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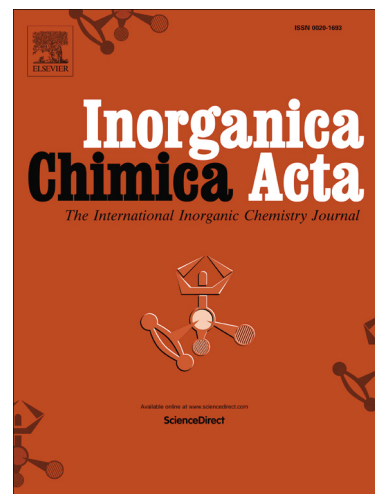
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PII: S0020-1693(16)30750-2  
DOI: <http://dx.doi.org/10.1016/j.ica.2017.01.033>  
Reference: ICA 17438

To appear in: *Inorganica Chimica Acta*

Received Date: 21 October 2016  
Revised Date: 19 January 2017  
Accepted Date: 21 January 2017



Please cite this article as: E. Orhan, A. Garci, B. Therrien, Coordination-driven self-assembly of arene ruthenium metalla-rectangles, *Inorganica Chimica Acta* (2017), doi: <http://dx.doi.org/10.1016/j.ica.2017.01.033>

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# Coordination-driven self-assembly of arene ruthenium metalla-rectangles

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## Abstract

Series of tetranuclear arene ruthenium complexes of the general formula  $[\text{Ru}_4(p\text{-cymene})_4(\mu_2\text{-N}\cap\text{N})_2(\mu_4\text{-OO}\cap\text{OO})_2][\text{CF}_3\text{SO}_3]_4$  ( $\text{N}\cap\text{N}$  = 2,5-dipyridyl-thiophene (dptp), 3,6-dipyridyl-1,2,4,5-tetrazine (dptz), 3,6-dipyridyl-1,4-dihydro-1,2,4,5-tetrazine (dpdt)) were prepared by reacting the dinuclear arene ruthenium complexes  $\text{Ru}_2(p\text{-cymene})_2(\mu_4\text{-OO}\cap\text{OO})\text{Cl}_2$  ( $\text{OO}\cap\text{OO}$  = oxalato (oxa), 2,5-dioxido-1,4-benzoquinonato (dobq), 2,5-dichloro-1,4-benzoquinonato (dClbq), 2,5-dioxido-3-undecyl-1,4-benzoquinonato (dubq), 5,8-dioxido-1,4-naphthoquinonato (donq)) with silver trifluoromethanesulfonate, followed by the addition of the corresponding  $\text{N}\cap\text{N}$  linkers. All metalla-rectangles were characterized by standard techniques, including infrared, UV-visible,  $^1\text{H}$ ,  $^{13}\text{C}$  NMR spectroscopy and ESI mass spectrometry: Thus confirming the rectangular structure of the complexes, and showing the facility of forming tetranuclear arene ruthenium metalla-rectangles.

**Keywords:** Supramolecular chemistry; Arene ruthenium complexes; Metalla-assemblies; Metalla-rectangles; Half-sandwich complexes.

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