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LÍNEAS DE INVESTIGACIÓN

Biorefinería de materiales lignocelulósicos.
Fabricación de papel.
Obtención de Lignonanofibras
Aplicación de las fracciones constituyentes de los materiales lignocelulósicos
Aplicación de LNFC en la industria alimentaria

PROYECTOS DE INVESTIGACIÓN

Development of a biorefinery process of lignocellulosic materials. Fractionation by autohydrolysis and pulping operations. CTQ 2010-19844-C02-01 FINANCIAL ENTITY: Plan Nacional I+D+i (MICINN) 01-01-2011 /12-31-2013 PRINCIPAL INVESTIGATOR: Luis Jiménez Alcaide

Biorefinery of agricultural residues. Benefit of hemicellulose, cellulose and lignin. TEP-6261 FINANCIAL ENTITY: Consejería de Economía Innovación y Ciencia (Proyecto de Excelencia) 03-15-2011 / 03-15-2015 PRINCIPAL INVESTIGATOR: Alejandro Rodríguez Pascual

Study of the suitability of olive and orange pruning for the production of cellulose pulp in a semi-industrial plant. TRA-2009_0064 FINANCIAL ENTITY: Ministerio de Ciencia y Tecnología 1/3/2010 / 29/2/2012 PRINCIPAL INVESTIGATOR: Luis Jiménez Alcaide

Study of sequences of thermo-chemical treatments for the optimization of integrated biorefinery applied to fast-growing crops and agricultural wastes FINANCIAL ENTITY: Plan Nacional I+D+i (MICINN) 01/01/2014 / 31/12/2016 PRINCIPAL INVESTIGATOR; Alejandro Rodríguez Pascual

Lignin-based nanofiber of cellulose from agrifood waste for application in functional and sustainable food packaging. CTQ2016-78729-R FINANCIAL ENTITY: Plan Nacional I+D+i (MICINN) 30/12/2016 /29/12/2019 PRINCIPAL INVESTIGATOR; Alejandro Rodríguez Pascual

PUBLICACIONES/OTRAS ACTIVIDADES

Juan Domínguez-Robles, Rafael Sánchez, Pilar Díaz-Carrasco, Eduardo Espinosa, María Trinidad García-Domínguez, **Alejandro Rodríguez**. Isolation and characterization of lignins from wheat straw: application as binder in lithium batteries. International Journal of Biological Macromolecules, 104, 909-918 <https://doi.org/10.1016/j.ijbiomac.2017.07.015> 2017

Eduardo Espinosa, Rafael Sánchez, Zoilo González, Juan Domínguez-Robles, Begoña Ferrari, **Alejandro Rodríguez**. Rapidly growing vegetables as new sources for lignocellulose nanofibre isolation: Physicochemical, thermal and rheological characterization. Carbohydrate Polymer, 175, 27-37. <https://doi.org/10.1016/j.carbpol.2017.07.055> 2017

Eduardo Espinosa, Quim Tarrés, Juan Domínguez-Robles, Marc Delgado-Aguilar, Pere Mutjé, **Alejandro Rodríguez**. Recycled fibers for fluting production: the role of lignocellulosic micro/nanofibers of banana leaves. Journal of Cleaner Production, 172, 233-238 <https://doi.org/10.1016/j.jclepro.2017.10.174> 2018

Juan Domínguez-Robles, Quim Tarrés, Neus Pellicer, Marc Delgado-Aguilar, **Alejandro Rodríguez**, Pere Mutjé. Approaching a new generation of fiberboards taking advantage of self-lignin as green adhesive. International Journal of Biological Macromolecules, 108, 927-935. <https://doi.org/10.1016/j.ijbiomac.2017.11.005> 2018

Juan Domínguez-Robles, María Soledad Peresin, Tarja Tamminen, **Alejandro Rodríguez**, Eneko Larrañeta, Anna-Stiina Jääskeläinen. Lignin-based hydrogels with "super-swelling" capacities for dye removal. International Journal of Biological Macromolecules, 115, 1249-1259. <https://doi.org/10.1016/j.ijbiomac.2018.04.044> 2018