

Preface

The 42nd IUPAC Congress was held in Glasgow on 2–7 August 2009, under the patronage of the Royal Society of Chemistry (RSC). More than 2200 delegates convened in the Scottish Exhibition and Conference Centre for this biennial event, evocatively subtitled “Chemistry Solutions” for the occasion. The Organizing Committee, chaired by Prof. Paul O’Brien (Manchester University), was responsible for overall planning and compilation of an outstanding scientific program, and orchestration by the RSC conference team and their management of facilities and activities during the Congress week were widely acclaimed as indispensable factors in ensuring a memorable international celebration of chemistry. For many delegates, this was also an opportunity to discover or renew acquaintance with the proud history and distinctive ambience of this great city, and to enjoy its progressive modern image.

The scientific program of the Congress was highlighted by nine inspiring plenary lectures by leading luminaries in various aspects of the chemical sciences. In addition, multi-themed parallel sessions provided a platform for presentation of no less than about 600 lectures, under the following theme titles:

- Analysis and Detection
- Chemistry for Health
- Communication and Education
- Energy and Environment
- Industry and Innovation
- Materials
- Synthesis and Mechanism

A program of symposia was presented in each of these themes, and catered for all interests from the most fundamental insights and interpretation of current advances in chemistry to the role of chemistry in meeting the growing technological challenges and aspirations of modern society. The scientific program was enriched by the display of over 1200 posters dealing in every imaginable area of pure and applied chemistry, and handsomely representing the contributions of a great number of the young scientists who attended the Congress.

Publication coverage of events such as the 42nd IUPAC Congress is challenging. Invited participants are often confronted with competing commitments, and a large multidisciplinary scientific program militates against reconciling a fully representative publication record with the readership appeal of a thematically coherent collection of works. This addition to the illustrious publication record of the Congress series in *Pure and Applied Chemistry (PAC)* (<<http://www.iupac.org/publications/pac/conferences/family/CONGRESS/>>) adheres to the recent practice of concentrating on more selective publication of certain themes. It is thus a pleasure to introduce a representative collection of works, based upon a seminal plenary presentation by Sir Fraser Stoddart and lectures by a distinguished group of invited contributors to the themes of “Chemistry for Health” and “Synthesis and Mechanism”. The organizers are particularly grateful to these presenters for ensuring that readers of *PAC* have an opportunity to relive or engage vicariously in an outstanding IUPAC Congress.

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