
FOREWORD

The isolation of fluorine by Henri Moissan on June 26th, 1886, which this book commemorates, was an event of major importance in chemistry, opening the way, as it did, for the discovery of many new families of compounds as the reactions of the element were explored. It is hard for us today to realise the difficulties confronting an experimenter in this field a hundred years ago. Virtually all of the facilities which we now take for granted were lacking then, and the solution of the many problems encountered in isolating so reactive an element called for quite exceptional skill and resourcefulness. These qualities characterize Moissan's work, and we are fortunate in having his own account of how these difficulties were overcome, in his book *Le Fluor et ses Composés*. This was published in 1900 and, very appropriately, was dedicated to the University of Paris, where the discovery was made.

Moissan realised that fluorine would one day be much more readily available when he wrote in the preface to *Le Fluor*:

“Maintenant que le fluor se prépare avec facilité, on est surpris que son isolement ait été aussi long et aussi laborieux. Il en est du reste toujours ainsi. Dans quelques années, sa préparation paraîtra toute simple, et pour peu qu'on lui trouve quelque application industrielle, on l'obtiendra en grande quantité et l'on oubliera les efforts que son isolement a pu coûter”. Few other chemists entered the field for some 30 years, however, and Moissan interested himself more and more in high-temperature chemistry with the turn of the century. It was not until the first high-temperature cell was developed in 1919 that this position changed. The use of molten potassium hydrogen fluoride as an electrolyte avoided the then laborious process for preparing anhydrous hydrogen fluoride, and the costly platinum anodes of the original cells could also be replaced by carbon. The result was a great upsurge in interest, not only in the element but in all aspects of fluorine chemistry, and a spate of new discoveries followed which has continued to the present day.

Since so much has stemmed, either directly or indirectly, from Moissan's original discovery, it is appropriate that this book, in honouring his memory, should also cover a wide field. Its editors and authors are all active in their respective fields, and chemists throughout the world will wish to join them in their tribute to this great French chemist. All have experienced the excitement and challenge of work in this field and Moissan's own words show that for him too it was something special:

“Si nous ajoutons qu'il s'agissait ici d'un élément d'une activité et d'une énergie de combinaison tout à fait exceptionnelles, on comprendra que le plaisir de la recherche en ait encore été augmenté”.

Fortunately, too, for those who have yet to enter this fascinating field, another of his sayings still holds true: "... l'étude des composés fluorés réserve encore bien des surprises".

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