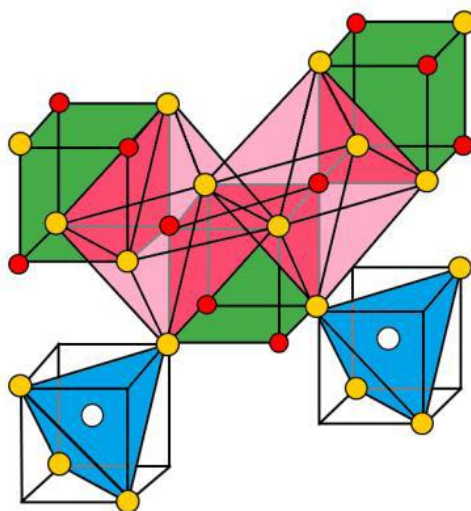


A research project entitled **“Design and preparation of heterometallic molecular clusters. Studies of their catalytic properties and transformation to novel nanomaterials”** includes the development of new original synthetic methods of a new unique generation of polymetallic molecular clusters composed of both elements of main groups and transition metals and lanthanides possessing various active centers and containing functionalized alkoxo ligands and their derivatives.



*Figure. Example of structure of heterometallic cluster.*

These compounds will be subjected to comprehensive physicochemical studies in order to explain their structure and properties and moreover, their catalytic, luminescent and magnetic properties will be investigated. The obtained heterometallic compounds will be transformed to specific nanomaterials with original individual properties and will be able to find a wide application in modern industrial technologies as magnetic materials, effective catalysts, phosphors, etc.