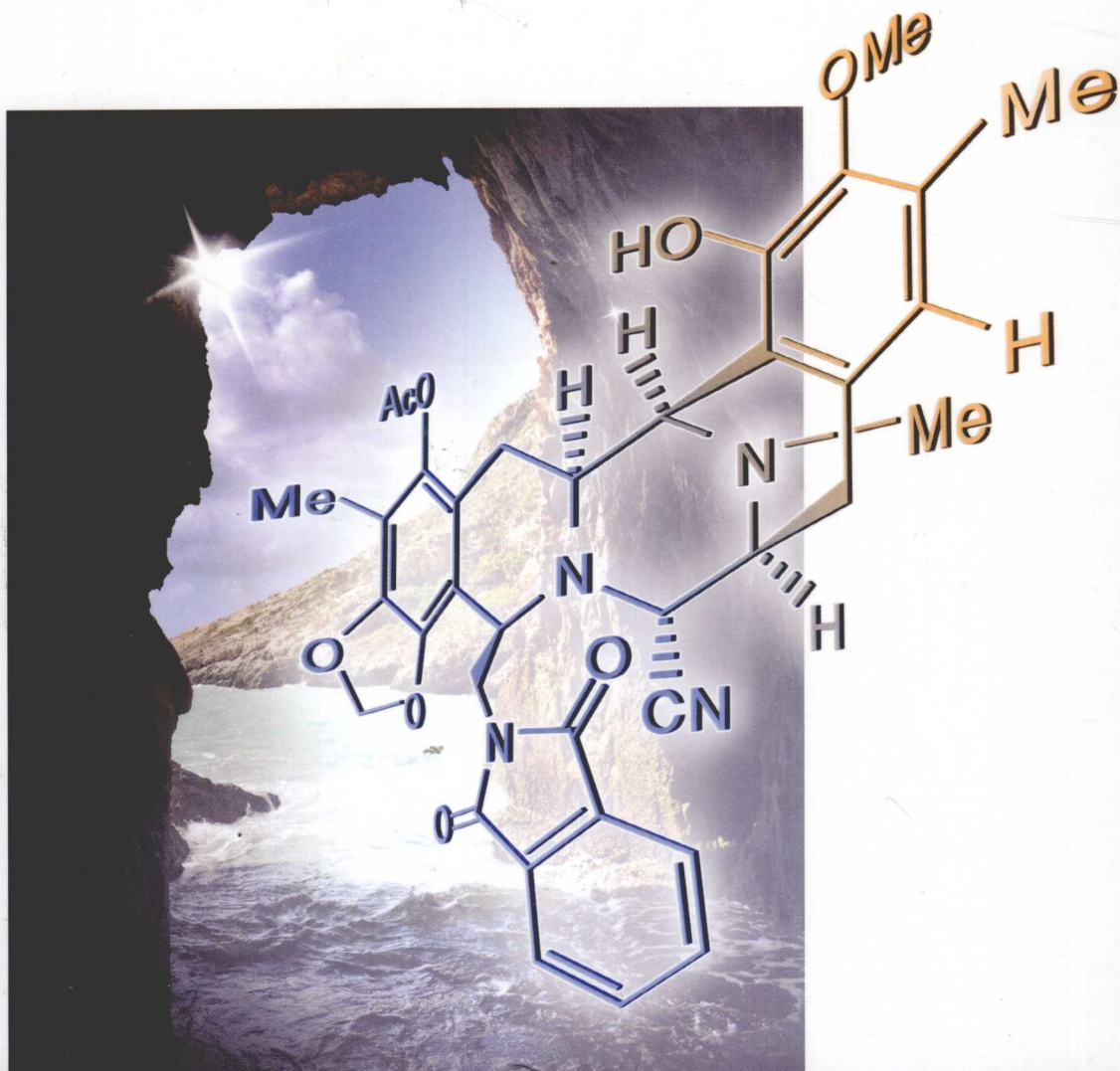


Edited by Kuiling Ding and Li-Xin Dai

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Organic Chemistry – Breakthroughs and Perspectives



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**Organic Chemistry –
Breakthroughs
and Perspectives**



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Introduction

Kuiling Ding and Li-Xin Dai

From the 1950s to the Second Decade of the Twenty-First Century

About half a century ago, two books were published. The first, entitled *Perspectives in Organic Chemistry*, 1956 [1], was dedicated to Sir Robert Robinson on the occasion of his 70th birthday. Twenty-two years later, another book, with the same theme as the first, with the title *Further Perspectives in Organic Chemistry*, 1978 [2], appeared. This book contains all the lectures given at a Symposium in memory of the late Sir Robert Robinson. These two books share a similar relationship with the great organic chemist, Sir Robert, and recorded the progress of organic chemistry at that time. Now we are in a new century and living in a rapidly changing world. The stimulus for us to edit this book, *Organic Chemistry – Breakthroughs and Perspectives*, is the tremendous achievements of organic chemistry in the last two decades. After the Second World War, we had experienced basically a sufficiently long peaceful and stable period that engendered the steady growth of chemistry. A relatively good financial situation to support the efforts of talented chemists, and also mutual interactions with neighboring sciences, all contributed to the tremendous achievements of organic chemistry. Organic chemistry is thus endowed with vital forces. The emergence of many new disciplines marks the vigorous new faces of organic chemistry. These disciplines include chemical biology, organocatalysis, supramolecular chemistry, green or sustainable chemistry, combinatorial chemistry, and flow chemistry, to name just a few.

The renaming of the Department of Chemistry as the Department of Chemistry and Chemical Biology by Harvard University at the end of the last century marked the emergence of chemical biology, an interface of chemistry and life sciences. To manifest the maturity of this new discipline, several new journals, namely *Nature Chemical Biology*, *ChemBioChem*, *Chemical Biology*, *BMC Chemical Biology*, *Chemical Biology and Drug Design*, and *Chemistry and Biology*, with the sole aim of reporting developments in chemical biology, were launched in the last couple of years. Chemical biology is now a distinct discipline in understanding science at the intersections of chemistry and biology. Chemical biologists believe that they are standing at the doorstep of an exciting era [3].

Similarly, green chemistry or sustainable chemistry is another new discipline, and as such also has its specialized new journals. Sixteen years ago, the establishment of the