

CHARLES UNIVERSITY IN PRAGUE

Faculty of Science

Department of Teaching & Didactics of Chemistry

Ph.D. study program: Chemistry Education

**Education in Inorganic Chemistry in Context
of Common Life**

Ph. D. thesis

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Abstract

The objective of this Ph.D. thesis is to contribute to the effectiveness and quality of education of inorganic chemistry in the context of common life. The first chapter characterizes the current state of inorganic chemistry as a science and as a teaching subject. The requirements of the teachers teaching inorganic chemistry in secondary schools were determined by using the method of personal interview in the second chapter. After comparing the school systems in the third chapter and the analysis of selected textbooks used in the Czech Republic and in one of the countries of Germany, the criteria for creating teaching materials for inorganic chemistry were set. A textbook on the topic of the transition metals for secondary school pupils was created by means of a transformation of a scientific text. Finally, the textbook was evaluated by chemistry teachers at secondary schools in the form of a questionnaire survey and adjusted to the final form.

Keywords: school system, secondary school, inorganic chemistry, chemistry education, textbook, transition metals, interview, questionnaire survey