUUM-ASSISTED INFUSION MOLDING", *Ingenius-Revista De Ciencia Y Tecnologia* (2020) 62-73.
- [3] F. Dominici, M.D. Samper, A. Carbonell-Verdu, F. Luzi, J. Lopez-Martinez, L. Torre, D. Puglia "Improved Toughness in Lignin/Natural Fiber Composites Plasticized with Epoxidized and Maleinized Linseed Oils", *Materials* (Basel, Switzerland) (2020) **13**,

2019

- [4] M.D. Samper, J.M. Ferri, A. Carbonell-Verdu, R. Balart, O. Fenollar "Properties of biobased epoxy resins from epoxidized linseed oil (ELO) crosslinked with a mixture of cyclic anhydride and maleinized linseed oil", *Express Polymer Letters* (2019) **13**, 407-418.



- [5] L. Quiles-Carrillo, S. Montava-Jorda, T. Boronat, C. Sammon, R. Balart, S. Torres-Giner "On the Use of Gallic Acid as a Potential Natural Antioxidant and Ultraviolet Light Stabilizer in Cast-Extruded Bio-Based High-Density Polyethylene Films", *Polymers* (2019) **12**,
- [6] L. Quiles-Carrillo, N. Montanes, J.M. Lagaron, R. Balart, S. Torres-Giner "In Situ Compatibilization of Biopolymer Ternary Blends by Reactive Extrusion with Low-Functionality Epoxy-Based Styrene-Acrylic Oligomer", *Journal of Polymers and the Environment* (2019) **27**, 84-96.
- [7] L. Quiles-Carrillo, N. Montanes, J.M. Lagaron, R. Balart, S. Torres-Giner "Bioactive Multilayer Polylactide Films with Controlled Release Capacity of Gallic Acid Accomplished by Incorporating Electrospun Nanostructured Coatings and Interlayers", *Applied Sciences-Basel* (2019) **9**,
- [8] L. Quiles-Carrillo, N. Montanes, A. Jorda-Vilaplana, R. Balart, S. Torres-Giner "A comparative study on the effect of different reactive compatibilizers on injection-molded pieces of bio-based high-density polyethylene/polylactide blends", *Journal of Applied Polymer Science* (2019) **136**,
- [9] L. Quiles-Carrillo, N. Montanes, V. Fombuena, R. Balart, S. Torres-Giner "Enhancement of the processing window and performance of polyamide 1010/bio-based high-density polyethylene blends by melt mixing with natural additives", *Polymer International* (2019)
- [10] L. Quiles-Carrillo, C. Mellinas, M.C. Garrigos, R. Balart, S. Torres-Giner "Optimization of Microwave-Assisted Extraction of Phenolic Compounds with Antioxidant Activity from Carob Pods", *Food Analytical Methods* (2019) **12**, 2480-2490.
- [11] L. Quiles-Carrillo, T. Boronat, N. Montanes, R. Balart, S. Torres-Giner "Injection-molded parts of fully bio-based polyamide 1010 strengthened with waste derived slate fibers pretreated with glycidyl- and amino-silane coupling agents", *Polymer Testing* (2019) **77**,
- [12] S. Montava-Jorda, S. Torres-Giner, S. Ferrandiz-Bou, L. Quiles-Carrillo, N. Montanes "Development of Sustainable and Cost-Competitive Injection-Molded Pieces of Partially Bio-Based Polyethylene Terephthalate through the Valorization of Cotton Textile Waste", *International Journal of Molecular Sciences* (2019) **20**,
- [13] S. Montava-Jorda, L. Quiles-Carrillo, N. Richart, S. Torres-Giner, N. Montanes "Enhanced Interfacial Adhesion of Polylactide/Poly(epsilon-caprolactone)/Walnut Shell Flour Composites by Reactive Extrusion with Maleinized Linseed Oil", *Polymers* (2019) **11**,



