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Synthesis of Phenanthrocyanines

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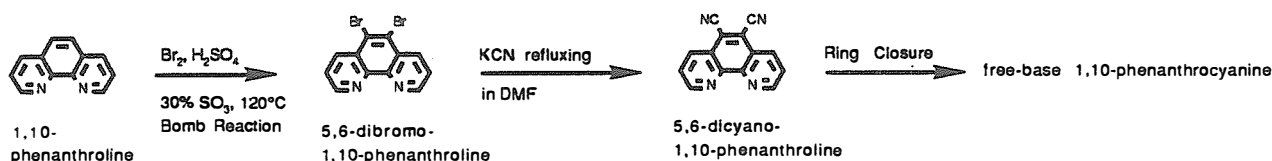
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SYNTHESIS OF PHENANTHROCYANINES

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The focus of this study is on the synthesis of phenanthrocyanines, a new class of multinuclear phthalocyanine derivatives. The anticipated structure of the pentanuclear metal derivatives of 1,10-phenanthrocyanine and 4,7-phenanthrocyanine are shown. The identical coordination environment of each of the four metals, M' , suggests that these complexes may show a simultaneous four-electron transfer at M' . The following is the synthetic scheme for 1,10-phenanthrocyanine :



4,7-Phenanthrocyanine will be synthesized by the same method as shown above.

The dibromo derivatives of 1,10- and 4,7-phenanthrolines were synthesized previously by J. Mlochowski, and the results were reproduced. Currently, the analysis of products from the reaction of 5,6-dibromo-1,10-phenanthroline with KCN in *N,N*-dimethylformamide is in progress.

