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TM22_DIP_SSST

Teach Mob – Visiting Professors ***Academic year 2016/2017***

2 nd Term
COURSE TITLE Materials Today Chemistry of Resources and Raw Materials
Scientific area Material Science/Chemistry
Department of Chemistry
Language used to teach: English
Teaching Commitment: 20 hours
Course summary Main course: Materials Today (16 hours): The course offers an introduction to modern materials science, with an emphasis on current research topics. Scope of the course is to acquaint the students with current scientific literature in the field, by describing case studies from different fields of materials science. The candidate visiting professor will contribute to a module devoted to materials for Green Chemistry and sustainable processes, as outlined below: <ul style="list-style-type: none"> - Design of heterogeneous catalysts: Zeolites & mesoporous silicates; Metal catalysts (and the importance of nanomaterials); Photocatalysts; Electrocatalysts - Selected applications of heterogeneous catalysts - Catalysis for Green Chemistry The candidate Visiting Professor will also contribute to the following course: Chemistry of Resources and Raw Materials (4 hours): The course contains three modules, devoted to: a) Petrochemistry and related processes; b) Biomass exploitation and biorefinery; c) Mineral resources and sustainability The candidate will contribute to module c) with an original contribution on one of the following subjects: <ul style="list-style-type: none"> - The role of chemical technology in the availability of natural resources - Chemical technology and the rational exploitation of fossil and other mineral resources - Sustainable process and resources conservation
Learning objectives Materials Today: at the end of the course, the student will be familiar with: <ul style="list-style-type: none"> - the structure of scientific papers in English in different fields of materials science - the main directions in the experimental and theoretical design of heterogeneous catalysts for Chemistry of Resources and Raw Materials: the student will be familiar with: <ul style="list-style-type: none"> - the role of technology and innovation in determining the availability of mineral resources - the role of chemical technology in rational/sustainable resource exploitation.
Tutorship activities

During the period of the course, the Visiting Professor shall be available to meet students, doctoral candidates, and young researchers pursuing study or research in the field of Chemistry to provide advice and mentoring.

For this purpose the presence of the Visiting Professor may be required both at the Department of Chemistry and at the **Scuola di Studi Superiori "F. Rossi" dell'Università di Torino**.

Lab activities

Other activities besides the course: i.e. seminars and conferences addressed to PhD students and research fellows, dissemination conferences

Research seminars for PhD students in Chemistry and Materials Science

Tutoring of Students at the Scuola di Studi Superiori "Ferdinando Rossi" in the field of chemistry, sustainable resources and energy technology.

Visiting Professor Profile

Professor of chemistry, ideally with:

- internationally-recognized research in the field of materials science for sustainable processes,
- a successful track record of PhD supervision.
- eloquent in English and some knowledge of Italian,

Experience of:

- instruction in different universities worldwide,
- lecturing at both undergraduate and graduate level,
- giving individual tutorials and small-class teaching.

Contact person at the Department

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