- [14] S. Montava-Jorda, V. Chacon, D. Lascano, L. Sanchez-Nacher, N. Montanes "Manufacturing and Characterization of Functionalized Aliphatic Polyester from Poly(lactic acid) with Halloysite Nanotubes", *Polymers* (2019) **11**,
- [15] N. Montanes, L. Quiles-Carrillo, S. Ferrandiz, O. Fenollar, T. Boronat "Effects of Lignocellulosic Fillers from Waste Thyme on Melt Flow Behavior and Processability of Wood Plastic Composites (WPC) with Biobased Poly(ethylene) by Injection Molding", *Journal of Polymers and the Environment* (2019) **27**, 747-756.
- [16] C. Mauricio Cobos, L. Garzon, J. Lopez Martinez, O. Fenollar, S. Ferrandiz "Study of thermal and rheological properties of PLA loaded with carbon and halloysite nanotubes for additive manufacturing", *Rapid Prototyping Journal* (2019) **25**, 738-743.
- [17] P. Liminana, D. Garcia-Sanoguera, L. Quiles-Carrillo, R. Balart, N. Montanes "Optimization of Maleinized Linseed Oil Loading as a Biobased Compatibilizer in Poly(Butylene Succinate) Composites with Almond Shell Flour", *Materials* (2019) **12**,
- [18] D. Lascano, L. Quiles-Carrillo, S. Torres-Giner, T. Boronat, N. Montanes "Optimization of the Curing and Post-Curing Conditions for the Manufacturing of Partially Bio-Based Epoxy Resins with Improved Toughness", *Polymers* (2019) **11**,
- [19] D. Lascano, L. Quiles-Carrillo, R. Balart, T. Boronat, N. Montanes "Toughened Poly (Lactic Acid)PLA Formulations by Binary Blends with Poly(Butylene Succinate-co-Adipate)PBSA and Their Shape Memory Behaviour", *Materials* (2019) **12**,
- [20] D. Lascano, L. Quiles-Carrillo, R. Balart, T. Boronat, N. Montanes "Kinetic Analysis of the Curing of a Partially Biobased Epoxy Resin Using Dynamic Differential Scanning Calorimetry", *Polymers* (2019) **11**,
- [21] D. Lascano, G. Moraga, J. Ivorra-Martinez, S. Rojas-Lema, S. Torres-Giner, R. Balart, T. Boronat, L. Quiles-Carrillo "Development of Injection-Molded Polylactide Pieces with High Toughness by the Addition of Lactic Acid Oligomer and Characterization of Their Shape Memory Behavior", *Polymers* (2019) **11**,
- [22] M. Jorda, S. Montava-Jorda, R. Balart, D. Lascano, N. Montanes, L. Quiles-Carrillo "Functionalization of Partially Bio-Based Poly(Ethylene Terephthalate) by Blending with Fully Bio-Based Poly(Amide) 10,10 and a Glycidyl Methacrylate-Based Compatibilizer", *Polymers* (2019) **11**,
- [23] J. Gonzalez-Ausejo, J. Gamez-Perez, R. Balart, J. Maria Lagaron, L. Cabedo "Effect of the addition of sepiolite on the morphology and properties of melt compounded PHBV/PLA blends", *Polymer Composites* (2019) **40**, E156-E168.
- [24] L. Gonzalez, A. Aguero, L. Quiles-Carrillo, D. Lascano, N. Montanes "Optimization of the Loading of an Environmentally Friendly Compatibilizer Derived



from Linseed Oil in Poly(Lactic Acid)/Diatomaceous Earth Composites", Materials (2019) **12**,

- [25] M.J. Garcia-Campo, L. Quiles-Carrillo, L. Sanchez-Nacher, R. Balart, N. Montanes "High toughness poly(lactic acid) (PLA) formulations obtained by ternary blends with poly(3-hydroxybutyrate) (PHB) and flexible polyesters from succinic acid", *Polymer Bulletin* (2019) **76**, 1839-1859.
- [26] V. Fombuena, R. Petrucci, F. Dominici, A. Jorda-Vilaplana, N. Montanes, L. Torre "Maleinized Linseed Oil as Epoxy Resin Hardener for Composites with High Bio Content Obtained from Linen Byproducts", *Polymers* (2019) **11**,
- [27] J.M. Ferri, D.L. Motoc, S. Ferrandiz Bou, R. Balart "Thermal expansivity and degradation properties of PLA/HA and PLA/beta TCP in vitro conditioned composites", *Journal of Thermal Analysis and Calorimetry* (2019) **138**, 2691-2702.
- [28] F. Dominici, D. Garcia Garcia, V. Fombuena, F. Luzi, D. Puglia, L. Torre, R. Balart "Bio-Polyethylene-Based Composites Reinforced with Alkali and Palmitoyl Chloride-Treated Coffee Silverskin", *Molecules* (2019) **24**,
- [29] R. Balart, D. Garcia-Sanoguera, L. Quiles-Carrillo, N. Montanes, S. Torres-Giner "Kinetic Analysis of the Thermal Degradation of Recycled Acrylonitrile-Butadiene-Styrene by non-Isothermal Thermogravimetry", *Polymers* (2019) **11**,
- [30] A. Aguero, L. Quiles-Carrillo, A. Jorda-Vilaplana, O. Fenollar, N. Montanes "Effect of different compatibilizers on environmentally friendly composites from poly(lactic acid) and diatomaceous earth", *Polymer International* (2019) **68**, 893-903.
- [31] A. Aguero, M. del Carmen Morcillo, L. Quiles-Carrillo, R. Balart, T. Boronat, D. Lascano, S. Torres-Giner, O. Fenollar "Study of the Influence of the Reprocessing Cycles on the Final Properties of Polylactide Pieces Obtained by Injection Molding", *Polymers* (2019) **11**,

