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Editorial Recent advances in boron chemistry

Boron chemistry has continuously developed during the XX and XXI centuries. Many questions about how a boron atom binds another producing complex cluster structures, or how metal-boron or boron-main group element bonds are generated have been answered. Theory as a tool to predict and interpret experimental results is getting very reliable, so are NMR and X-ray diffraction studies. Without their evolvement boron chemistry would be in its infancy. New synthetic protocols have emerged and captivating new molecules have been synthesized. Non-classical boron compounds have moved from the box of curiosities to real applications and boronic acid derivatives are today very popular as reagents for C-C coupling reactions as is the widely used hydroboration reaction. Boron is present in many materials, old and new, and applications in medicine and functional materials are emerging. However, boron specialists cannot be satisfied with these achievements and a courageous step ahead to explore the possibilities of boron compounds in the emerging scientific and technological areas is needed. Certainly, it is in the hands of the current active boron groups to present to the scientific community, to the funding institutions, to the companies, to the governments and to the public that boron chemistry is a tool for the advancement of science and the benefit of the society. The boron community shall become an influential group of scientists by doing good science and showing potential applications and shall stimulate young scientists to be creative, original and competitive, so that they bring new ideas to this fascinating world of boron chemistry.

We cannot be contented with the progress achieved so far and have to be keen to participate in the new scenarios that will certainly flourish as a result of the current economic crisis, the coming global oil shortage, environmental problems, the climate change, the increasing world population and the continuous need of change in the way of living. Thus, we shall not turn our backs to the new technologies aiming to improve health, to the nano- and bio-technology, to cleaner and sustainable energy, to new materials, to environment and many others to come.

This issue of *Journal of Organometallic Chemistry* reports on current research in boron chemistry done by leading groups in the field. Although not all aspects are covered, it provides a broad view of current research in the area.

We hope this set of papers will contribute to disseminate boron chemistry and stimulate researchers to introduce boron compounds in new and emerging fields.

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