



**Latvian State  
Institute of Wood Chemistry  
(LSIWC),  
Riga, Latvia**



**7th Framework Programme for  
Research and Technological  
Development,  
Specific programme - Capacities**

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**FP7 Project:** The implementation of  
research potential of the Latvian State  
Institute of Wood Chemistry in the European  
Research Area (**WOOD-NET**)

## Background

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- Forest, the unique renewable resource, has made a long-term contribution to the stabilization of the European and Latvian economy. The future perspectives of the forest sector should be linked with the competitiveness of its products – high added value and the ability to meet the society needs on national, European and global scales. This can be achieved through the acquisition of new knowledge in the forestry and wood chemistry sector, the integration of society (industry) needs, the involving of R&D and education.

## Goals

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- To improve the research capacities and to reinforce the scientific and technological potential of the Latvian State Institute of Wood Chemistry (LSIWC) in its scientific excellence with the aim of unlocking its capacity and make it accessible for European Research Area (ERA); to strengthen LSIWC as a central part, which ensures the smooth integration of researchers in a field vital for the social-economic development of Europe and Latvia such as Forestry and Forest Products.

## Research topics

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- Forest products;
- Biomass processing;
- Wood science;
- Wood chemistry

The project **WOOD-NET** will be viewed as logical continuation and extension of the FP6 project "Integration of the Latvian State Institute of Wood Chemistry in the European Research Area -**WOODPRO**", which was realized by LSIWC during 2003-2006 and ensured the formation of close links with related research institutions, mobility of researchers and young specialists, and the development of the Institute's infrastructure.

## Objectives

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- The exchange of know-how and experience, the activation of the dissemination of scientific information and joint results;
- The involvement of young researchers in the scientific environment;
- The acquisition and upgrading of unique research equipment;
- The formation of strategic co-operation partnership between the related leading European research centers, the strengthening of the Institute as an international research centre and make it attractive for the co-operation partners. **51 institutions** as provisional cooperation partners from **24 countries** will be predicted (**EU countries, Eastern European and Mediterranean countries**).

## Thematic priorities (TP) (1)

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- TP 1.** Understanding of the impact of environmental factors on the changes in the structure of coniferous tree (*Gymnospermae*) wood cell wall in optimizing biomass industrial processing processes (Dr. J.Dolacis, Dr. habil. J.Hrol);
- TP 2.** Investigation of wood durability and other properties improving (upgrading) mechanisms by non-biocidal methods (Dr. I.Andersone);
- TP 3.** Biological wood damage of cultural heritage sites: organisms, biodeterioration, prevention (MSc. I.Irbe);
- TP 4.** Wood molecular-, nano-level and composite materials research and biological re-engineering of plant cell walls for chemicals and energy (Prof., Dr.habil. J.Gravitis);
- TP 5.** Delignification of fast growing deciduous trees yielding (obtaining) new and improved products (Prof., Dr. habil. A.Treimanis);

## Thematic priorities (TP) (2)

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- TP 6.** Development of biorefinery by the thermochemical conversion of biomass (Dr. A.Zhurins);
- TP 7.** Development of novel and improved products, including hybrids, originated from lignocellulosics and polyphenolics plant biomass processing waste for increasing sustainability of agriculture and forestry (Dr. habil. G.Telysheva);
- TP 8.** Knowledge-based biomass polymeric products with multiple functions (Dr. habil. G.Shulga);
- TP 9.** Environmentally friendly rigid polyurethane foams as an energy saving material (Dr. U.Cabulis);
- TP 10.** Development of process control systems: functional state mathematical modelling, programming and optimization of bioreactor's design both for solid state (including composting) and submerged fermentations (Prof. Dr. habil. U.Viesturs).

## 7th FP project information

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- Project type:  
**Coordination and support action – Support action;**
- FP7 project number: **203459**
- FP7 call: **FP7-REGPOT-2007-1;**  
Programme “Capacities”, Part 4: Research Potential,  
Activity: 4.1. Unlocking and developing the research  
potential in the EU’s convergence regions and outermost  
regions
- Other relevant FP7 topics:  
**KBBE: Food, Agriculture, and Biotechnology**
- Duration: **36 months (1 June, 2008 – 31 May, 2011);**
- Project coordinator: **Latvian State Institute of Wood  
Chemistry (LSIWC), Riga, Latvia;**
- Project leader: **Dr. Bruno Andersons**, the Scientific  
Director of the LSIWC;
- Project technical manager: **Dr. Arnis Kokorevics.**

## Work packages (WP) (1)

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- WP 1** Exchange of experience – the exchange of know-how and scientific experience with partner institutions, the bilateral visits of the leading researchers, the recruitment of specialists from abroad for long term staying;
- WP 2** Training of young scientists – the bilateral visits of the young researchers to augment their experience and knowledge and to master the operation of modern and unique research equipment;
- WP 3** Acquisition and upgrading of research equipment – the purchasing of new research and analytical equipment and upgrading of the existing one;

## Work packages (WP) (2)

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- WP 4** Organization and participation of workshops and conference – the organization of workshops, advanced courses and an international conference, participation in international scientific conferences;
- WP 5** Dissemination of scientific information and public relations – the summarizing of the scientific results gained as a result of co-operation and their publication, the information of the researchers' community in Latvia, in ERA and in third countries, as well as representatives of industry and the society as a whole about the project, its results and co-operation possibilities;
- WP 6** Management of the project.

## Contact data

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## Additional Information

- ❑ FP7, Capacities, Research potential of Convergence Regions:  
[http://cordis.europa.eu/fp7/capacities/convergence-regions\\_en.html](http://cordis.europa.eu/fp7/capacities/convergence-regions_en.html)
- ❑ Latvian State Institute of Wood Chemistry (LSIWC): :  
<http://www.kki.lv/>