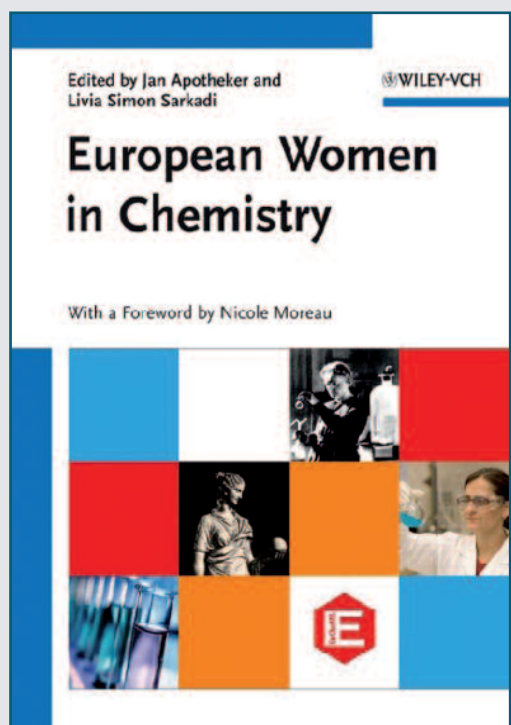




EUROPEAN WOMEN IN CHEMISTRY

edited by J. Apotheker, L.S. Sarkadi

Wiley-VCH

Pag. XVI+240, softcover, 27 euro

It is not of minor relevance that the European Association of Chemical and Molecular Sciences (EuCheMS) wants to celebrate the International Year of Chemistry (IYC) 2011 with a book on the stories and scientific achievements of "European Women in Chemistry". Under the experienced guidance of the two editors, Jan Apotheker and Livia Sarkadi, and the continuous support of the publisher Wiley-VCH and its staff, an excellent team of authors have written a first-class book highlighting the role of European women in science, and in particular, in chemistry. Consider the most famous female European scientist, Marie Skłodowska Curie; her work at the beginning of the last century was absolutely fundamental for the progress of a then still young Science! Her research was eventually recognised with the award of the Nobel Prize in Physics (1903), and later in Chemistry (1911). Indeed, it is no coincidence that 2011-the centennial celebration of her prize in chemistry-was chosen as the IYC!

I began the book with the normal curiosity for reading stories of the lives of famous people, accompanied by the added advantage of learning something more about chemistry and its history. But ultimately, I was fascinated by all these inspirational women who, generally coming from educated and wealthy families, managed to reach an outstanding level of scientific achievement only through their intelli-

gence and strong determination. During the last century-in particular, the first half-the upper classes were dominated by men, and women were generally excluded from performing serious activities, even from studying! For example, universities, colleges, academies, parliaments, even voting in many instances, were all places and situations forbidden to women. They had to stay at home, taking care of children. The biographies of 54 women in chemistry (or alchemy, interestingly, for some women from many centuries ago) are reported in the book: scientists from all over Europe, who often also moved through Europe from one university to another to follow their thirst for culture, personal inspiration, and their desire to do something important in science. They were all gifted with intelligence accompanied by deep scientific curiosity, but always had to fight within, and sometime against, a world that was thoroughly dominated by men. Many of them are no longer alive, but if they were here today, they would probably feel that things have definitely improved, but not to the point of complete equality for both genders to reach their goals. Having taken note of what I learned from the lives encountered in the book, I only want now to address three figures which, to my opinion, are absolutely paradigmatic of the difficulties women encountered, and unfortunately sometimes still do even nowadays, to reach what they wanted to and also deserve.

Marie Skłodowska Curie (1867-1934): in 1911 she was advised, by one member of the Swedish Academy of Science, not to go to Stockholm to accept the prize. How strange it must have appeared to this academic that a female had sufficient aptitude for performing top-quality science! Even after receiving the award, her nomination to the Academie Française des Sciences was declined - she was a woman, and worse still a foreigner!

Filomena Nitti Bovet (1909-1994): the daughter of a great Italian economist and Prime Minister, Filomena Nitti Bovet was scientifically (and also politically) active until 1975. *ChemMedChem* readers specifically will be interested to know that she was played an important role in the development of pharmacology and therapeutic chemistry. Noticeably, in her laboratory she also led a group of female scientists. In 1957 her husband Daniel Bovet, with whom she had scientifically collaborated with for decades, received Nobel recognition (Nobel Prize in Physiology or Medicine). It has been said, by many scientists and colleagues at those times, that she made a major contribution to this achievement. Indeed, after the prize was awarded, in a congratulatory letter written by a fellow scientist, both were jointly applauded for the recognition!

