In this issue

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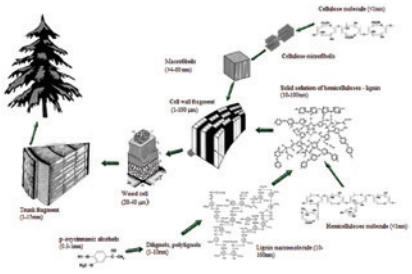
Modern supercritical fluid technologies for the processing of plant biocomposites: theory and practice

https://doi.org/10.1515/pac-2018-0404
Pure Appl. Chem. 2018; 90(11): 1679–1683

Conference paper: The biocomposite structure of wood is formed at the nanolevel by cellulose microfibrils (2–60 nm), hemicelluloses and lignin clusters of fractal type (14–70 nm). This plant biocomposite is a thermodynamically limited ordered system of biopolymers in quasi-equilibrium; the areas of thermodynamic compatibility of components can be changed due to chemical and/or physical impact. Thus, the supercritical fluid technologies can be considered as a tool for directing changes in the biocomposite's structure and properties at the molecular level.

Keywords: biopolymer; green chemistry; ICGC-7; nanobiocomposite; supercritical fluid technologies; wood matrix.



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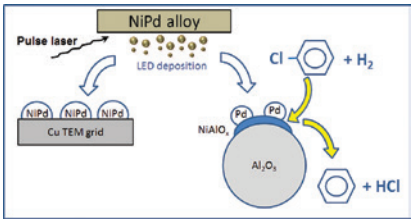
Chlorobenzene hydrodechlorination on bimetallic catalysts prepared by laser electrodispersion of NiPd alloy

https://doi.org/10.1515/pac-2018-0207
Pure Appl. Chem. 2018; 90(11): 1685–1701

Conference paper: Laser electrodispersion (LED) of NiPd alloy on alumina provides 0.005%Pd/$NiAlO_x/Al_2O_3$ catalyst more stable and efficient in chlorobenzene hydrodechlorination than Pd/Al_2O_3.

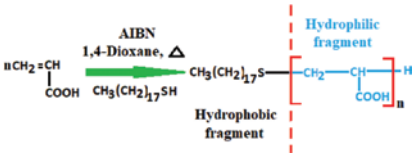
Keywords: alumina; bimetallic catalyst; chlorobenzene; hydrodechlorination; ICGC-7; laser electrodispersion; nickel; NiPd alloy; palladium.



Yaroslav O. Mezhuev, Oksana Y. Sizova, Yuri V. Korshak, Anna L. Luss, Ivan V. Plyushchii, Alina Y. Svistunova, Antonis K. Stratidakis, Alexey V. Panov, Mikhail I. Shtilman and Aristidis M. Tsatsakis

Kinetics of radical telomerization of acrylic acid in the presence of 1-octadecanethiol

https://doi.org/10.1515/pac-2018-0601
Pure Appl. Chem. 2018; 90(11): 1743–1754

Conference paper: Synthesis of acrylic acid oligomer with thiooctadecyl end-group.

Keywords: acrylic acid; atom economy; ICGC-7; kinetics; mechanism; polymerization; surface active agents; telomerization.