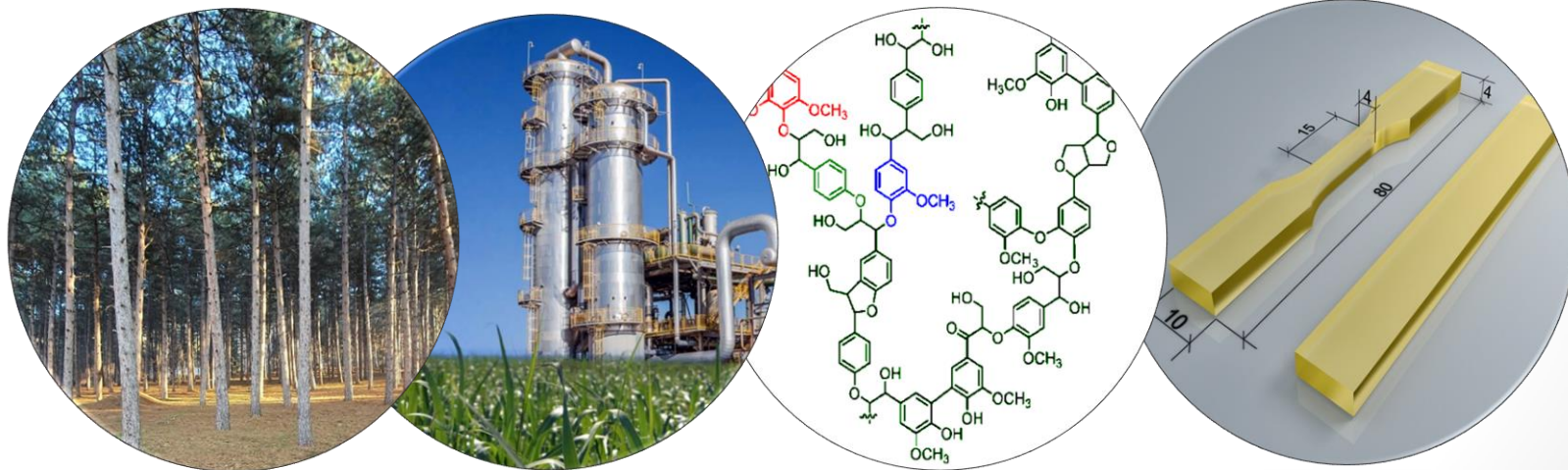
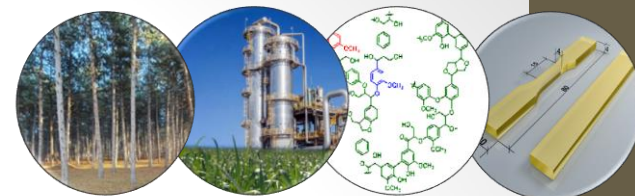


## LignoCOST online training school

# 'Modified Lignin Materials for Reactive Polymer Composites Processing and Characterization'





- **LignoCOST Training School** will provide intensive online presentation and training in research topics on lignin materials processing and characterization within the laboratories of University of Belgrade, Serbia

- **Laboratory for Electronic Microscopy**, Faculty of Agriculture (FoA)

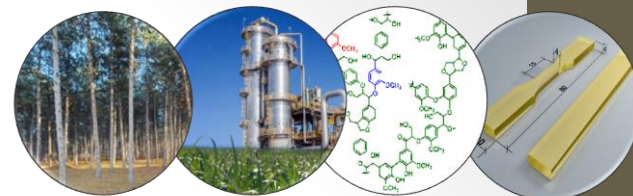


- **Laboratory of Department for Organic Chemistry**, Faculty of Technology and Metallurgy and Innovation center of the Faculty of Technology and Metallurgy



- **Laboratory of Department for Materials and Protection**, Military Technical Institute, Belgrade, Serbia





## Our research team...

- **Laboratory for Electronic Microscopy, Faculty of Agriculture**



Laboratory for electron microscopy at FoA is established by Dr. Vladimir Pavlovic, professor of physics at Department of Physics and mathematics, FoA. The laboratory is equipped with JEOL JSM-6390 scanning electron microscope, critical point dryer, and JEM 1400 transmission electron microscope.





## Our research team...

- **Laboratory of Department for Organic Chemistry**, Faculty of Technology and Metallurgy (TMF) and Innovation center of the Faculty of Technology and Metallurgy (IC TMF)



The research group connected within the professor of organic chemistry Dr. Aleksandar Marinkovic, TMF, established experimental research programs in the field of targeted synthesis and modification of multifunctional materials based on renewable and recycled polymer materials (nanocellulose, lignin, tannin, waste PET)





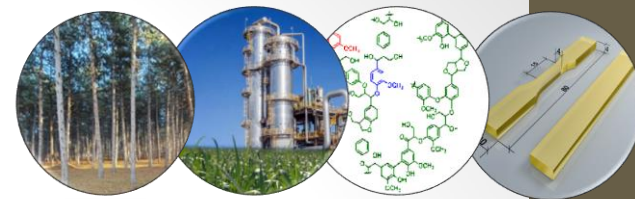
## Our research team...



- **Laboratory of Department for Materials and Protection, Military Technical Institute (MTI), Belgrade, Serbia**

Research group has many years of experience in chemical depolymerization and synthesis of polymers (polyurethanes, polyesters, etc.) obtained from the bio-renewable and waste resources (vegetable oils, lignin, tannins, furan-2-carboxylic acid, waste PET, ect.), chemical functionalization of lignin, cellulose and inorganic micro/nano- materials. Also laboratory is equipped with instruments for mechanical, dynamic-mechanical and thermal analysis.





