D. Pletcher, Z.-Q. Tian, and D.E. Williams (eds): *Developments in Electrochemistry: Science Inspired by Martin Fleischmann*

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A book dedicated to a well-known electrochemist who was certainly not shy of the spotlight of science and general publicity appears like a promising collection (bag) containing presumably numerous items from the certainly multifaceted scientific career of the dedicatee and/or items inspired by him. Most readers familiar in particular with their specific field of research in electrochemistry will expect insights in case Martin Fleischmann has been active in this field, too (Very likely). Other readers not yet entrenched in a particular field may hope for a more person-related overview on the developments of electrochemistry (which has been somewhat confusingly the title of another book edited by J.H. Chun: *Developments in Electrochemistry*, InTech, Rijeka 2012. But that tome is a rather diffuse collection of some review publications, which are somehow at odds with the high-flying intentions of the editor and the author of a major contribution therein with again this title).

What to expect actually from the book inspected here the curious reader might hope to learn from a foreword. There is none. Instead there is a chapter 1 entitled quite clearly “Martin Fleischmann – The Scientist and the Person.” There are no authors—surprisingly different from subsequent chapters that are all properly assigned to authors. The chapter is sort of a CV ending with a list of publications, organized into various fields of research. Apparently their enthusiasm carried the unknown authors away; there is one field that yielded exactly one publication. The reader still a bit uncertain of the concept this book might follow may perhaps expect, that the following chapters are arranged in some sequence either logical (which might be a bit hard given the very multifaceted interests of the

dedicatee) or the organizing principle of the list of publications. Neither works. Nevertheless, he will enjoy the numerous anecdotes illustrating the person and its professional as well as its scientific development. This suggests strongly that some authors have contributed personal memories—why they wish to stay shrouded in anonymity remains a mystery.

In ch. 2, Bond et al. review methods for evaluation of electrode kinetics at stationary macrodisk electrodes. After a few pages, the reader detects the relationship between this chapter and Martin Fleischmann. The following, mostly shorter 17 chapters touch on almost every topic that has earlier attracted his interest or which the authors think might have some connection with him. They include electrocrystallization, phase formation and growth, vibrational spectroscopies and X-ray diffraction at electrochemical interfaces, organic electrosynthesis, electrochemical cell design and engineering, scanning probe microscopies, corrosion, photoelectrochemistry, and impedance and noise measurements. And yes, there is also a chapter on cold fusion. Major topics like batteries, fuel cells, supercaps, and many more are absent. Which nicely illustrates that even Martin Fleischmann was not everywhere. And even the most inspired author contributing to this book might have had difficulties in connecting his or her research to him. The rather limited size of all contributions (even when split into two) strongly narrows scope and completeness of most chapters except where the authors after some remarks on the dedicatee happily embark on their small favorite pet subject.

The book is very carefully prepared and lavishly illustrated. The final index is a bit unusual, entries like 295-6 or 299-300 are a bit at odds with standards in scientific publishing. Page ranges may be justified in reference lists of publication, in an index the present author has not found them before. They simply confuse here. Why names of just one scientist and several products make it into the index is a mystery, it appears to be arbitrary and of small value. Why an enhancement factor shows up only in relation to smooth versus 3D-electrodes and

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not in relation to surface-enhanced Raman spectroscopy is more than a riddle. Eleven references to publications (of Martin Fleischmann) all pointing to the same spot at the end of ch. 1 are as unneeded as 10 references to the Fleischmann-Pons heat effect pointing to another single spot. Perhaps the index was created by a service-provider?

Finally, the question that always should be asked by the authors and editors of a scientific book shall be posed again: For which reader will this book be beneficial? The reviewer has no answer; the editors and authors did not even try to provide one. A real final puzzle: Even without examining the CVs of all contributors, it appears to be safe to state that some of them may be called students of Martin Fleischmann, and many of them are introduced as his colleagues at various stations of his finally highly mobile career. But somehow the relations must have been a bit limited: Even the portrait picture (a very typical one) was taken from a Wikipedia website. Perhaps the simple fact, that the book was published about two years after his death in 2012 provides a clue: It may simply be considered a memorial to a well-known scientist. The sometimes remarkable acknowledgments at the end of some chapters are quite insightful: Donors, hard-working students, and granting agencies are frequently mentioned, down to copy-and-paste. Only one author

mentions Martin Fleischmann (p. 345). And many have nothing to acknowledge at all. Surprising only at first glance, many details in chapter 1 might have foretold this. The book is certainly worthwhile and remarkable as sort of a memorial from the authors and editors perspectives. For the general reader, this project sometimes oscillating between the personal and the scientifically disjointed appears to be of limited value only. Presumably not a must for a library dealing in electrochemistry.

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