

環状銅多核錯体の酸化によるダイヤモンドコア銅二核錯体の合成 (神奈川大理) ○堀部 健太朗・井上 哲・山西 克典・川本 達也

Synthesis of dinuclear copper complexes with diamond core by oxidation of cyclic polynuclear copper complexes (*Faculty of Science, Kanagawa University*)

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Cyclic hexanuclear copper complexes were synthesized by the reaction of $[\text{Cu}(\text{CH}_3\text{CN})_4]\text{ClO}_4$ with benzothiazolines having substituents on the 3,5-positions of the pendent phenyl group. The complexes were dissolved in organic solvents and stirred under an oxygen atmosphere for 1~3 h. The resulting dinuclear copper complexes with diamond core were then purified by column chromatography. Synthesis of mixed-valence complexes was also attempted by reduction of the dinuclear copper complexes with cobaltocene, and it was found that the absorption peaks of Cu_A of cytochrome *c* oxidase could be reproduced relatively well by adjusting the reaction time and the amount of cobaltocene added.

Keywords : copper complex, diamond core complex, mixed-valence complexes

側鎖フェニル基の 3,5 位に置換基を有するベンゾチアゾリン類と $[\text{Cu}(\text{CH}_3\text{CN})_4]\text{ClO}_4$ の反応より環状銅六核錯体を合成した。その錯体を有機溶媒に溶解し、酸素雰囲気下で 1~3 時間攪拌後、カラムクロマトグラフィーによってダイヤモンドコア銅二核錯体の精製を行った。また、銅二核錯体をコバルトセンを用いて還元することで、混合原子価錯体の合成を試みた結果、反応時間とコバルトセンの添加量を調整することで、シトクロム *c* 酸化酵素の Cu_A の吸収ピークを比較的良好に再現できることが分かった。