Information and communications technologies as methodological support of the practical training in Inorganic Chemistry

N.E. Boboriko, A.V. Zuraev, E.I. Vasilevskaya
Belarusian State University, Minsk, Belarus, e-mail: *boboriko@bsu.by*

Practical training of the students in a system of Higher Chemistry education along with the laboratory work utilizes solving of calculation and logical tasks. The epidemic situation that formed in 2020-2021 provoked massive transfer to remote conducting of the classes. And therefore, the essential expansion of the use of information and communication technologies in the teaching of the Chemistry disciplines occurred. The tasks embodied by information and communication technologies help to individualize the teaching process, make it more interactive and attractive for students. But on the other side, information technologies demand altering not only the manner of the tasks but their matter as well.

At the Chemistry Faculty of the BSU the remote practical teaching the Inorganic Chemistry implied training of the students by the tasks with the different level of the cognitive activity. The first level tasks (reproductive) requested following the example, completing tasks on the analogy, and the search for the ready-made answers in the textbooks. The second level (reconstructive) required using the known ways of solving the problem but in new situations with the self-constructed decision course. The third level (exploratory) tasks counted on the students' individual solutions in the absence of the ready algorithm. An example of the task, which contains the reproductive question, drag-and-drop reconstructive task, and exploratory transformation chain, is presented in Figure.

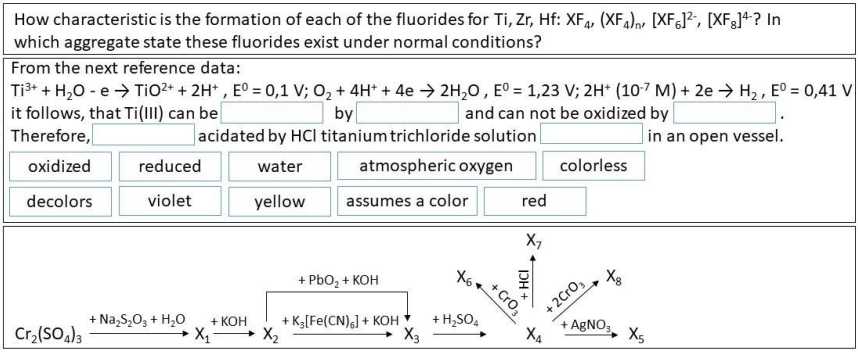

Fig. An example of the task in a remote mode for the topic "Metals of the IV-VIB groups"

The combination of the split-level tasks with information and communication technologies provides intense interest from the students and better educational outcomes.