INVITATION and CALL FOR PAPERS
4th EuCheMS Chemistry Congress
Prague, Czech Republic, August 26 – 30, 2012

Green Chemistry

A Symposium convened by Tundo Pietro, Italy
and the EuCheMS Working Party on Green and Sustainable Chemistry
29 – 30 August

Green Chemistry includes essentially four topics in EuCheMS Congress:
- Policy on Climate Change,
- Carbonate Chemistry,
- Recycle of pollutants and
- Process intensification with microreactors

A key element of the EU efforts to promote sustainable development is its “Integrated Climate and Energy Policy”, providing for substantial reductions of the green house gas emissions in the EU with a reduction of the consumption of natural resources and a lowering of air pollution as co-benefits. This is a first step towards a conceived massive global effort to limit global warming to 2 degrees, which would correspond to reducing the green house gas emissions globally by 50 % till the year 2050. New “sustainable and green” technologies have to be developed and implemented. The keynote lecture devoted to this topic will be given by Manfred Grasserbauer, Vienna University of Technology, on The climate and energy policy of the European Union: challenges for green chemistry.

Microreactors and advanced flow reactors are important in the development of safe and sustainable processes for the production of biobased chemicals from natural chemical platforms. Examples involve C3-platform glycerol, lactic acid and serinol, and C-6 sorbitol and glucose. Appropriate combinations of Chemistry, Chemical Engineering and Process Analytical Technology are key for the development of safe and sustainable processes for Fine and Pharma industries with reduction of inventories, good productivity, fully controlled operating conditions, reproducibility, constant quality and improved economics. This keynote lecture will be presented by Attilio Citterio, Politecnico di Milano, Italy on: Microreactors and advanced flow reactors for safe valorization of natural chemical platforms.

World-wide production of oil and gas is expected to peak before 2020. Therefore, since over 90% of all commercially available organic chemicals are sourced from crude oil, a major challenge for chemistry over the next 10 years is to find alternative, sustainable feedstocks for the chemicals industry. One particularly attractive reaction in this respect is the 100% atom economical reaction between CO$_2$ and epoxides leading to cyclic carbonates. Cyclic carbonates are already manufactured commercially and have a number of applications including as electrolytes for lithium ion batteries and as polar aprotic solvents. The state of art of this topic will be presented by Michael North, School of Chemistry, Newcastle University, with the keynote lecture on: Synthesis of cyclic carbonates from waste CO$_2$.

For full details on the Congress see: www.euchems-prague2012.cz/
Burning of fossil fuels for power generation is always accompanied with formation of awfully undesired pollutants which are environmentally damaging and typically highly toxic. Even renewable fuels such as biodiesel, bioethanol and even hydrogen are expected to generate toxic contaminants particularly oxides of nitrogen. While the traditional abatement methods focused on neutralization and decontamination of the pollutants, novel technologies are seeking approaches to convert the pollutants into useful products e.g. sulfate or nitrite fertilizers, sulfuric or nitric acid and heavy metals. Yoel Sasson, Institute of Chemistry of the Hebrew University of Jerusalem, will give the keynote lecture on: Green Chemistry Success Record: Chemistry and technology of end of pipe solutions for treatment of flue gas in mobile and stationary sources.

Organisation
This symposium will take place on 29-30 August. It is embedded in one of the seven Main Congress Themes of the 4th EuCheMS Chemistry Congress under the heading “Environment and Green Chemistry” from 27 – 30 August. For more information see the flyer on this Main Congress Theme. The whole scientific programme of the congress is available on its website: www.euchems-prague2012.cz

Abstracts
Participants are encouraged to submit titles and abstracts for presentations. The deadline for abstract submission is May 5, 2012. The submissions can be made online: www.euchems-prague2012.cz. In order to broaden the programme, attendees will be allowed only one oral presentation. On the other hand, you can present as many posters as you wish.

Registration
Registration is open with discounted fees available for students and members of EuCheMS member societies. Full details about registration see: www.euchems-prague2012.cz. Early registration until May 5, 2012 for EuCheMS members: 450 €, for EuCheMS student members: 220 €.

Travel grants by individual Chemical Societies
National Chemical Societies members of EuCheMS will provide special travel funds for students to attend the 4th European Chemistry Congress. Contact your National Chemical Society for more details.

Publication of the presentations
The journal Environmental Science and Pollution Research (ESPR) http://www.springer.com/environment/journal/11356 intends to publish a Special Issue with selected papers based on keynote lectures and submitted oral or poster presentations. Manuscripts must be sent for preselecting to Philippe Garrigues, ESPR Editor-in-Chief: p.garrigues@ism.u-bordeaux1.fr

Contact
For further information, please don't hesitate to contact Pietro Tundo, convener of the Symposium Green Chemistry: tundop@unive.it

Additional Symposia on Green Chemistry (27 – 30 Aug. 2011)

- Mining and the Environment (2 days, 28-29 August)
- Environmental Radiochemistry (1 days, 27 August)
- General Environmental Chemistry including Organic and Inorganic Chemical Pollutants

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