



ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ
ΣΧΟΛΗ ΧΗΜΙΚΩΝ ΜΗΧΑΝΙΚΩΝ

ΕΠΙΤΡΟΠΗ ΣΕΜΙΝΑΡΙΩΝ, Καθηγητής Α. Κοκόσης

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ΣΕΜΙΝΑΡΙΟ ΧΗΜΙΚΗΣ ΜΗΧΑΝΙΚΗΣ

Πέμπτη 12 Μαΐου 2011, 13:00
Αίθουσα Σεμιναρίων «Ν. Κουμούτσου»

Professor Jean-Marie Dubois

Institut Jean Lamour, Nancy-Université

Complexity and Potential Applications of a New Kind of Metallic Alloys

In this seminar, I will state that so-called Complex Metallic Alloys (or CMAs) form a new kind of metallic alloys in so far that i- their physical properties are significantly different from the ones of their individual constituents and ii- they exhibit a potential for technological applications that is usually not achieved by conventional alloys.

The way CMAs depart from usual metals and alloys is intrinsically related to the complexity of their crystal lattice on the one hand, and to electron-lattice interactions on the other. The talk will therefore begin with some phenomenological description of CMA crystal lattices and some insight into the interplay between properties of CMAs and lattice complexity. We will then examine few properties of technological relevance. A brief survey of the state of the art regarding applications, realized or potential, of CMAs will terminate the conference.