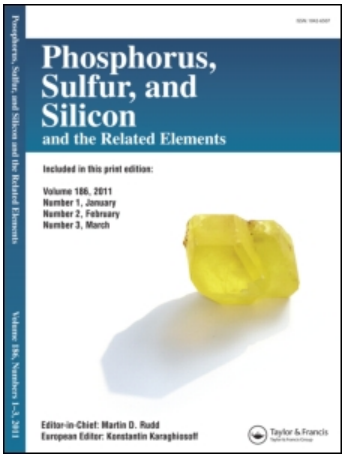

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Construction of Redox System Composed of Crowded Tetraaryldiphosphanes

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CONSTRUCTION OF REDOX SYSTEM COMPOSED OF CROWDED TETRAARYLDIPHOSPHANES

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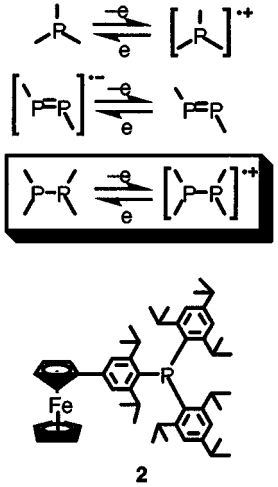
We are interested in construction of multistep redox system composed of phosphorus functional groups and have employed crowded triarylphosphines[1] and sterically protected diphosphenes[2] as redox centers so far. Crowded tetraaryldiphosphanes such as tetrakis(2,4,6-triisopropylphenyl)diphosphane (**1**)[3] are expected to be one of the promising candidates for the phosphorus redox center of the multistep redox systems, since **1** is oxidized at a very low oxidation potential to the corresponding cation radical, which is very stable with blue color.

In order to construct multistep redox systems possessing phosphorus and ferrocene redox centers, 4-ferrocenyl-2,6-diisopropylphenyl group



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was developed and crowded triarylphosphine **2** was synthesized as a model compound. Cyclic voltammetry of **2** revealed that **2** was reversible two-step redox system even at room temperature.

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