2018

- [32] S. Torres-Giner, N. Montanes, V. Fombuena, T. Boronat, L. Sanchez-Nacher "Preparation and characterization of compression-molded green composite sheets made of poly(3-hydroxybutyrate) reinforced with long pita fibers", *Advances in Polymer Technology* (2018) **37**, 1305-1315.
- [33] F. Sarasini, F. Luzi, F. Dominici, G. Maffei, A. Iannone, A. Zuorro, R. Lavecchia, L. Torre, A. Carbonell-Verdu, R. Balart, D. Puglia "Effect of Different



Compatibilizers on Sustainable Composites Based on a PHBV/PBAT Matrix Filled with Coffee Silverskin", Polymers (2018) 10,

- [34] L. Quiles-Carrillo, N. Montanes, C. Sammon, R. Balart, S. Torres-Giner "Compatibilization of highly sustainable polylactide/almond shell flour composites by reactive extrusion with maleinized linseed oil", Industrial Crops and Products (2018) **111**, 878-888.
- [35] L. Quiles-Carrillo, N. Montanes, J. Maria Lagaron, R. Balart, S. Torres-Giner "On the use of acrylated epoxidized soybean oil as a reactive compatibilizer in injection-molded compostable pieces consisting of polylactide filled with orange peel flour", Polymer International (2018) **67**, 1341-1351.
- [36] L. Quiles-Carrillo, N. Montanes, D. Garcia-Garcia, A. Carbonell-Verdu, R. Balart, S. Torres-Giner "Effect of different compatibilizers on injection-molded green composite pieces based on polylactide filled with almond shell flour", Composites Part B-Engineering (2018) **147**, 76-85.
- [37] L. Quiles-Carrillo, S. Duart, N. Montanes, S. Torres-Giner, R. Balart "Enhancement of the mechanical and thermal properties of injection-molded polylactide parts by the addition of acrylated epoxidized soybean oil", Materials & Design (2018) **140**, 54-63.
- [38] L. Quiles-Carrillo, M.M. Blanes-Martinez, N. Montanes, O. Fenollar, S. Torres-Giner, R. Balart "Reactive toughening of injection-molded polylactide pieces using maleinized hemp seed oil", European Polymer Journal (2018) **98**, 402-410.
- [39] D.L. Motoc, S. Ferrandiz Bou, R. Balart "Thermal properties comparison of hybrid CF/FF and BF/FF cyanate ester-based composites", Journal of Thermal Analysis and Calorimetry (2018) **133**, 509-518.
- [40] N. Montanes, D. Garcia-Sanoguera, V.J. Segui, O. Fenollar, T. Boronat "Processing and Characterization of Environmentally Friendly Composites from Biobased Polyethylene and Natural Fillers from Thyme Herbs", Journal of Polymers and the Environment (2018) **26**, 1218-1230.
- [41] P. Liminana, L. Quiles-Carrillo, T. Boronat, R. Balart, N. Montanes "The Effect of Varying Almond Shell Flour (ASF) Loading in Composites with Poly(Butylene Succinate) (PBS) Matrix Compatibilized with Maleinized Linseed Oil (MLO)", Materials (2018) **11**,
- [42] P. Liminana, D. Garcia-Sanoguera, L. Quiles-Carrillo, R. Balart, N. Montanes "Development and characterization of environmentally friendly composites from poly(butylene succinate) (PBS) and almond shell flour with different compatibilizers", Composites Part B-Engineering (2018) **144**, 153-162.



