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## **VABILO NA INŠTITUTSKO PREDAVANJE / INVITATION TO THE INSTITUTE LECTURE**

# **Prof. dr. Rafael Luque**

Department of Organic Chemistry, University of Cordoba, Spain

**Petek / Friday, 30. 05. 2014, ob / at 11:00**

**Velika predavalnica Kemijskega inštituta / Lecture Hall at the  
National Institute of Chemistry; Hajdrihova 19, Ljubljana**

## **Innovative benign by design methodologies: from nanomaterials to heterogeneous catalysis and biomass/waste valorization**

The design of benign and environmentally sound methodologies has been the driving force of scientists in recent years. Attractive and innovative protocols that nowadays are even part of industrial ventures including biomass-derived porous carbonaceous materials, biodiesel integrating glycerol into its composition and more recently gasification and waste valorisation have been recently developed in our group in past years. These topics have extensively covered the preparation and design of (nano)materials and their utilisation in heterogeneously catalysed processes as well as in biomass and waste valorisation practises.

In this lecture, we aim to provide an overview of recent trends from our group in the utilisation of novel methodologies including microwaves and ball milling for the design of nanomaterials (supported metal and metal oxide nanoparticles and related nanostructures), heterogeneously catalysed processes (oxidations, hydrogenations, C-C couplings) as well as recent efforts on a biorefinery concept entailing biomass and waste valorisation of forestry and food residues (e.g. lignin, orange peel) to high added value products and biofuels. Towards the end of the lecture, we will highlight personal experiences as young entrepreneur co-founder of Starbon Technologies Ltd at York (UK) and Green Applied Solutions S.L. in Cordoba (Spain) in our aim to stimulate and promote entrepreneurial activities within the academic and student community.

**Vljudno vabljeni! / Kindly invited!**

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