



5-7 July 2010 Paris France

ORGANISERS

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DIFFUSION, PERMEABILITY AND GAS DISSOLUTION IN POLYMERS AND POLYMER FOAMS SPECIAL SESSION



**Abstract Submission Deadline
22 March 2010**

DIFFUSION, PERMEABILITY AND GAS DISSOLUTION IN POLYMERS AND POLYMER FOAMS

(SS2)

This session is focused on the study of phenomena involving gas diffusion, gas permeability and gas dissolution in polymers. From a scientific point of view, the relationships between molecular architecture, polymer morphology, amount and type of fillers used in the composition, etc and the diffusion rates and amount of gas that can be dissolved in a given polymer is an interesting topic, which is nowadays in the centre of discussion of the scientific community due to the new possibilities offered by nanofillers and bioplastics to control the diffusion rates and solubility limits. From the technical point of view this knowledge is used in important industrial products such as, thin films for packaging of food (barrier properties), stoppers for wine bottles, plastic parts with low permeability to gases, production of microcellular and nanocellular foams for several industrial applications, etc.

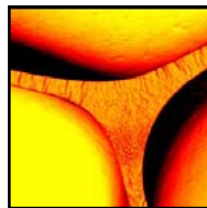
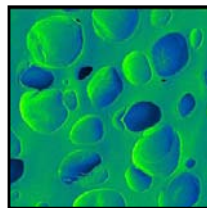
Topics of the Session:

- Production of foams via supercritical gas dissolution
- Gas permeability in polymer thin films.
- Fillers and nanofillers in polymers: Modifying gas permeability
- Gas permeability of bioplastics and composites and nanocomposites based on bioplastics.
- Novel polymers with improved barrier properties.
- Diffusion coefficients in polymeric materials: methods and experimental results
- Diffusion process in polymeric materials: Analytical and FEM modelling.

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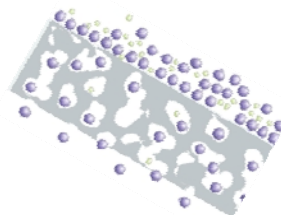
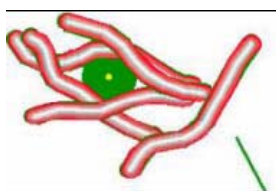
Grupo de Materiales Celulares

CELLMAT



HOT TOPICS OF THE SPECIAL SESSION:

- Gas diffusion and permeability in bioplastics.
- Possibilities offered by fillers and nanofillers to control the permeability in polymer systems.
- Fabrication of microcellular and nanocellular foams via supercritical gas dissolution.



ABSTRACTS SUBMISSION:

Online: <http://www.dsl2010-paris.com/abstract.html>

or directly by email to:

abstract@dsl2010-paris.com

PUBLICATION:

Selected papers will be published in a special issue of **POLYMER ENGINEERING AND SCIENCE** (2008 Impact Factor = 1.245)

<http://www3.interscience.wiley.com/journal/107639236/home>

Papers submitted to DSL-2010 and accepted after review process will be published in the periodical "**DEFECT AND DIFFUSION FORUM**" (Special Issue)

by Trans Tech. Publications:

www.ttp.net/1012-0386.html

cited in the Conference Proceedings Citation Index - Science (CPCI-S) by ISI Web of Knowledge



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