Expanded Ligands Based upon Iron(II) Coordination Compounds of Asymmetrical Bis(terpyridine) Domains

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

ID 4656711
Author(s) Rocco, Dalila; Prescimone, Alessandro; Housecroft, Catherine E.; Constable, Edwin C.
Author(s) at UniBasel Housecroft, Catherine ; Constable, Edwin Charles ; Rocco, Dalila ; Prescimone, Alessandro ;
Year 2023
Title Expanded Ligands Based upon Iron(II) Coordination Compounds of Asymmetrical Bis(terpyridine) Domains
Journal Molecules
Volume 28
Pages / **Article-Number** 82
Keywords 2,2′′:6′′,2′′-terpyridine; 3,2′′:6′′,3′′-terpyridine; 4,2′′:6′′,4′′-terpyridine; iron(II); expanded ligand
The synthesis and characterization of two tritopic ligands containing a 2,2':6',2′′- terpyridine (tpy) metal binding domain and either a 3,2′′:6′′,3′′- or a 4,2′′:6′′,4′′-tpy domain are detailed. The synthetic routes to these ligands involved the [Pd(dppf)Cl2]-catalyzed coupling of a boronic ester-functionalized 2,2′′:6′′,2′′-tpy with bromo-derivatives of 3,2′′:6′′,3′′-tpy or 4,2′′:6′′,4′′-tpy. The 2,2′′:6′′,2′′-tpy domains of the tritopic ligands preferentially bind Fe2+ in reactions with iron(II) salts leading to the formation of two homoleptic iron(II) complexes containing two peripheral 3,2′′:6′′,3′′- tpy or 4,2′′:6′′,4′′-tpy metal-binding sites, respectively. These iron(II) complexes are potentially tetratopic ligands and represent expanded versions of tetra(pyridin-4-yl)pyrazine
Publisher MDPI
ISSN/ISBN 1420-3049
URL https://www.mdpi.com/1420-3049/28/1/82
edoc-URL https://edoc.unibas.ch/91959/
Full Text on edoc Available;
Digital Object Identifier DOI 10.3390/molecules28010082