



AVVISO DI SEMINARIO

Martedì 14 Gennaio alle ore 14:30

nell'Aula Seminari del Dipartimento di

Scienze e Tecnologie Chimiche

il Prof. Eugene A. Katz

University of the Negev, Israel

Terrà un seminario dal titolo:

"FULLERENE-LIKE ARCHITECTURE IN NANO-, MICRO- AND MACRO-WORLDS"

Proponente: Prof.ssa M. L. Terranova

FULLERENE-LIKE ARCHITECTURE IN NANO-, MICRO- AND MACRO-WORLDS

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The discovery of C_{60} , a third variety of carbon, in addition to the more familiar diamond and graphite forms, has generated enormous interest in many areas of science. Furthermore, it turns out that C_{60} is only the first of an entire class of closed-cage polyhedral molecules consisting of only carbon atoms - the fullerenes (C_{20} , C^{24} , C^{26} , ... C_{60} , ... C_{70} , ... $C_{1000000}$ -carbon nanotubes). This talk presents main mathematical principles for engineering fullerene-like structures (based on symmetry considerations and Euler relation between the numbers of faces, vertices and edges in polyhedra). I will discuss how Nature, using fullerene-like structures, minimizes energy and matter resources in molecules and nanoclusters, viruses and living organisms. Examples of achievement of such goals in architecture are also presented. Discussion of scientific terms and concepts will be held in a context of history of their discoveries. History of discoveries of fullerenes and carbon nanomaterials made at the end of XX century will be punctuated by excursions into the depths of time - until the Renaissance, and even Antiquity.