

Publication

A pyrazolyl-terminated 2,2':6',2''-terpyridine ligand : Iron(II), ruthenium(II) and palladium(II) complexes of 4'-(3,5-dimethylpyrazol-1-yl)-2,2':6',2''-terpyridine

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 43259**Author(s)** Beves, Jonathon E.; Constable, Edwin C.; Housecroft, Catherine E.; Neuburger, Markus; Schaffner, Silvia**Author(s) at UniBasel** [Constable, Edwin Charles](#) ; [Housecroft, Catherine](#) ; [Neuburger, Markus](#) ;**Year** 2008**Title** A pyrazolyl-terminated 2,2':6',2''-terpyridine ligand : Iron(II), ruthenium(II) and palladium(II) complexes of 4'-(3,5-dimethylpyrazol-1-yl)-2,2':6',2''-terpyridine**Journal** Polyhedron**Volume** 27**Number** 11**Pages / Article-Number** 2395-2401**Keywords** 2,2':6',2''-terpyridine, heterocyclic, coordination, iron, ruthenium, palladium

The preparation of 4'-(3,5-dimethylpyrazol-1-yl)-2,2':6',2''-terpyridine (2) under acidic conditions results in the formation of the salts $[H(2)2][MeOSO_3](2)$ and $[H(2)2][EtOSO_3](2)$, treatment of which with base leads to neutral 2. The structure of $[H(2)2][EtOSO_3](2) \cdot H_2O$ has been established by single crystal X-ray diffraction. The complexes $[Fe(2)(2)][PF_6](2)$ and $[Ru(2)(2)][PF_6](2)$ have been prepared and characterized, and the single crystal structure determination of $[Ru(2)(2)][PF_6](2)$ is reported; $[Fe(2)(2)][PF_6](2)$ is isostructural with $[Ru(2)(2)][PF_6](2)$. Treatment of $[Fe(2)(2)](2+)$ with $PdCl_2$ produces $[Pd(2)Cl](+)$, isolated and structurally characterized as the hexafluoridophosphate salt, illustrating that metal exchange within the tpy-binding domain occurs in preference to palladium(II) coordination by the N-donor atom of the pendant 3,5-dimethylpyrazol-1-yl unit in 2. $[Pd(2)Cl](2+)$ can also be prepared from $PdCl_2$ and $[H(2)2][MeOSO_3](2)$ in refluxing methanol.

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