Università degli Studi di Trieste

Dipartimento di Fisica

Alumnorum Colloquia

Nicola Seriani

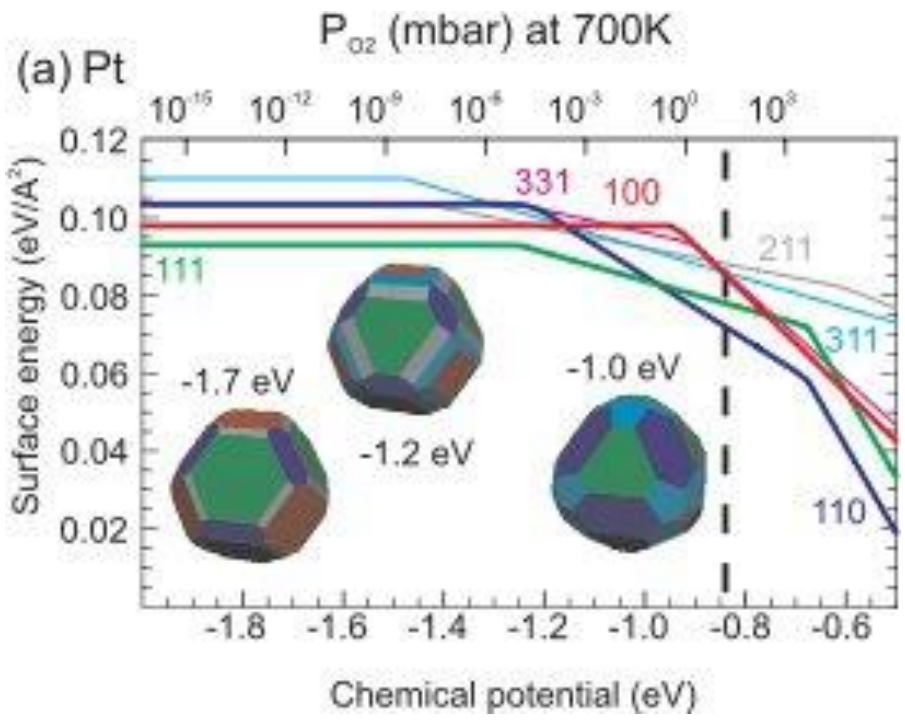
Condensed Matter and Statistical Physics Section

The Abdus Salam ICTP

October 5, 4.30 PM - Lecture Room A, F building, Physics Dept. - via Valerio, 2 – Trieste

Understanding materials at the atomic scale

From batteries to solar cells, from electronic devices to catalysts for water treatment, much of our technology relies on nanostructured materials to perform difficult tasks with high efficiency and precision. However, notwithstanding great theoretical and experimental efforts, it is still a challenge to understand and control the peculiar behavior of materials at the smallest scales, with the result that, often, materials are still optimized by trial-and-error. In this seminar I will talk about recent progress in the atomic-scale characterization of the behavior of functional materials by a combination of high-precision experiments and first-principles simulations based on density functional theory. I will also point at open problems that show how far we still are from being able to design nanostructured materials using only the basic laws of physics.



Organizzazione a cura di: M. Girardi, E. Gozzi, G. Pastore, R. Rui, E. Vesselli

Everyone interested in the topic is welcome to attend

Informazioni: seminari@ts.infn.it