

1. Record Nr.	UNINA9910418316603321
Autore	Knoll Daniel
Titolo	Heterobimetallic [2.2]paracyclophane complexes and their application in photoredox catalysis // Daniel Knoll
Pubbl/distr/stampa	Berlin/Germany, : Logos Verlag Berlin, 2020 Berlin, Germany : , : Logos Verlag Berlin GmbH, , [2020] ©2020
ISBN	9783832550714
Descrizione fisica	1 online resource (xiii, 212 pages) : illustrations; digital file(s)
Collana	Beiträge zur organischen Synthese ; 85
Soggetti	Heterobimetallic complexes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Author's doctoral thesis, Karlsruher Institut für Technologie (KIT) -- title-page recto. Includes bibliographical references.
Nota di bibliografia	
Sommario/riassunto	The most important goal of current chemistry research is to provide green and sustainable routes to compounds of interest. One way of addressing this is the use of abundant and inexpensive sources of energy to drive reactions, with the prime example being visible light in photoredox catalysis. One recent promising approach is the use of heterobimetallic catalysts where two metals work in a cooperative fashion to achieve the desired transformation. However, these cooperative effects are poorly understood due to a lack of model complexes suitable for the intricate study of heterobimetallic complexes. In this work, [2.2]paracyclophane (PCP) is presented as a new platform on which to build distance-variable heterobimetallic complexes. The methods for the access to these synthetic targets are developed and investigated for their broader synthetic applicability. To demonstrate the potential of these complexes as catalysts, Au/Ru heterobimetallic complexes are evaluated regarding their performance in a dual photoredox catalytic arylative Meyer-Schuster rearrangement reaction. This reaction provides a very convenient and sustainable access to arylated enones, an important building blocks for relevant pharmaceutical compounds.

