

## 5th KMM-VIN Industrial Workshop, Summary:

Industrial workshop “Multi-Scale and Multi-Physics Materials Modeling for Advanced Industries”, the fifth in a series of industrially oriented workshops organized by KMM-VIN, was held in Madrid on the 26<sup>th</sup> and 27<sup>th</sup> of January 2016. It was organized in collaboration with the Industrial Engineering School of the Technical University of Madrid and with the Federation of European Materials Societies (FEMS). The organization of the workshop was coordinated by Prof. Andrés Díaz Lantada from the Technical University of Madrid, by Prof. Cecilia Poletti from Graz University of Technology and by Prof. Jerzy Rojek from Institute of Fundamental Technological Research of Polish Academy of Sciences representing KMM-VIN.

The workshop was aimed at presenting the latest developments in multi-scale and multi-physics materials modeling, especially those linked to final application in industries including: transport, energy, health, manufacture, and information and communication technologies, among other relevant industrial practices. The scope of the workshop covered:

- Multi-scale/physics modeling of the synthesis and processing of materials.
- Multi-scale/physics modeling of industrial applications of materials.
- Modeling of conventional materials, including:
  - ✓ Metals and alloys,
  - ✓ ceramics,
  - ✓ polymers,
  - ✓ composites.
- Modeling of modern materials including:
  - ✓ Multifunctional (smart) materials,
  - ✓ nanocomposites,
  - ✓ metamaterials,
  - ✓ biomaterials and biomimetic materials.
- Promotion of knowledge-based materials for enhanced industrial performance.
- Cases of success in health, transport, energy, manufacture and ICT industries.

A total of 14 plenary invited lectures, 14 parallel session lectures and 4 posters were presented by recognized scientists and experts in the field. The workshop was well attended with a total of 45 participants representing 8 countries: Spain (29), Poland (4), Germany (4), Greece (3), Italy (2), France (1), Austria (1), and Colombia (1). There was a nice balance between participants from academia (28) and industry (17), covering sectors such as: transport, energy, health, construction and information and communication technologies. The workshop was a good opportunity for a dialogue between scientists, technologists and engineers and the informal lunch and workshop dinner, after a visit to Prado Museum, were nice leisure activities for relaxed conversations about science, technology and life.