



Foreword/Avant-propos

Advances in catalytic reactivity and specific mechanisms of nanostructured catalysts—Memorial issue in honor of François Gault



Preface

François Gault was a star of unequalled brilliance in Europe's intellectual firmament whose 85th birthday we celebrated in 2016; we welcome the opportunity of paying homage. He was the founder of the Laboratories of Catalysis of Caen (1960) and Strasbourg (1971).

François Gault, an outstanding French scientist, mentor to many generations of French chemists, was born on January 7, 1931 in Nancy; he died on August 4, 1979 after he wrote a fascinating symphony of organic chemistry and catalysis. Over the course of his career, he has been acknowledged as a leading researcher in the field of catalysis and organic chemistry. François Gault was a brilliant, creative, visionary, enthusiastic scholar, and a warm and thoughtful husband, father, colleague, and friend. François Gault had a most gracious personality, courteous, and charming. He has remained friend of J.-M. Lehn, G. Ourisson, J. A. Osborn, M. Boudart, C. Kambal, R. L. Burwell, K. I. Tamaru, K. Tanabe, G. C. Bond, G. A. Somorjai, Z. Paal, V. A. Kazansky, L. Gucci, J. R. Anderson, J. J. Rooney, P. Wells, A. Frennet, W. M. H. Sachtler, V. Ponec, J.-E. Germain, R. Maurel, J. Barbier, G. Leclercq, F. Gautier, and so on. This is not an exhaustive list.

He used to work quite a lot, leaving the laboratory around midnight or later. His reflection was always very fast and his scientific knowledge was very impressive. When a doctorate student was asked to discuss the scientific results in his office, it was always a great moment for him as he was always learning something new; it was very rewarding. He was a very good teacher.

He was interested in the study of the catalytic mechanisms of hydrocarbons using isotope tracing (^{13}C and D_2). He was the first to demonstrate the isomerization of alkanes on platinum metal films. François Gault was a perfectionist; the development of his researches followed the same trend than the analytical progresses, and he

always pushed the limits of the techniques for highest possible data quality. He was a forerunner in his field, as the use of labeled molecules demonstrated, to better understand the catalytic mechanisms of hydrocarbons rearrangement. Each article is the culmination of a detailed study on a current topic in heterogeneous catalysis. These articles highlight a number of fundamental aspects of modern heterogeneous catalysis, surface phase behavior, adsorption and reaction properties, and particle size effects on chemical reactions.

In recognition of his work and his personality, the European Federation of Catalysis Societies has founded, in his honor, the François Gault Lectureship Award. The award is given every 2 years to a distinguished scientist as Europe's highest honor in the field of catalysis. The François Gault Lectureship is the most prestigious distinction that a catalysis scientist can receive from a European organization.

This thematic issue contains a diverse collection of articles that highlight the latest development in catalysis. It contains both review and research articles in this burgeoning field. This issue is based on articles presented by the winners of the François Gault Lectureship Award, the former students, colleagues, and friends of Gault. We thank all authors for the time and effort involved in preparing these articles. We also thank all of the reviewers who took time out of their demanding schedules to referee the articles in a timely manner.

We express our warm thanks to Mrs. Fatima Messadi, Mrs. Marie-Christine Brissot, and Mr. Jean-Michel Blengino, who coordinated the handling and collecting of the manuscripts with a high degree of professionalism. We sincerely thank all the editors of *Comptes rendus Chimie* involved in this special issue. Last, but certainly not least, we also express our gratitude to Professor Pierre Braunstein for his generosity and moral elegance shown in his acceptance of the editorial duties inherent to the present issue of the prestigious journal of the French Academy of Sciences.

Ioana Fechete*
*Institut de chimie et procédés pour l'énergie,
l'environnement et la santé – ICPEES, UMR 7515 CNRS,
Université de Strasbourg, 25, rue Becquerel,
67087 Strasbourg cedex 2, France*

Daniel E. Resasco
*University of Oklahoma, 100 East Boyd St, Norman,
OK 73019, USA*
E-mail address: ouresasco@gmail.com

Joachim Sauer
*Humboldt-Universität zu Berlin, Institut für Chemie,
Unter Den Linden 6, 10099 Berlin, Germany*
E-mail address: js@chemie.hu-berlin.de

François Garin
*Institut de chimie et procédés pour l'énergie,
l'environnement et la santé – ICPEES, UMR 7515 CNRS,
Université de Strasbourg, 25, rue Becquerel,
67087 Strasbourg cedex 2, France*
E-mail address: garin@unistra.fr

* Corresponding author.
E-mail addresses: i_fechete@yahoo.com, ifechete@unistra.fr
(I. Fechete)

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