- [43] J. Lario, V. Fombuena, A. Vicente, V. Amigo "Influence of Heat Treatment and UV Irradiation on the Wettability of Ti35Nb10Ta Nanotubes", *Metals* (2018) **8**,
- [44] J. Lario, V. Fombuena, F. Segovia, V. Amigo "Influence of the nanotubular morphology on the wettability and contact angle of Ti6Al4V ELI alloy", *Revista De Metalurgia* (2018) **54**,
- [45] M. Jesus Garcia-Campo, T. Boronat, L. Quiles-Carrillo, R. Balart, N. Montanes "Manufacturing and Characterization of Toughened Poly(lactic acid) (PLA) Formulations by Ternary Blends with Biopolymers", *Polymers* (2018) **10**,
- [46] D. Garcia-Garcia, L. Quiles-Carrillo, N. Montanes, V. Fombuena, R. Balart "Manufacturing and Characterization of Composite Fibreboards with Posidonia oceanica Wastes with an Environmentally-Friendly Binder from Epoxy Resin", *Materials* (2018) **11**,
- [47] D. Garcia-Garcia, J. Lopez-Martinez, R. Balart, E. Stromberg, R. Moriana "Reinforcing capability of cellulose nanocrystals obtained from pine cones in a biodegradable poly(3-hydroxybutyrate)/poly(epsilon-caprolactone) (PHB/PCL) thermoplastic blend", *European Polymer Journal* (2018) **104**, 10-18.
- [48] D. Garcia-Garcia, D. Garcia-Sanoguera, V. Fombuena, J. Lopez-Martinez, R. Balart "Improvement of mechanical and thermal properties of poly(3-hydroxybutyrate) (PHB) blends with surface-modified halloysite nanotubes (HNT)", *Applied Clay Science* (2018) **162**, 487-498.
- [49] D. Garcia-Garcia, R. Balart, J. Lopez-Martinez, M. Ek, R. Moriana "Optimizing the yield and physico-chemical properties of pine cone cellulose nanocrystals by different hydrolysis time", *Cellulose* (2018) **25**, 2925-2938.
- [50] J.M. Ferri, J. Jorda, N. Montanes, O. Fenollar, R. Balart "Manufacturing and characterization of poly(lactic acid) composites with hydroxyapatite", *Journal of Thermoplastic Composite Materials* (2018) **31**, 865-881.
- [51] J.M. Ferri, D. Garcia-Garcia, A. Carbonell-Verdu, O. Fenollar, R. Balart "Poly(lactic acid) formulations with improved toughness by physical blending with thermoplastic starch", *Journal of Applied Polymer Science* (2018) **135**,
- [52] A. Carbonell-Verdu, J.M. Ferri, F. Dominici, T. Boronat, L. Sanchez-Nacher, R. Balart, L. Torre "Manufacturing and compatibilization of PLA/PBAT binary blends by cottonseed oil-based derivatives", *Express Polymer Letters* (2018) **12**, 808-823.
- [53] J.F. Balart, N. Montanes, V. Fombuena, T. Boronat, L. Sanchez-Nacher "Disintegration in Compost Conditions and Water Uptake of Green Composites from Poly(Lactic Acid) and Hazelnut Shell Flour", *Journal of Polymers and the Environment* (2018) **26**, 701-715.



- [54] J.F. Balart, D. Garcia-Sanoguera, R. Balart, T. Boronat, L. Sanchez-Nacher "Manufacturing and properties of biobased thermoplastic composites from poly(lactid acid) and hazelnut shell wastes", *Polymer Composites* (2018) **39**, 848-857.

2017

- [55] S. Torres-Giner, A. Torres, M. Ferrandiz, V. Fombuena, R. Balart "Antimicrobial activity of metal cation-exchanged zeolites and their evaluation on injection-molded pieces of bio-based high-density polyethylene", *Journal of Food Safety* (2017) **37**,
- [56] E. Torres, A. Valles-Lluch, V. Fombuena, B. Napiwocki, T. Lih-Sheng "Influence of the Hydrophobic-Hydrophilic Nature of Biomedical Polymers and Nanocomposites on In Vitro Biological Development", *Macromolecular Materials and Engineering* (2017) **302**,
- [57] E. Torres, V. Fombuena, A. Valles-Lluch, T. Ellingham "Improvement of mechanical and biological properties of Polycaprolactone loaded with Hydroxyapatite and Halloysite nanotubes", *Materials Science & Engineering C-Materials for Biological Applications* (2017) **75**, 418-424.
- [58] A. Revert, M. Reig, V.J. Segui, T. Boronat, V. Fombuena, R. Balart "Upgrading Brewer's Spent Grain as Functional Filler in Polypropylene Matrix", *Polymer Composites* (2017) **38**, 40-47.
- [59] L. Quiles-Carrillo, N. Montanes, T. Boronat, R. Balart, S. Torres-Giner "Evaluation of the engineering performance of different bio-based aliphatic homopolyamide tubes prepared by profile extrusion", *Polymer Testing* (2017) **61**, 421-429.
- [60] B. Mico-Vicent, J. Jordan, F. Martinez-Verdu, R. Balart "A combination of three surface modifiers for the optimal generation and application of natural hybrid nanopigments in a biodegradable resin", *Journal of Materials Science* (2017) **52**, 889-898.
- [61] A. Jorda-Vilaplana, A. Carbonell-Verdu, M.D. Samper, A. Pop, D. Garcia-Sanoguera "Development and characterization of a new natural fiber reinforced thermoplastic (NFRP) with *Cortaderia selloana* (Pampa grass) short fibers", *Composites Science and Technology* (2017) **145**, 1-9.
- [62] J. Gonzalez-Ausejo, E. Sanchez-Safont, J. Maria Lagaron, R. Balart, L. Cabedo, J. Gamez-Perez "Compatibilization of poly(3-hydroxybutyrate-co-3-hydroxyvalerate)-poly(lactic acid) blends with diisocyanates", *Journal of Applied Polymer Science* (2017) **134**,



