

## SEMINARIO

**Prof. Iovu Horia**

Universitatea Politehnica din București

### **“Innovative Research Topics in Polymer Science and Bioengineering - Advanced Polymer Materials Group”**

**17 de mayo de 2024  
11:30 – 12:30**

**Lugar:** Salón de Actos del Centro de Tecnología Biomédica (CTB)  
Universidad Politécnica de Madrid (UPM), Campus Montegancedo  
M-40 km. 38, 28223 Pozuelo de Alarcón, Madrid.

**Cómo llegar:** <http://www.ctb.upm.es/contact/>

**Ponente:** Prof. Iovu Horia

Advanced Polymer Materials Group Leader, Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Romania

### **Resumen:**

The Advanced Polymer Materials Group (APMG) was established in 2004. The main research activity was firstly devoted to synthesis and characterization of new nanocomposites based on epoxy resins and modified silicates, like montmorillonites, etc. As the research infrastructure was strongly developed in the last few years (advanced spectroscopic techniques, advanced thermal characterization, enhanced dynamic and dynamic mechanical approach and complete mechanical characterization) the research subjects were enlarged to various nanocomposites with suitable reinforcing agents as carbon nanotubes (CNTs), polyhedral oligomeric silsesquioxane (POSS), halloysites, combined modified silicates with CNTs and POSS, a.s.o. New hybrid nanomaterials with enhanced properties were finally designed for various applications: aerospace industry, electronics, biomedical engineering, dental materials. More than 20 projects are ongoing concerning developing of new hybrid nanomaterials with targeting applications and more than 40 papers were published in international ISI-high rated journals since 2005.

**Comunidad EELISA "Advanced Materials for a Sustainable Future":** European Engineering Learning Innovation and Science Alliance (EELISA) is the first alliance of Higher Education Institutions (graduate engineering schools, technology universities and full-spectrum universities) from different countries in Europe meant to define and implement a common model of European engineer rooted in society. In close cooperation with diverse stakeholders including accreditation agencies, ministries, employers, alumni, and student representatives, the project will scrutinize the viability and impact of the label at the institutional level. Additionally, it will delineate a spectrum of innovative learning methodologies, underscoring the integration of European values within joint degree programs.