

## **Cyclotron Institute Opportunities in Chemical Studies of Super Heavy Elements**

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**Abstract.** The topic of this talk is to demonstrate current techniques and to discuss ideas aimed at chemical characterization and investigation of the heaviest elements of the Periodic Table. I will consider gas phase and liquid phase approaches, highlight advantages and disadvantages of each method, and provide new results to propose future experiments with superheavy elements. These results are based on ongoing studies at Cyclotron Institute and are focused on implementation of ionic liquids and deep eutectic mixtures - new classes of compounds with unique properties.