- [63] D. Garcia-Garcia, E. Rayon, A. Carbonell-Verdu, J. Lopez-Martinez, R. Balart "Improvement of the compatibility between poly(3-hydroxybutyrate) and poly(8-caprolactone) by reactive extrusion with dicumyl peroxide", European Polymer Journal (2017) **86**, 41-57.
- [64] D. Garcia-Garcia, L. Quiles-Carrillo, N. Montanes, V. Fombuena, R. Balart "Manufacturing and Characterization of Composite Fibreboards with Posidonia oceanica Wastes with an Environmentally-Friendly Binder from Epoxy Resin", Materials (Basel, Switzerland) (2017) **11**,
- [65] D. Garcia-Garcia, J.M. Ferri, L. Ripoll, M. Hidalgo, J. Lopez-Martinez, R. Balart "Characterization of selectively etched halloysite nanotubes by acid treatment", Applied Surface Science (2017) **422**, 616-625.
- [66] D. Garcia-Garcia, O. Fenollar, V. Fombuena, J. Lopez-Martinez, R. Balart "Improvement of Mechanical Ductile Properties of Poly(3-hydroxybutyrate) by Using Vegetable Oil Derivatives", Macromolecular Materials and Engineering (2017) **302**,
- [67] M.J. Garcia-Campo, L. Quiles-Carrillo, J. Masia, M.J. Reig-Perez, N. Montanes, R. Balart "Environmentally Friendly Compatibilizers from Soybean Oil for Ternary Blends of Poly(lactic acid)-PLA, Poly(epsilon-caprolactone)-PCL and Poly(3-hydroxybutyrate)-PHB", Materials (Basel, Switzerland) (2017) **10**,
- [68] J.M. Ferri, D. Garcia-Garcia, N. Montanes, O. Fenollar, R. Balart "The effect of maleinized linseed oil as biobased plasticizer in poly (lactic acid)-based formulations", Polymer International (2017) **66**, 882-891.
- [69] M. Ferrandiz, A. Lopez, E. Franco, D. Garcia-Garcia, D. Fenollar, R. Balart "Development and characterization of bioactive alginate microcapsules with cedarwood essential oil", Flavour and Fragrance Journal (2017) **32**, 184-190.

2016

- [70] A. Carbonell-Verdu, D. Garcia-Sanoguera, A. Jorda-Vilaplana, L. Sanchez-Nacher, R. Balart "A new biobased plasticizer for poly(vinyl chloride) based on epoxidized cottonseed oil (vol 134, pg 44438, 2016)", Journal of Applied Polymer Science (2017) **134**,
- [71] A. Carbonell-Verdu, D. Garcia-Garcia, F. Dominici, L. Torre, L. Sanchez-Nacher, R. Balart "PLA films with improved flexibility properties by using maleinized cottonseed oil", European Polymer Journal (2017) **91**, 248-259.



- [72] A. Carbonell-Verdu, M. Dolores Samper, D. Garcia-Garcia, L. Sanchez-Nacher, R. Balart "Plasticization effect of epoxidized cottonseed oil (ECSO) on poly(lactic acid)", Industrial Crops and Products (2017) **104**, 278-286.
- [73] A. Valdes, O. Fenollar, A. Beltran, R. Balart, E. Fortunati, J. Maria Kenny, M. Carmen Garrigos "Characterization and enzymatic degradation study of poly(epsilon-caprolactone)-based biocomposites from almond agricultural by-products", Polymer Degradation and Stability (2016) **132**, 181-190.
- [74] S. Torres-Giner, N. Montanes, O. Fenollar, D. Garcia-Sanoguera, R. Balart "Development and optimization of renewable vinyl plastisol/wood flour composites exposed to ultraviolet radiation", Materials & Design (2016) **108**, 648-658.
- [75] S. Torres-Giner, N. Montanes, T. Boronat, L. Quiles-Carrillo, R. Balart "Melt grafting of sepiolite nanoclay onto poly(3-hydroxybutyrate-co-4-hydroxybutyrate) by reactive extrusion with multi-functional epoxy-based styrene-acrylic oligomer", European Polymer Journal (2016) **84**, 693-707.
- [76] D. Garcia-Garcia, J.M. Ferri, N. Montanes, J. Lopez-Martinez, R. Balart "Plasticization effects of epoxidized vegetable oils on mechanical properties of poly(3-hydroxybutyrate)", Polymer International (2016) **65**, 1157-1164.
- [77] D. Garcia-Garcia, J.M. Ferri, T. Boronat, J. Lopez-Martinez, R. Balart "Processing and characterization of binary poly(hydroxybutyrate) (PHB) and poly(caprolactone) (PCL) blends with improved impact properties", Polymer Bulletin (2016) **73**, 3333-3350.
- [78] D. Garcia-Garcia, A. Carbonell-Verdu, A. Jorda-Vilaplana, R. Balart, D. Garcia-Sanoguera "Development and characterization of green composites from bio-based polyethylene and peanut shell", Journal of Applied Polymer Science (2016) **133**,
- [79] J.M. Ferri, M.D. Samper, D. Garcia-Sanoguera, M.J. Reig, O. Fenollar, R. Balart "Plasticizing effect of biobased epoxidized fatty acid esters on mechanical and thermal properties of poly(lactic acid)", Journal of Materials Science (2016) **51**, 5356-5366.
- [80] J.M. Ferri, I. Gisbert, D. Garcia-Sanoguera, M.J. Reig, R. Balart "The effect of beta-tricalcium phosphate on mechanical and thermal performances of poly(lactic acid)", Journal of Composite Materials (2016) **50**, 4189-4198.
- [81] J.M. Ferri, D. Garcia-Garcia, L. Sanchez-Nacher, O. Fenollar, R. Balart "The effect of maleinized linseed oil (MLO) on mechanical performance of poly(lactic acid)-thermoplastic starch (PLA-TPS) blends", Carbohydrate Polymers (2016) **147**, 60-68.
- [82] J.M. Ferri, O. Fenollar, A. Jorda-Vilaplana, D. Garcia-Sanoguera, R. Balart "Effect of miscibility on mechanical and thermal properties of poly(lactic acid)/polycaprolactone blends", Polymer International (2016) **65**, 453-463.



