DOI: 10.1002/chem.201400423



## m-Metallaphenol: Synthesis and Reactivity Studies















Feifei Han

Hong Zhang

Haiping Xia

Invited for the cover of this issue is the group of Haiping Xia at the University of Xiamen. The image depicts their recent work on the chemistry of transition-metal-containing metallaaromatics, organometallic compounds derived from formal replacement of a (hydro)carbon segment in an organic aromatic ring by an isolobal transition-metal fragment. Read the full text of the article at 10.1002/chem.201304957.

## What was the inspiration for the cover design?

According to the Chinese lunar calendar, this year is the Year of the Horse. In China, the horse is symbolic of passion, endurance, freedom, and vigorous spirit. In the past decade, we have concentrated on synthetic strategies for metallaaromatics, with a particular focus on their reactivity that would lead to new metallaaromatic species. The image of a running horse represents our wonderful journey through the chemistry of metallaaromatics.

## What is the most significant result of this study?

In this contribution, we present the synthesis of the first examples of *m*-metallaphenols as well as reactivity studies for the complex. Both experimental and theoretical studies suggest that these metallacycles have aromatic character. They can undergo typical reactions of aromatic systems (e.g., nucleophilic substitution reaction) as well as phenols (e.g., formation of urethane linkage with isocyanates).

## What other topics are you working on at the moment?

Our synthetic efforts have led to a large family of metallaaromatics with surprisingly excellent stability towards air, water, and heat. Their stability, together with their unprecedented structures, made it possible to study their properties, such as optical, electrochemical, magnetic, and chiral properties. Furthermore, these methods have also created a series of new topologies, such as metallapentalynes with Möbius aromaticity, metallapyridynes, five-membered metallacycloallenes, and a number of metallaaromatics with fused rings. On account of these results, we are attempting to employ some valuable classic organic reactions in our metallacycles, which might allow us to capture certain key intermediates. Further ad-

vances are expected, not only for new insights into the classic organic reactions, but also for the expansion of metallaaromatic chemistry.