## LignoCOST training school goals...

- To provide intensive online presentation on:

Lignin depolymerization methods

Lignin chemical modification methods

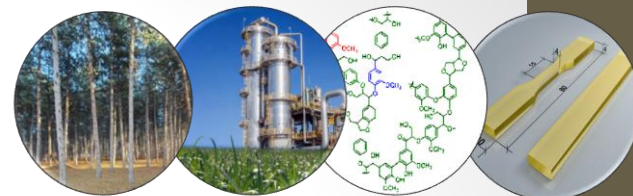
Lignin based composite materials

Lignin and environmental protection

- To provide training in lignin materials characterization

Morphology analysis using Electronic Microscopy

Mechanical, dynamic-mechanical and thermal analysis



## LignoCOST training school goals...

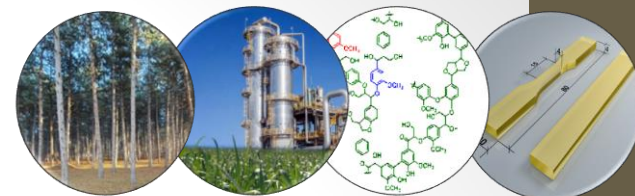
- 7 University of Belgrade trainers

Prof. dr Milica Rančić/ University of Belgrade, Faculty of Forestry - Lignin depolymerization methods – From Lignin to Valuable Oligomers/Monomers for Polymer Materials

dr Jelena Rusmirovic/ MTI– Reactive Lignin Materials for High Performance Composites- Modification Methods and Characterization

Ana Popović/ TMF- Lignin microspheres: A novel eco-friendly adsorption material

Jelena Bebic/ TMF– Porous amino modified lignin materials for enzyme immobilization



## LignoCOST training school goals...

- 7 University of Belgrade trainers

Nikola Stanojevic and Danilo Zivkovic/ White Lemur Ltd., Serbia, soma.eco - Using lignin and cellulose-rich waste for the production of innovative biotic materials through the utilization of microorganisms, fungi, and derived enzymes

dr. Tihomir Kovacevic, MTI- Mechanical and Rheological Characterization of Lignin based Materials

prof. dr Vladimir Pavlovic, FoA - Scanning and Transmission Electronic Microscopy in Lignin based Materials Characterization





**CA17128 LignoCOST online training school ‘Modified Lignin Materials for Reactive Polymer Composites: Processing and Characterization’ organised by University of Belgrade, Faculty of Technology and Metallurgy (TMF), Faculty of Agriculture, Faculty of Forestry, and Military Technical Institute, Serbia**

**Date: 23 October 2020, Agenda:**

- 10.00-10.20 Welcome & Introduction (LignoCOST coordinator and local organizer)
- 10.20-11.00 Oral and video presentation (35 min + 5 min discussion total 40 min) |  
Prof. dr Milica Rančić/ University of Belgrade, Faculty of Forestry - Lignin depolymerization methods – From Lignin to Valuable Oligomers/Monomers for Polymer Materials Preparation
- 11.00-11.40 Oral and video presentation (35 min + 5 min discussion total 40 min)  
dr Jelena Rusmirovic/ Military Technical Institute, Department for Materials and Protection, Belgrade, Serbia – Reactive Lignin Materials for High Performance Composites- Modification Methods and Characterization
- 12.40-12.00 Oral presentation (15 min + 5 min discussion total 20 min)  
Ana Popović/ University of Belgrade, Faculty of Technology and Metallurgy - Lignin microspheres: A novel eco-friendly adsorption material
- 12.00-12.20 Oral presentation (15 min + 5 min discussion total 20 min)  
Jelena Bebic/ University of Belgrade, Faculty of Technology and Metallurgy – Porous amino modified lignin materials for enzyme immobilization
- 12.20-13.20 Break for Lunch on your own



**CA17128 LignoCOST online training school 'Modified Lignin Materials for Reactive Polymer Composites: Processing and Characterization' organised by University of Belgrade, Faculty of Technology and Metallurgy (TMF), Faculty of Agriculture, Faculty of Forestry, and Military Technical Institute, Serbia**

**Date: 23 October 2020, Agenda:**

- 13.20-13.40 Oral presentation (15 min + 5 min discussion total 20 min)  
Nikola [Stanojevic](#) and Danilo [Zivkovic](#)/ White Lemur Ltd., Serbia, [soma.eco](#) - Using lignin and cellulose-rich waste for the production of innovative biotic materials through the utilization of microorganisms, fungi, and derived enzymes
- 13.40-14.20 Oral and video presentation (35 min + 5 min discussion total 40 min)  
[dr. Tihomir Kovacevic](#), Military Technical Institute, Department for Materials and Protection, Belgrade, Serbia - Mechanical and Rheological Characterization of Lignin based Materials
- 14.20-15.00 Oral and video presentation (35 min + 5 min discussion total 40 min)  
[prof. dr Vladimir Pavlovic](#)/University of Belgrade, Faculty of Agriculture - Scanning and Transmission Electronic Microscopy in Lignin based Materials Characterization
- 15.00-15.20 Closing of the training school ([LignoCOST](#) coordinator and local [organizer](#))