- [83] A. Carbonell-Verdu, D. Garcia-Sanoguera, A. Jorda-Vilaplana, L. Sanchez-Nacher, R. Balart "A new biobased plasticizer for poly(vinyl chloride) based on epoxidized cottonseed oil", Journal of Applied Polymer Science (2016) **133**,
- [84] A. Carbonell-Verdu, D. Garcia-Sanoguera, A. Jorda-Vilaplana, L. Sanchez-Nacher, R. Balart "A new biobased plasticizer for poly(vinyl chloride) based on epoxidized cottonseed oil (vol 33, 43642, 2016)", Journal of Applied Polymer Science (2016) **133**,
- [85] J.F. Balart, V. Fombuena, O. Fenollar, T. Boronat, L. Sanchez-Nacher "Processing and characterization of high environmental efficiency composites based on PLA and hazelnut shell flour (HSF) with biobased plasticizers derived from epoxidized linseed oil (ELO)", Composites Part B-Engineering (2016) **86**, 168-177.

2015

- [86] M.D. Samper-Madrigal, O. Fenollar, F. Dominici, R. Balart, J.M. Kenny "The effect of sepiolite on the compatibilization of polyethylene-thermoplastic starch blends for environmentally friendly films", Journal of Materials Science (2015) **50**, 863-872.
- [87] M.D. Samper, R. Petrucci, L. Sanchez-Nacher, R. Balart, J.M. Kenny "New environmentally friendly composite laminates with epoxidized linseed oil (ELO) and slate fiber fabrics", Composites Part B-Engineering (2015) **71**, 203-209.
- [88] M.D. Samper, R. Petrucci, L. Sanchez-Nacher, R. Balart, J.M. Kenny "Properties of composite laminates based on basalt fibers with epoxidized vegetable oils", Materials & Design (2015) **72**, 9-15.
- [89] M.D. Samper, R. Petrucci, L. Sanchez-Nacher, R. Balart, J.M. Kenny "Effect of silane coupling agents on basalt fiber-epoxidized vegetable oil matrix composite materials analyzed by the single fiber fragmentation technique", Polymer Composites (2015) **36**, 1205-1212.
- [90] A. Jorda-Vilaplana, L. Sanchez-Nacher, V. Fombuena, D. Garcia-Garcia, A. Carbonell-Verdu "Improvement of mechanical properties of polylactic acid adhesion joints with bio-based adhesives by using air atmospheric plasma treatment", Journal of Applied Polymer Science (2015) **132**,
- [91] D. Garcia-Garcia, A. Carbonell, M.D. Samper, D. Garcia-Sanoguera, R. Balart "Green composites based on polypropylene matrix and hydrophobized spent coffee ground (SCG) powder", Composites Part B-Engineering (2015) **78**, 256-265.



- [92] B. Ferrero, V. Fombuena, O. Fenollar, T. Boronat, R. Balart "Development of natural fiber-reinforced plastics (NFRP) based on biobased polyethylene and waste fibers from *Posidonia oceanica* seaweed", *Polymer Composites* (2015) **36**, 1378-1385.
- [93] A. Carbonell-Verdu, D. Garcia-Garcia, A. Jorda, M.D. Samper, R. Balart "Development of slate fiber reinforced high density polyethylene composites for injection molding", *Composites Part B-Engineering* (2015) **69**, 460-466.
- [94] A. Carbonell-Verdu, L. Bernardi, D. Garcia-Garcia, L. Sanchez-Nacher, R. Balart "Development of environmentally friendly composite matrices from epoxidized cottonseed oil", *European Polymer Journal* (2015) **63**, 1-10.
- [95] T. Boronat, V. Fombuena, D. Garcia-Sanoguera, L. Sanchez-Nacher, R. Balart "Development of a biocomposite based on green polyethylene biopolymer and eggshell", *Materials & Design* (2015) **68**, 177-185.

