

## **Editorial - Proceedings of 4th International Conference on Tribo-Corrosion, Glasgow 2014-volume 1.**

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**Conference photograph from Tribo-Corrosion 2014, Glasgow.**

The fourth International Conference on Tribo-Corrosion was held in Glasgow from 9-11 April 2014 and had a distinctively Gaelic flavour, with the city of Glasgow being the gateway to the Gaelic traditions encapsulated in the Highlands and Islands of Scotland. An eclectic group of participants took part in the conference from 23 countries which was the first time the international conference series was held in Scotland (a 2 day workshop of the Tribo-Corrosion Network, Tri-CorrNet was held in 2002).

The proceedings from the conference are divided into 2 volumes, published in Tribology International and the new Journal of Bio-and Tribo-Corrosion, the first time that the conference will have been published in 2 journal special issues, indicating the growth and development in the subject in recent years. The conference has led to a number of elegant papers in new and emerging areas of the subject. A study of the synergism between corrosion and wear on CoCrMo–Al<sub>2</sub>O<sub>3</sub> biocomposites in a physiological solution was

generated by a Brazilian/Portugese collaboration, Toptan, Ribeiro, Rocha et al in which the tribo-corrosion resistance of potential novel biocomposites was assessed. Finite element analysis of the head-neck taper interface of modular hip prostheses, Dyrkacz and co-authors, investigated the important aspects modular hip configuration. Sliding tribo-corrosion metallic glass against bearing steel was addressed in a study from China, Ji et al, and another contribution from Brazil and Portugal investigated the tribo-corrosion behaviour of hot pressed CoCrMo-HAP biocomposites, Toptan, Rocha et al.

There were a number of papers on tribo-corrosion of Ti published at the meeting reflecting much recent interest in this material in tribo-corrosion environments. The first of these considered the effect of sliding velocity on tribo-oxides and wear behavior of a Ti-6Al-4V alloy. Li, Wang et al. A new approach to studying the fretting corrosion in hip implant modular junctions was addressed by a paper from Rush Medical University, Chicago, US, Mathew, Royhman and Jacobs. This was followed by two further papers on Ti, the role of counterface materials in the tribo-corrosion of a Ti alloy, Wang, Li et al and a contribution from Strathclyde outlining tribo-oxidation maps for Ti based composites, Rasool and Stack, which was a student poster paper at the meeting. A final paper considered friction and wear of selected titanium and zirconium based nitride coatings in aqueous solution, Ripoll et al.

A lively series of social events included a visit to the town hall in George Square, Glasgow where Bailie Nina Baker, Glasgow City Council, on behalf of the Lady Provost, welcomed the international delegates to a reception. This was followed by a visit to the council chamber with a historical overview of events over the past 150 years since the era of Queen Victoria. The conference dinner was hosted in the Corinthian hotel, another famous Glasgow landmark and the site of the Tribo-Corrosion workshop dinner in 2002. The social programme also included a visit to the Kelvingrove Art Gallery, Glengoyne Distillery and Loch Lomond for accompanying delegates. We are very grateful to all our sponsors, and in particular to the University of Strathclyde and the Millenium hotel for all the assistance with the conference. Special thanks must go to the local organizing team, the Tribos research group in the Department of Mechanical and Aerospace Engineering, University of Strathclyde, for their sterling work in the day to day management of the meeting.

Go raibh míle maith agaibh go léir! (Thank you, Gaelic).

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