

The Workshop on ‘**Nanoparticles for flame retardancy: challenges and risks**’ will be organized on May 16, 2013, within the **COST Action MP1105** “Sustainable flame retardancy for textiles and related materials based on nanoparticles substituting conventional chemicals” (FLARETEX, <http://www.flaretex.eu>)

The Workshop is an essential part of the “5th International Seminar on Modern Polymeric Materials for Environmental Applications – MPM2013” (<http://www.mpm2013.pl/>) organized at the Department of Chemistry and Technology of Polymers, Cracow University of Technology, Poland.

The aim of the Workshop is to discuss how nanoparticles can improve the fire retarding performance of polymeric materials. It is already known that nanomaterials could be used in relatively low quantities and, additionally, they could be coupled with low amounts of traditional flame retardants to exploit significant synergistic effects. By optimizing nanoparticles for flame retardancy, the problems of toxicity, safety and environmental impact can be tackled in novel and innovative ways. This Workshop shall contribute to these issues.

Invited speakers:

- Prof. Paul Kiekens, Ghent University, Belgium
“The COST Action MP1105 on Flame Retardancy : A European opportunity for cutting edge research”
- Prof. Serge Bourbigot, Université Lille 1, France –
“Influence of the nanomorphology on the reaction to fire of flame retarded polymer”
- Prof. Giovanni Camino, Politecnico di Torino, Italy
“The thermal behaviour of nanoparticles and nanocomposites”
- Dr. Carine Chivas-Joly, Laboratoire National de Métrologie et d'essais, France
“Evaluation of gaseous effluents and aerosols emitted during combustion of nanocomposites”
- Dr. Alberto Fina, Politecnico di Torino, Italy
“Nanoparticles in flame retardancy of polymers: effectiveness in different fire tests”
- Dr. Sabyasachi Gaan, Empa, Switzerland
“Synergistic interaction of nanoparticles and phosphorus based flame retardants: recent developments”
- Dr Fengge Gao, Nottingham Trent University, United Kingdom
“The challenge in understanding the role of clay in the condensed phase reaction during combustion and its risk to health and environment”
- Prof. Baljinder Kandola, University of Bolton, United Kingdom
“Nanoparticulate flame retardants for structural composites”
- Dr. Pantelis Kiliaris, National Technical University of Athens, Greece
“Fire retardancy of polymer nanocomposites: recent advances and future prospects”
- Prof. Joseph H. Koo, The University of Texas at Austin, USA
“Role of different nanoparticles in flame retardant polyamide 11 nanocomposites”

- Dr. Brigitta Loretz, Helmholtz Institute for Pharmaceutical Research Saarland, Germany
“Nanoparticles interactions with cells and tissue: Selected issues”
- Prof. Yusuf Menciloglu, Sabanci University, Turkey
“Nano-integrated composites: bottom up approaches”
- Dr. Celeste Pereira, University of Porto, Portugal
“Flame retardant fibre reinforced polymer composites based on nanoclays and carbon nanotubes”
- Dr. Anna Stec/Prof. Richard Hull, University of Central Lancashire, United Kingdom
“Fire retardant mechanisms of polymer nanocomposites: Experimental and modelling studies of barrier effects”
- Prof. Rao Y. Surampalli, U.S. Environmental Protection Agency, USA
“Hazards associated with wastes containing nanoparticles used in flame retardants”
- Prof. Assoc. Maria Władyska-Przybylak, INF&MP in Poznań, Poland
“Fire retardant coatings for textiles based on nanoparticles and conventional flame retardants”
- Dr. Mauro Zammarano, American University, USA
“Nanoparticles in flame-retardant coatings: effect on flammability and nanoparticle release”