

## THE PERIODIC TABLE A DRIVER FOR TRANSACTINIDE CHEMISTRY

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The periodic table celebrates its 150 years anniversary. This talk will illustrate the predictive power of this unique ordering scheme of the chemical elements towards the chemical properties of discovered and undiscovered superheavy elements<sup>1</sup>. Therefore, experimental results obtained from gas phase chemical investigations of transactinides (for review see<sup>2-4</sup>) will be analyzed in the view of expectations from chemical trends in the corresponding groups of D.I Mendeleev's periodic table. The other way around it will be tried to give an outlook of potentially exciting chemical systems to investigate transactinide elements in the future, despite their short half-lives and their minute production rates. Some selected recent developments in this field are presented with special focus on their challenges, advantages, disadvantages, and their future potential.

### References

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