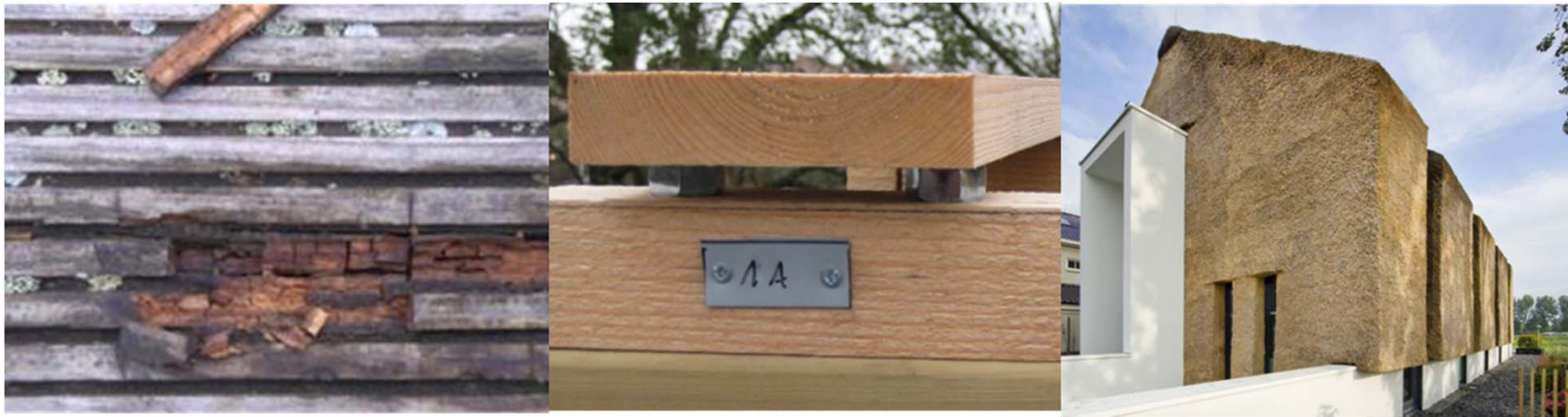


Ongoing R&D projects in COST member countries

January 2014



COST FP1303: Performance of bio-based building materials



Group 1: Carmen-Mihaela Popescu (MC, STSM Manager)

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Group 2: Gabriela Lisa (MC)

Faculty of Chemical Engineering and Protection of the Environment

"Gh. Asachi" Technical University of Iasi

Group 3: Mariana Pruna

SC ICECON SA, Bucharest

Group 4:

Transilvania University, Brasov

Romania

Research institute

January 2014



“Petru Poni” Institute of Macromolecular Chemistry, Iasi

Established in 1949, the Institute has a long tradition in fundamental and applied research in organic and inorganic chemistry, polymer chemistry and physics, polymer materials.

Experience:

- synthesis of polymers for different applications
- modification of wood
- rot fungi, thermal degradation and weathering of wood
- polymer/biomass composites
- different analytical methods: microscopic (optical and scanning electron microscopy); spectroscopic (infrared, near infrared and 2 dimensional correlation spectroscopy and other chemometric methods, solid state CPMAS ^{13}C NMR spectroscopy, x-ray diffraction, x-ray photoelectron spectroscopy), thermal (thermogravimetry)



