

Preface

Palladium and platinum continue to play very significant roles in the development of fundamental organometallic chemistry and organic synthesis employing these metal centers in both stoichiometric and catalytic processes. The most common oxidation states exhibited by these elements cover the range 0 to +IV, and this volume has a central theme emphasizing the chemistry of oxidation states $>+II$, including metal–metal-bonded systems. At a broader level, there is significant emphasis on synthesis, structural chemistry of higher oxidation states, and mechanisms of stoichiometric and catalytic reactions involving the higher oxidation states. The synthetic and mechanistic chemistry of the higher oxidation states mandates a discussion of many aspects of lower oxidation states, in particular +II. In a formal electron book-keeping sense, some of the “higher oxidation state” complexes discussed here are closer to oxidation state +II, e.g., some metal–metal-bonded systems where Pd(II) and Pt(II) can be regarded as donors toward more electrophilic centers. The Editor has enlisted authors who are research active at the forefront of a selection of research areas of considerable current interest in the organometallic chemistry of palladium and platinum in higher oxidation states.

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Hobart, Tasmania, Australia

Allan J. Canty

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