2014

- [96] A. Jorda-Vilaplana, V. Fombuena, D. Garcia-Garcia, M.D. Samper, L. Sanchez-Nacher "Surface modification of polylactic acid (PLA) by air atmospheric plasma treatment", *European Polymer Journal* (2014) **58**, 23-33.
- [97] V. Fombuena, D. Garcia-Sanoguera, L. Sanchez-Nacher, R. Balart, T. Boronat "Optimization of atmospheric plasma treatment of LDPE films: influence on adhesive properties and ageing behavior", *Journal of Adhesion Science and Technology* (2014) **28**, 97-113.
- [98] V. Fombuena, L. Bernardi, O. Fenollar, T. Boronat, R. Balart "Characterization of green composites from biobased epoxy matrices and bio-fillers derived from seashell wastes", *Materials & Design* (2014) **57**, 168-174.

2013

- [99] M.D. Samper, E. Fages, O. Fenollar, T. Boronat, R. Balart "The potential of flavonoids as natural antioxidants and UV light stabilizers for polypropylene", *Journal of Applied Polymer Science* (2013) **129**, 1707-1716.
- [100] D. Juarez, D. Garcia-Sanoguera, S. Ferrandiz, M. Angel Peydro, R. Balart "Study, Mechanical Characterization and Mathematical Modeling of Compatible SEBS Blends for Industrial Applications in Orthopedics and Childcare", *Polymer-Plastics Technology and Engineering* (2013) **52**, 862-868.



- [101] D. Juarez, R. Balart, T. Boronat, M.J. Reig, S. Ferrandiz "Validation of the Use of SEBS Blends as a Substitute for Liquid Silicone Rubber in Injection Processes", Materials and Manufacturing Processes (2013) **28**, 1215-1221.
- [102] V. Fombuena, L. Sanchez-Nacher, M.D. Samper, D. Juarez, R. Balart "Study of the Properties of Thermoset Materials Derived from Epoxidized Soybean Oil and Protein Fillers", Journal of the American Oil Chemists Society (2013) **90**, 449-457.
- [103] V. Fombuena, J. Balart, T. Boronat, L. Sanchez-Nacher, D. Garcia-Sanoguera "Improving mechanical performance of thermoplastic adhesion joints by atmospheric plasma", Materials & Design (2013) **47**, 49-56.
- [104] B. Ferrero, T. Boronat, R. Moriana, O. Fenollar, R. Balart "Green Composites Based on Wheat Gluten Matrix and Posidonia Oceanica Waste Fibers as Reinforcements", Polymer Composites (2013) **34**, 1663-1669.
- [105] O. Fenollar, D. Garcia-Sanoguera, L. Sanchez-Nacher, T. Boronat, J. Lopez, R. Balart "Mechanical and Thermal Properties of Polyvinyl Chloride Plasticized with Natural Fatty Acid Esters", Polymer-Plastics Technology and Engineering (2013) **52**, 761-767.
- [106] E. Fages, M.A. Cano, S. Girones, T. Boronat, O. Fenollar, R. Balart "The use of wet-laid techniques to obtain flax nonwovens with different thermoplastic binding fibers for technical insulation applications", Textile Research Journal (2013) **83**, 426-437.
- [107] J.M. Espana, M.D. Samper, E. Fages, L. Sanchez-Nacher, R. Balart "Investigation of the effect of different silane coupling agents on mechanical performance of basalt fiber composite laminates with biobased epoxy matrices", Polymer Composites (2013) **34**, 376-381.
- [108] J.M. Espana, T. Boronat, D. Garcia-Sanoguera, J. Lopez, R. Balart "Use of atmospheric plasma treatment to improve adhesion properties of sodium ionomer sheets", Surface & Coatings Technology (2013) **218**, 1-6.

2012

- [109] M.D. Samper, V. Fombuena, T. Boronat, D. Garcia-Sanoguera, R. Balart "Thermal and Mechanical Characterization of Epoxy Resins (ELO and ESO) Cured with Anhydrides", Journal of the American Oil Chemists Society (2012) **89**, 1521-1528.



