

The European Polysaccharide Network (POLYSACCHARIDES)

Topics: Engineering Support for Materials Development

Coordinator: Dr. Patrick NAVARD - Centre de Mise en Forme des Matériaux (CEMEF) Armines and UMR Ecole des Mines de Paris/CNRS

Partners:

- ARMINES - ENSMP - Centre de Mise en Forme des Matériaux CEMEF France (P. Navard). Rheology, rheo-optics, modelling, processing
- Institute of Chemistry, University of Agricultural Sciences (BOKU), Austria (P. Kosma). Wood organic chemistry
- Centre of Excellence for Polysaccharide Research at the University of Jena, Germany (T. Heinze). Fundamental chemistry of derivatization
- Fraunhofer - Institute for Applied Polymer Research, Germany (H.P. Fink, W. Vorwerg). Structural characterisation, starch applications
- VTT Biotechnology (Research), Finland (T. Reinikainen). Applied enzymology, encapsulation
- Federal Research Centre of Forestry and Forest Products, Germany (J. Puls). Polysaccharide raw material extraction, hemicelluloses
- Aabo Akademi University, Laboratory of Forest Products Chemistry, Finland (B. Holmbom). Fibre and papermaking chemistry. Mannans, galactans
- "Petru Poni" Institute of Macromolecular Chemistry, Romania (B.C. Simionescu). Cellulose and hemicelluloses applications
- University of Maribor, Slovenia (K. Stana-Kleinschek). Interfaces chemistry, physics and properties
- ATO, The Netherlands (J. Van Dam). Polysaccharide conversion
- TITK, Germany (F. Meister). Chemical processing, development of natural polymer applications, molding and shaping
- Institute of Chemical Fibres, Poland (H. Struszczyk, D. Ciechanska). Microbiology, chemistry and applications of chitin, chitosan and alginates
- School of Biosciences, University of Nottingham, UK (J. Mitchell). Starch processing, applications of polysaccharides in pharmaceutical industry
- INRA, France (A. Buleon). Chemistry, solid-state structure
- Institute of Textile Chemistry and Textile Physics, University Innsbruck, Austria (T. Bechtold). Textile applications
- University of Utrecht, Department of Science, Technology and Society, The Netherlands (M. Patel). Polysaccharide policy, environmental assessments

Overall objectives of the European Polysaccharide Network of Excellence

To promote the use of the polysaccharide renewable raw materials as industry feedstock for the manufacturing of advanced, multifunctional materials

The ambition and objectives of the European Polysaccharide Network

- to combine all fields around polysaccharide research
- to train scientists in academia and industry
- to spread knowledge, results and excellence
- to attract the interest of citizens for science

Potential impacts of the network

- Strengthening S&T excellence on the polysaccharide topic (Recognition of polysaccharides as a major stake; creation of the world force in this area; reach of ambitious scientific goals)
- Long-term structuring impacts of the establishment of the European Polysaccharide Network on the way research is conducted in Europe (De-fragmentation of the research area; integration of existing staff and facilities; communication between scientists and mobility)
- Impacts of the European Polysaccharide Network on EU industry (Development of new materials; strong increase of industry-academia contacts; enlargement of the industrial field of polysaccharides)
- Spreading knowledge and excellence (Direct impact on the scientific community; impact of knowledge flow; impact on national research organisations; spreading of good practice excellence)
- Impacts on training and education on the polysaccharide field in Europe (Training students; continuing education and industrial training)
- Impacts of the European Polysaccharide Network on several major societal objectives (Employment, health and safety; impact on environmental issues; dialogue concerning "science and society" aspects; development of rural areas)
- Impacts on standardisation

Prof. Bogdan Simionescu presented (on behalf of the project coordinator) POLYSACCHARIDES - The European Polysaccharides Network at EURONET Workshop, Sinaia, Romania, September, 29, 2003.

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Born March 16, 1948 in Iasi, Romania

Education:

B.S. (July 1971), Department of Organic and Macromolecular Chemistry, Polytechnic Institute of Iasi, Romania

Ph.D. (June 1975), Department of Organic and Macromolecular Chemistry, Catholic University of Louvain, Louvain, Belgium; promoter, Prof. Georges J. Smets

Research interests:

Radical polymerization and copolymerization; plasma-induced polymerization; unconventional polymerization reactions; combined polymer synthesis techniques; solution properties of ultrahigh molecular weight polymers; polysiloxanes; macromolecular architectures

Publications/invited lectures:

more than 250 papers in international journals, 2 books/more than 70 invited lectures in Europe, USA, Canada, Japan

Visiting/associate professorships:

1991 (April - June), visiting professor, Ecole Nationale Supérieure de Chimie de Mulhouse, Mulhouse, France

1992 (August - September), associate research director and visiting professor, Ecole Nationale Supérieure des Mines de Paris, CEMEF Sophia Antipolis, France

1995 (April and December), visiting professor, Université du Littoral, Dunkerque, France

1996 (February), visiting professor, Freiburger Materialforschungszentrum, FMF, Freiburg, Germany

1996 (May - June), visiting professor, Society of Polymer Science, Japan 1998 (May - June), 1999 (June), 2001 (June), visiting professor, Center of Polymer Chemistry, Zabrze, Poland

2001 (November), visiting professor, Université Montpellier 2, LEMP/MAO, Montpellier, France

1994 - present, associate professor, Polytechnic University of Bucharest, Romania



Romanian partner:

"PETRU PONII" INSTITUTE OF MACROMOLECULAR CHEMISTRY

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