Advances in bonding and properties of inorganic systems from relativistic calculations in Latin America

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The inclusion of relativistic effects to understand chemical structures and related properties brings to the scientific community challenging study cases, showing the rich diversity of chemical behavior of the different elements along the periodic table. The results highlighted here represent applications of relativistic methodologies to study the nature of bonding and a prediction of optical and magnetic properties of meaningful chemical entities containing heavy atoms, all made in Latin America. The good agreement between calculated and experimental observables in many molecular and cluster-like systems ratifies that relativistic methods are appropriate to describe these entities realistically. We expect to enhance our knowledge in these methodologies, currently included in doctoral programs in our region.

Actinides

Heavy Elements

Lanthanide

Relativistic effects

Spin-Orbit

Actinides

Chemical bonds

Rare earth elements

Relativity

Chemical behavior

Doctoral programs

Heavy elements

Inorganic systems

Relativistic calculations

Relativistic effects

Scientific community

Spin orbits

Atoms