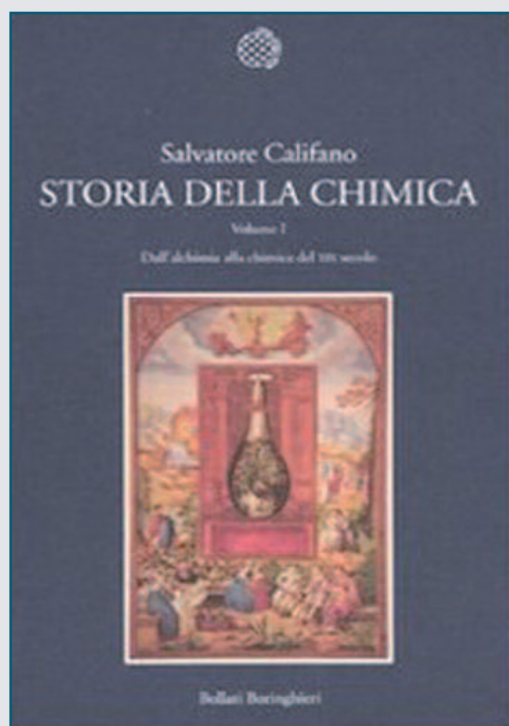
Rosalind Franklin (1920-1958): in 1962, Crick, Watson and Wilkins were jointly awarded the Nobel Prize in Physiology or Medicine for their discovery of the structure of DNA. However, it was Franklin's work that gave proof to the double helix theory! She was working in London, in the Fifties, in a different laboratory to that of Crick and Watson, and the X-ray photographs she had taken were shown to Crick and Watson without Franklin's permission. She was not informed of their use or of

the interpretation of her data nor, later, was she even mentioned during their Nobel Prize lecture or quoted in the relevant paper. Though widely acknowledged to have played a pivotal role in this momentous discovery, she unfortunately died young and so never experienced the recognition.

It is my strong conviction that unbiased reading of this book, besides increasing the reader's historical knowledge of chemistry and science, will also have a profound, hopefully constructive, effect on their opinions on the potential achievements in science that might be obtained by women.

Francesco De Angelis

(la recensione è stata pubblicata anche sul numero di marzo della rivista *ChemMedChem*)



STORIA DELLA CHIMICA

di S. Califano

Bollati Boringhieri (collana Nuova cultura)

Pag. 432, brossura, 45 euro

Ci sono varie brevi descrizioni dell'evoluzione della chimica od opere più estese su singoli aspetti ma mancava su questa materia un'opera organica e completa. Questo libro colma una lacuna dandoci una rappresentazione dettagliata della storia della chimica.

L'originalità del lavoro risiede particolarmente nell'approccio usato nel descrivere lo sviluppo della disciplina e il contributo di tanti scienziati. Molte storie delle discipline scientifiche descrivono la sequenza tem-

porale delle scoperte, delle elaborazioni teoriche e dei protagonisti; Califano privilegia un approccio autenticamente culturale da cui emerge un'immagine accattivante della chimica. La chimica ha contribuito in modo sostanziale al progresso dell'umanità attraverso grandi realizzazioni, come la sintesi dei fertilizzanti, la sintesi dei coloranti, la scoperta di nuovi materiali, la sintesi di farmaci. Focalizzarsi su questo porta ad una visione utilitaristica se non ancillare della chimica. L'impostazione del libro predilige una prospettiva più sostanziale perché si concentra su una storia della chimica come un grande avvenimento ed una grande conquista culturale. Comprendere a fondo la natura e la struttura del mondo che ci circonda ha dato un contributo fondamentale alla crescita culturale dell'uomo e ad affrancarlo dalle paure di un mondo ostile perché sconosciuto.

In questa "Storia della chimica" viene discusso ed illustrato un percorso logico nello sviluppo della disciplina, uno sviluppo che procede certamente grazie alle intuizioni degli scienziati ma è inquadrato in una storia più generale della cultura e dell'economia con le sue esigenze. In questo senso il titolo "Storia della chimica" può sembrare addirittura limitativo per la ricchezza di riferimenti che troviamo ai momenti storici, alle esigenze economiche e agli sviluppi delle altre discipline. Tale impostazione rende assai piacevole la lettura del libro anche per non specialisti. A questo contribuisce una prosa semplice e scorrevole senza rinunce al rigore del linguaggio scientifico, qualità di non poco conto per la diffusione della cultura scientifica.

Nell'immaginario popolare il chimico è visto come personaggio solitario intento ad operazioni misteriose nei suoi laboratori, più alchimista che scienziato. Il libro restituisce i personaggi che hanno fatto la storia della chimica ad una dimensione più vera portandoli fuori dei laboratori per collocarli nel loro ambiente familiare, sociale, di interessi economici e di relazioni umane (ed anche di contrasti e competizioni scientifiche ed accademiche) e nel momento storico in cui hanno vissuto.

L'opera è organizzata in due volumi, di cui abbiamo ora la prima parte, che copre un arco temporale dalle origini alla seconda metà dell'Ottocento. Il primo capitolo (*Dall'alchimia alla iatrochimica*) comincia in realtà molto prima di quello che possiamo più propriamente chiamare alchimia. Tutte le tappe del faticoso passaggio dall'acquisizione di conoscenze empiriche, ai tentativi di classificazione organica, all'elaborazione di una prima teoria scientifica sono percorse usando una descrizione per tematiche che hanno una loro intersezione temporale, contribuendo a dare una successione logica al racconto. Mirabili sono i capitoli in successione su *Gli atomi dei chimici*, *La nascita della chimica organica*, *Pesi atomici e molecolari*, *Il sistema periodico degli elementi* perché descrivono in maniera organica e dettagliata l'enorme sforzo e le intuizioni che hanno portato alla sistematizzazione della disciplina.

Vincenzo Schettino