

## Book Reviews

Yuri Orlic

**Chemistry: Active Methods of Teaching and Learning.**

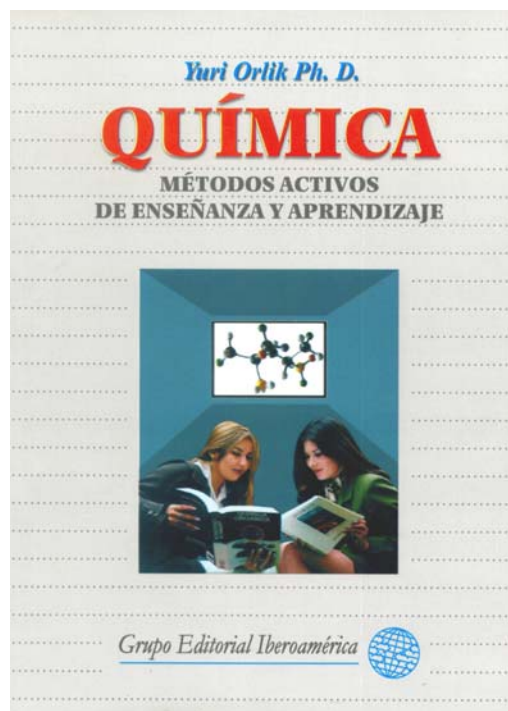
**Mexico: Iberoamerica Publ., 2002, pp. 358 (text in Spanish).**

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Knowledge in the field of natural sciences including chemistry is important not only as academic matter. It has also direct impact on resolution of environmental problems, industrial, cultural, development and welfare of the society. For this reason, for any country teaching chemistry is very valuable topic for the education in both secondary school and university.

Unfortunately, interest to natural science in modern settings is on the decrease. The number of students who chooses chemistry course at university has been constantly declining. There is an opinion that chemistry as a subject is too difficult for students. One cause for this situation is that to ensure a good level of teaching and learning chemistry, teacher does not always possess the necessary methodological base. Another problem is that students do not know modern learning methods, so they cannot conduct their productive and systematic individual work and gain a good level of knowledge and abilities in chemistry.

In *Chemistry: Active Methods of Teaching and Learning*, the author, Ph.D., professor Y.Orlic presents knowledge about both traditional and modern methods in teaching and learning chemistry. The book is intended for both teachers and students. Knowing the basic principles of chemistry curriculum design and the corresponding examples is very important to improve teaching chemistry. The book objective is to show principles of solving problems, organization of modern chemical experiment, assessment of knowledge, computer support and system approach at chemistry classes. The book contents is organized within 11 chapters: curricular design in chemistry; methods of teaching chemistry; resolution of numerical problems at chemistry classes; methods of evaluating knowledge and abilities in chemistry; chemical experiment in teaching; system approach for chemistry teaching; means of teaching and textbooks in chemistry; construction of knowledge and history of chemistry in teaching; modern organization of classes and extra-mural work in chemistry; integral methodology of chemistry teacher. The



author uses corresponding examples from different countries: US, Columbia, Canada, Belarus, Russia, Germany, etc., proceedings of both national and international scientific conferences, experience from various educational centers. Comparative analysis of teaching methods applied in different countries provides a lot of new information for teachers. Moreover, the book includes interesting result of the author's research in the field of chemical education.

The book is well written and included 700 good references. This book could be of great usefulness for secondary and higher school teachers, students, graduates, postgraduates, researchers and for everyone interested in chemical education.

Reviewed by **Elena I. Vasilevskaya**  
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