

ROME, Italy

DSL-2009

24-26 June 2009



DSL 2009 CONFERENCE

24-26 June 2009 / Rome, Italy

5th International Conference on Diffusion in Solids and Liquids - Mass Transfer, Heat Transfer, Microstructure and Properties, Nanodiffusion and Nanostructured Materials (DSL2009)

Grand Hotel Palazzo Carpegna, Rome - ITALY

DSL2009 Major topics:

Mass Transfer / Heat Transfer / Microstructure and Properties / Nanodiffusion and Nanostructured Materials

Mass Transfer

- * Basics of diffusion
- * Carburisation and Nitridation
- * Internal precipitation
- * Alloy heat treatment
- * Particle growth and coarsening
- * Microstructural and crystallographic texture evolution
- * Reactive diffusion
- * Phase transformations
- * Multiphase diffusion systems
- * Microelectronic and nanoscale systems
- * Interfaces
- * Diffusion in crystalline and amorphous materials
- * Diffusion in ultrafine grain and nanocrystalline materials
- * Diffusion in porous media
- * Surface oxidation and corrosion
- * Phase diagrams
- * Ad- and ab-sorption
- * Diffusion coefficients
- * Solute trapping at solid liquid interfaces
- * Mathematical modelling
- * Numerical methods
- * Experimental methods
- * Industrial applications

Heat Transfer

- * Mathematical modelling
- * Numerical methods
- * Experimental methods
- * Industrial applications

Microstructure & Properties

- * Mathematical modelling
- * Numerical methods
- * Experimental methods
- * Industrial applications

Nanodiffusion and Nanostructured Materials

- * Nanomaterials
- * Nanocomposites
- * Biomaterials
- * Industrial applications

SPECIAL SESSIONS:

1. 'Diffusion in Intermetallics'
2. 'Heat Transfer in Cellular and Composite Materials'
3. 'Grain Boundaries and Interfaces: Structure, Thermodynamics and Diffusion Properties'
4. 'Heat and Mass Transfer in Porous Media'
5. 'Microstructural Control through Diffusion Processes'
6. 'Characterization and properties of hard coatings'
7. 'Frontiers of Nanostructured Materials'

PUBLICATION:

- ADVANCED ENGINEERING MATERIALS
- DEFECT AND DIFFUSION FORUM
- JOURNAL OF POROUS MEDIA
- JOURNAL OF MATERIAL SCIENCE

PLENARY LECTURES:

"Diffusion at Short Circuits. State of the Art"
Professor B.S. Bokstein, Russia
(DSL-2009 Honorary Chairman)

"Selected Analyses and Observations in Multicomponent Diffusion"
Professor M.A. Dayananda, USA

"Single and Two-Phase Flow Heat Transfer in Micropipes"
Professor Gian Piero Celata, Italy

ABSTRACT SUBMISSION DEADLINE: 27 March 2009

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