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JOINT EVENT ON

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Processing of natural polymers based materials using ionic liquids

Laboratory of Process Engineering for Environment and Food, Nantes, FranceThe recent concerns for carbon management (including fossil fuels use and CO_2 emissions) have drawn attention on biobased plastics, including natural polymers. When compared to petroleum based plastics, these polymers obtained from plants are generally considered as relatively weak, with low mechanical performances and more complex processability, due to water sensitivity and/or low thermal stability. Nevertheless, this current objective of replacing petroleum based commodity plastics may hide other opportunities for the use of natural polymers as structural and/or functional materials in applications that would take advantage of their specific properties. This approach will be illustrated by different examples of our recent research involving the use of ionic liquids as processing aids and functional additives for the design of functional and bioinspired materials from starch, cellulose and natural rubber.

Biography

Eric Leroy joined CNRS in 2008. He studied materials engineering and science at the National Institute of Applied Sciences (INSA) of Lyon. After obtaining a PhD in polymers and composite materials in 2000, he worked as a contracted researcher at the Donostia International Physics Center in San Sebastian, Spain, before joining the Alès School of Mines, France, as an assistant professor from 2002 to 2007. Author of 43 articles with over 1000 citations, he received the CNRS Bronze medal in 2013.

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