COST FP1303: Performance of bio-based building materials

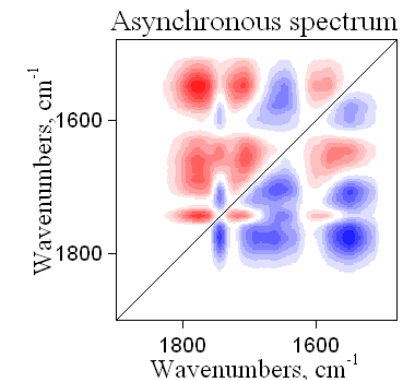
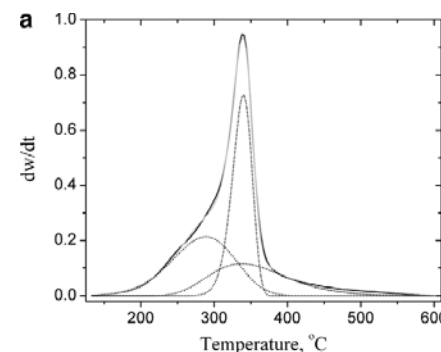
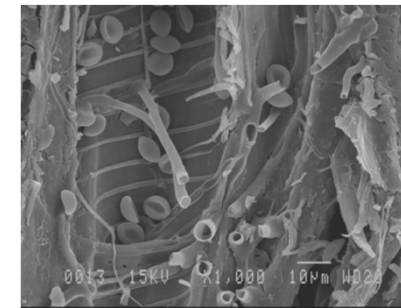
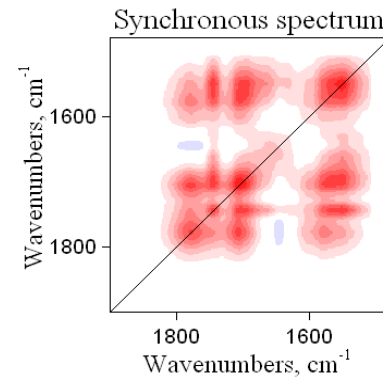


“Petru Poni” Institute of Macromolecular Chemistry, Iasi



Interests / Activities:

- modification of wood
- rot fungi degradation of wood
- polymer/biomass composites
- structural evaluation of wood by different microscopic, spectral and thermal methods





Faculty of Chemical Engineering and Protection of the Environment, "Gh. Asachi" Technical University of Iasi

Main research areas:

Biochemical engineering and biotechnology

Environmental engineering and impact assessment

Technologies for advanced treatment of industrial effluents

Multifunctional polymeric material for top applications

Chemical engineering

Nanomaterials and nanotechnologies

Chemistry of wood and its components

Paper science



The Research Institute for Construction Equipment and Technology - ICECON S.A.

Continues a long scientific research tradition of more than 50 years in the field of construction products, machines, equipment, installations and technologies.

Research – development and construction technical regulations:
New materials, technologies, internal systems and equipment, built-in equipment, technological equipment, town management, environment protection, waste recycling, standards

Romani

Research institute/company

January 2014



The Research Institute for Construction Equipment and Technology - ICECON S.A.

Experience:

- mechanical testing
- biodegradation (fungi, moulds, insects) resistance
- moisture resistance
- ageing tests
- fire resistance



COST FP1303: Performance of bio-based building materials



Transilvania University of Brasov

The Faculty of Wood Engineering has been functioning in Romania since 1959, being nowadays the only one of this profile in the country.

Objectives:

- foundation of some theoretical, experimental and applicative bases in order to produce new composite materials with lamellar structure, wooden products with advanced structures and materials with sandwich structure;
- achievement of innovative manufacturing technologies for the developed products and their implementation within the Romanian economy;
- scientific fundamentals of some methods and innovative means for the capitalization of some forestry resources through furniture eco-design, eco-efficiency and eco-domination;
- development of some innovative optimization models of eco-processes from wood industry;



"Petru Poni"
Institute of
Macromolecular
Chemistry, Iasi

- ✓ liquid state NMR spectrometer
- ✓ FTIR spectrometer
- ✓ UV-Vis spectrometer
- ✓ X-ray diffractometer
- ✓ Scanning probe microscope (AFM)
- ✓ Scanning electron microscope
- ✓ Transmission electron microscope
- ✓ Differential scanning calorimeter
- ✓ Thermogravimeter
- ✓ Dynamic mechanical analyzer
- ✓ Thermal analysis system TG/DSC/FTIR/MS
- ✓ Rheometer
- ✓ Contact angle measuring system



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