

Preface

The 19th International Symposium on Plasma Chemistry (ISPC-19) was held at Ruhr-University Bochum, Germany, from 26 to 31 July 2009 under the sponsorship of the International Union of Pure and Applied Chemistry (IUPAC) and the International Plasma Chemistry Society (IPCS), and under the patronage of the Ministry of Innovation, Science, Research and Technology of North-Rhine Westphalia, Germany. Bochum also served as the host venue for ISPC-10 in 1991, and this return occasion of ISPC-19 was co-sponsored by the German Science Foundation, the Ruhr-University Bochum, and the town of Bochum.

ISPC is a bi-annual international conference with topics encompassing the complete areas of plasma chemistry and plasma processing science. Almost 650 participants from over 40 countries presented 682 papers. Six plenary speakers and 22 topical invited speakers covered a broad range of topics. These keynote lectures were complemented by 105 oral contributions and about 530 poster presentations in 16 categorized scientific topics. The large number of papers reflects that the current field of plasma chemistry is lively and evolving, and crosses the borders between many disciplines ranging from natural to engineering sciences.

This issue of *Pure and Applied Chemistry* contains 13 papers based on plenary lectures and topical invited talks presented at ISPC-19. This compilation illustrates very well that the traditional distinction between low-pressure and thermal high-pressure plasmas almost disappears; the current research topics on microplasmas and microplasma jets exhibit many similarities if compared to research on conventional arcs used for thermal spraying. We sincerely hope that this issue provides readers an overview of current and future scientific developments.

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