- [110] J. Pascual, F. Peris, T. Boronat, O. Fenollar, R. Balart "Study of the Effects of Multi-Walled Carbon Nanotubes on Mechanical Performance and Thermal Stability of Polypropylene", *Polymer Engineering and Science* (2012) **52**, 733-740.
- [111] R. Lopez, M. Pascual, D. Garcia-Sanoguera, L. Sanchez-Nacher, R. Balart "Improvement of Liquid Absorption Properties of Nonwoven Polypropylene Substrates by Low Pressure Plasma Treatment with CH₄-O₂ Mixture Gas", *Fibers and Polymers* (2012) **13**, 1139-1144.
- [112] D. Juarez, S. Ferrandiz, R. Balart, M.J. Reig, M.A. Peydro, *Rheological Characterization and Mathematical Modeling of a SEBS Blend for Industrial Applications where Nowadays Liquid Silicone Rubber is Used*, in *Advances in Manufacturing Systems*, M. Marcos, J. Salguero, and A. Pastor, Editors. 2012. p. 109-114.
- [113] O. Fenollar, D. Garcia-Sanoguera, L. Sanchez-Nacher, J. Lopez, R. Balart "Characterization of the curing process of vinyl plastisols with epoxidized linseed oil as a natural-based plasticizer", *Journal of Applied Polymer Science* (2012) **124**, 2550-2557.
- [114] E. Fages, S. Girones, L. Sanchez-Nacher, D. Garcia-Sanoguera, R. Balart "Use of wet-laid techniques to form flax-polypropylene nonwovens as base substrates for eco-friendly composites by using hot-press molding", *Polymer Composites* (2012) **33**, 253-261.
- [115] J.M. Espana, L. Sanchez-Nacher, T. Boronat, V. Fombuena, R. Balart "Properties of Biobased Epoxy Resins from Epoxidized Soybean Oil (ESBO) Cured with Maleic Anhydride (MA)", *Journal of the American Oil Chemists Society* (2012) **89**, 2067-2075.
- [116] J.M. Espana, D. Garcia, L. Sanchez, J. Lopez, R. Balart "Modification of surface wettability of sodium ionomer sheets via atmospheric plasma treatment", *Polymer Engineering and Science* (2012) **52**, 2573-2580.
- [117] J.M. Espana, E. Fages, R. Moriana, T. Boronat, R. Balart "Antioxidant and antibacterial effects of natural phenolic compounds on green composite materials", *Polymer Composites* (2012) **33**, 1288-1294.
- [118] T. Boronat, J.M. Espana, I. Rico, O. Fenollar, R. Balart, *Processing and Characterization of New Organic Matrix for Composite Materials based on Acrylated Epoxidized Vegetable Oils*, in *Advances in Materials Processing Technologies*, M. Marcos and J. Salguero, Editors. 2012. p. 201-206.
- [119] D. Bertomeu, D. Garcia-Sanoguera, O. Fenollar, T. Boronat, R. Balart "Use of eco-friendly epoxy resins from renewable resources as potential substitutes of petrochemical



epoxy resins for ambient cured composites with flax reinforcements", Polymer Composites (2012) 33, 683-692.

- [120] J. Balart, V. Fombuena, J.M. Espana, L. Sanchez-Nacher, R. Balart "*Improvement of adhesion properties of polypropylene substrates by methyl methacrylate UV photografting surface treatment*", Materials & Design (2012) 33, 1-10.
- [121] J. Balart, V. Fombuena, T. Boronat, M.J. Reig, R. Balart "*Surface modification of polypropylene substrates by UV photografting of methyl methacrylate (MMA) for improved surface wettability*", Journal of Materials Science (2012) 47, 2375-2383.

2011

- [122] D. Juarez, S. Ferrand, O. Fenollar, V. Fombuena, R. Balart "*Improvement of thermal inertia of styrene-ethylene/butylene-styrene (SEBS) polymers by addition of microencapsulated phase change materials (PCMs)*", European Polymer Journal (2011) 47, 153-161.
- [123] E. Fages, J. Pascual, O. Fenollar, D. Garcia-Sanoguera, R. Balart "*Study of Antibacterial Properties of Polypropylene Filled With Surfactant-Coated Silver Nanoparticles*", Polymer Engineering and Science (2011) 51, 804-811.

2010

- [124] M. Blanes, B. Marco, M.J. Gisbert, M.A. Bonet, R. Balart "*Surface Modification of Polypropylene Non-woven Substrates by Padding with Antistatic Agents for Deposition of Polyvinyl Alcohol Nanofiber Webs by Electrospinning*", Textile Research Journal (2010) 80, 1335-1346.
- [125] M. Blanes, M.J. Gisbert, B. Marco, M. Bonet, J. Gisbert, R. Balart "*Influence of Glyoxal in the Physical Characterization of PVA Nanofibers*", Textile Research Journal (2010) 80, 1465-1472.
- [126] J. Balart, V. Fombuena, R. Balart, J.M. Espana, R. Navarro, O. Fenollar "*Optimization of Adhesion Properties of Polypropylene by Surface Modification Using Acrylic Acid Photografting*", Journal of Applied Polymer Science (2010) 116, 3256-3264.